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A Fitness Guide for Maturing Women

Dr. Malti P. Shah

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Dr. Malti P. Shah

Note : The information contained in this book is intended to complement, not replace, the advice of your own physician, whom you should always consult about your individual needs. You should always consult with your own physician before starting any medical treatment, exercise regimen, or diet.

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'Rupal Hospital for Women', Moti Desai Pol, Soni Falia, Surat – 395 003. INDIA.

Email : fitandfirmatforty@gmail.com

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To

Dr. Pravin Shah

*My late husband
who has been the inspirational force behind
all my professional, social and cultural activities*

Contents

Introduction

Menopause and You 09

Exercise 19

Diet and Nutrition 75

Rest and Rejuvenation 119

Important Tools and References 129

Conclusion

Goal and Purpose of Menopause Management
Understanding Middle Age and Menopause
The Three Key Components of Good Health

Benefits of Exercise
Types of Exercises
Planning your Exercise Routine
Exercises for Specific Body Parts
Stair Climbing for Weight Loss and Strength
Guidelines for Exercise Safety

Nutrition Basics
Rujuta Diwekar's Four Principles of Eating Right
Diet Recommendations for Specific Menopausal Problems

Sleep
Sexuality and Middle Age
Live a Tension-free Life
Spirituality and Ageing

Editor's Note

I did not start out as the Editor of this book. In fact, I was just a tech-help and proof-reader who gave some suggestions regarding content and presentation just because I also happened to be the daughter-in-law of the author. Initially, I was not too convinced about why this book should be written, especially by a gynecologist, because I saw that the market and the internet is flooded with all kinds of information on diet, exercise, losing weight, etc. But then I realized that this book is not about diet or exercise, but much more than that. On close examination, I found out that there wasn't in fact any book that targeted women of the peri-menopausal and menopausal age group and talked about the issues related to health during that age, and also gave suggestions to improve overall health during and after menopause through lifestyle changes such as exercise, diet and rest and rejuvenation. I was convinced that it had to be done. I really do not remember when, but slowly I got so involved into the book and its making, that since the last few months something or the other related to it has always topped my daily to-do list.

During the course of the writing, two very important decisions were taken that have changed the book tremendously. Firstly, we realized that this book would be much more helpful as well as visually appealing if it was to have good graphics and composition. So we decided to go for a well-designed full colour book that would be very attractive to read and provide valuable information at the same time. This decision added a whole new dimension in terms of the efforts involved as well as time consumed. Secondly, the idea of inclusion of seven successful celebrities candidly sharing the process of handling their menopause and middle age became very meaningful in the context of this book, since these are the women whom we aspire to become like. What you have in hand today is a result of the combined efforts of many people to whom we are highly obliged.

My mother in law, Dr. Malti Shah, has always been an inspiration for all of us in the family. She had once given me a card saying, "All of us may not be able to do big things in a great way, but we can all do small things in a great way", and that is what she has been doing in her social as well as professional life all these years. The cumulative effect of all these seemingly small efforts have paid off in a big way to her patients as well as society at large. Last year, she founded, and is currently successfully running "Club 35+" in Surat, currently having over 350 members, which encourages women over 35 to improve their lifestyle and prepare for menopause through various educational and cultural activities.

When I started working on the book, I was about 10 months away from my 35th birthday, and weighed about 10 kg more than what I ought to. Inspired from the book, I got all my baseline tests done, and decided that a fitter 'me' would be my birthday gift to myself this year, and I have been patiently, and successfully, working towards this goal since then.

It cannot be more wonderful to discover that the release of this first edition of this book almost coincides with my 35th birthday and the entire process of involvement in the book has already benefitted me immensely. I sincerely hope that this book reaches as many women as possible and helps them enter and live through their middle and later age with utmost grace and confidence.

Saloni Shah

August, 2011

**“Life can only be understood backwards;
but it must be lived forwards.”**

- Soren Kierkegaard

After practicing Gynaecology and Obstetrics for almost forty years, and writing several awareness books on various subjects related to Gynaecology such as puberty, pregnancy and motherhood, what inspired me to write a book on healthy lifestyle? Neither exercise nor nutrition is my field of expertise, but having learnt it the hard way through my own life experiences, I have come to realize the importance of living a healthy lifestyle, especially after the age of 35 years. As a doctor, I have always stressed on the importance of prevention of disease, rather than looking for a cure after the disease has already struck. And living a healthy lifestyle is just about that – prevention. I want to share my experiences and learning with you, which may inspire you to read and follow the book.

Most patients who had their babies delivered by me earlier, are now in the menopausal or post-menopausal phase of their life, and consult me for their menopause related problems. During these consultations, I have often felt the need for a simple, yet comprehensive guidebook that can be given to them for reading. Not finding such a book in the market for this particular age group, I decided to compile a good reference book from all the material I had read. The aim of writing this book is to motivate and help my patients by providing scientific knowledge about healthy lifestyle. I want them to understand that they can improve or change their lifestyle at any age, though earlier is better, but the benefits are assured whenever they start. Not wanting to make the book have a textbook like feel, we decided to make it a colourful and visually appealing book that would be beautifully designed. It is not necessary to read the book chronologically from the beginning to the end. You can just read up about the topic of your choice, and come back to other topics later.

Our health at mid-life has its roots in our teens, 20s and 30s. It is during these decades that we need to start taking in enough bone-building minerals, getting enough, proper and consistent exercise, and developing positive lifestyle and dietary habits. But even if we have been neglectful during these periods, middle age can be a positive motivational factor for changing to a healthy lifestyle that will ease not only our passage through menopause, but benefit our health for the rest of our lives. The earlier we take the time to re-evaluate our lifestyles and make meaningful changes, the better our mid-life and later years will be.

The Indian Menopause Society's motto goes, “Fit at Forty, Strong at Sixty, Independent at Eighty”, which are crucial stages to be in to live an active, pain-free life. If you wish to make this your goal too, you need to start working towards it NOW, and this book will be a good companion through your journey. Not only for individuals over 40, this book would be a helpful reference material for healthcare providers of maturing women, social workers working in the field of women's health issues, and paramedical staff too. Though this book is written targeting women, the book can be useful to middle-aged men too. The process similar to menopause in women happens to men at a later age than women, and is known as Andropause. Due to the reduction in the hormone testosterone, men also experience symptoms such as sleeplessness, lack of appetite, bone and joint pain, reduced physical energy, and lack of interest in all activities including sex. They can also have osteoporosis, sarcopenia and reduced muscle mass too. So this book is a good source of information for everyone.

The first chapter begins with an explanation of the goal and purpose of menopause management, and goes on to discuss the changes occurring before and after the onset of menopause. Understanding physical, mental and social changes of middle age is important to prevent or minimize them, and deal with them effectively. The second chapter, the mainstay of this book, talks about the role of exercise in fitness. It explains the benefits of exercise during the transitional phase. Brief information about various kinds of exercises and recommendation of exercise prescription, as well as exercises for specific problems of middle age are also described.

The third chapter includes all about diet and nutrition. Various macronutrients and micronutrients, their sources and need are explained in detail in this chapter. The importance and method of 'right diet at right time' is discussed. Diet decisions for various problems of middle age are also suggested here. Healthy lifestyle changes also include Rest and Rejuvenation. Proper and adequate sleep, a healthy sex life, living a stress free life, and spirituality are equally important as exercise and diet for healthy ageing, which is what the fourth chapter discusses. The last chapter is a collection of charts and references that help in making informed decisions about exercises and diet, and also include body monitoring tools to record your personal details.

In today's digital world, there is no dearth of information on any subject you care to look for. The key is to identify the right and good sources and follow them. The material in this book has been compiled from works of eminent people in the fields of medicine, exercise and diet in their books such as “Clinical Practice of Menopausal Medicine : How and Why” edited by Dr. Urvashi Prasad Jha; “Don't Lose Your Mind, Lose Your Weight” by Rujuta Diwekar; “Super Nutrition for Women” and “Super Nutrition for Menopause” by Ann Louise Gittleman, and “Dietetics” by B. Srilakshmi, among others.

This book would not have been born if not for the encouragement, support, and help of various people, to whom I wish to express my heartfelt appreciation and gratitude:

- Ms. Rujuta Diwekar, Dr. Urvashi Prasad Jha, Dr. Maninder Ahuja, Ms. B. Srilakshmi and Ms. Ann-Louise Gittleman, for readily permitting me to use the information from their books and articles.
- Dr. Heena Shah, a senior Dentist practicing in Surat, who is very keen about living a healthy lifestyle. Her beautiful pictures of various exercise demonstrations have helped me a lot in explaining them easily.
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- Mr. Jabir Kureshi (M/s Brains Creative Unit) for the elegant graphic design and printing of the book.
- Mr. Chandrakant Joshi and Mr. Ajay Shah for the wonderful photography of the exercise demonstrations as well as other pictures, and Ms. Pragna Kapasiawala for sharing some beautiful pictures related to food and food ingredients.
- My daughter-in-law, Saloni, the editor of this book, whose creativity and keen interest in reading and getting knowledge about healthy lifestyle led to apt and beautiful editing of the book.
- My loving children – Snehal and Dr. Rupal; and my son-in-law Dr. Nirav, who have been a constant source of encouragement and support in all my activities, especially Snehal's vision for the kind of book we should produce, and his persistent follow-up and help for achieving that vision.

“It is never too early to prepare for a healthy, comfortable menopause. You can make menopause and later life a time of renewed energy, greater expectation, and better health. I hope this book will be helpful to you and your family in making timely and appropriate changes in your lifestyle for a smooth transition through menopause and a healthy and happy life thereafter!”

Dr. Malti P. Shah

June 2011





SHOBHAA DÉ

Writer / Model / Journalist / Socialite

“ *Menopause was not a dreaded word in my maternal family. I had watched my mother dealing with it without the slightest fuss. No erratic behaviour. No tantrums. She just got on with life. And so did I. Though, being far more aware about the enormous changes that do take place in a woman's physical and emotional conditions over this transitional period, I had mentally prepared myself for the worst! I thought I would turn into a monster... worse, I was sure my family members would treat me like one! I did the next best thing - instead of running away from this touchy topic, I decided to talk about menopause and its possible side effects to those I share my life with. I did warn them that my behaviour may appear a bit erratic and strange at times, but to bear with me... show me a little patience. In turn, I would 'warn' them about impending mood swings. Believe me, it worked! Everyone, including my husband and children, co-operated during this sensitive phase. I felt their love and acceptance even while I was dealing with hormones that were driving me a little crazy!*

Women the world over are subjected to cruel barbs and harsh put-downs for being 'menopausal'. Almost as if it's a disease and not a biological fact. Menopause does take a toll on a woman's self-esteem, particularly if she isn't sufficiently informed and allows this to happen. If more and more women confront menopause minus shame, it will send out a strong and positive message to society at large that menopause is not something to be ashamed of. It is an intrinsic part of being a woman. Face the change without fear or embarrassment - and free other women from their anxiety about what is, after all, just another aspect of the cycle of life.”

Menopause & You

At present, I am in my late sixties. As most (so-called) busy professionals, I neglected my health at younger age too, and developed many health related problems after the age of 60 years. This required replacement of three of my joints – one hip joint (injured in an accident), and two knee joints (because of severe osteoarthritis). Meanwhile, my husband was diagnosed pancreatic cancer, and while taking care of him for almost one year, and one year after his death I was badly broken emotionally.

While reorganizing my life, I decided to appear for the Credentialed Examination for Menopause Practitioners conducted by the Indian Menopause Society to start the second inning of my career. While reading for the subject, I gathered more and more information about healthy lifestyle changes and healthy ageing. Though it was late, I started changing my own lifestyle gradually, which improved my physical and mental health.

After many years, my body is now pain free. My bone density has improved to almost normal. I am active throughout the day. I can participate in any activity of my choice with pleasure and confidence. Now I know by experience that to stay physically and mentally fit, a healthy lifestyle is very important at any age. Lifestyle changes can prevent or reduce almost fifty percent of the metabolic diseases like blood pressure, heart disease, diabetes, obesity, osteoporosis, osteoarthritis as well as some cancers.



Menopause is a gradual and natural end of a woman's child-bearing age. When the function of ovaries starts slowing down, the levels of hormones produced in the ovaries – mainly estrogen, progesterone and testosterone – begin to diminish, as a result of which physical and mental changes occur in a woman. Menopause is a natural process. About two to eight years prior to the onset of menopause physical and mental changes start developing in a woman's body. In some women menopause takes place without any problem. But for several women this journey turns out to be a very painful process - just when many of the major tasks of life get over and it is time to live a peaceful life, the painful process of menopause begins.

The intermediate time period between youth and old age is known as peri-menopausal period. The word 'Menopause' originates from two Greek words meaning Month and End i.e. stoppage of menstruation. When menstruation stops for a year or more, then menopause is said to have established. Every woman should welcome and accept peri-menopausal age after youth with the same eagerness as a child awaits adolescence and an adolescent awaits youth. This is possible only if she is mentally and physically fit during this time.

In naturally occurring menopause the 2-8 years prior to the actual onset of menopause are very important for the woman during which it is very important to maintain health. Generally the latter half of your life depends upon how you live in the first half of life. Those women who are already aware about their health from the beginning do not experience major problems during this transformation. But for those women who are careless about their health from the beginning, it is time to change their habits. This is the time when various diseases start developing in women who are careless about their health, and is also the time when they are having various responsibilities in life on them.

The World Health Organization defines health as a state of complete physical, mental, spiritual and social well-being, and not only the absence of disease. Exercising, eating right, sleeping well, and having positive attitude of mind play an equal role in prevention of infection and diseases. With improvement in health care status, longevity has increased. Average age of menopause is 47.5 years in Indian women with an average life expectancy of 71 years. Therefore, an average Indian woman is likely to spend almost 23.5 years, that is almost one-third of her total life in menopause. A maturing woman has to face physical, mental and social problems alongwith the problems arising from menopause. It is important to ensure that this period of her life is disease and disability-free.

Goal and Purpose of Menopause Management

The goal and purpose of menopause management are :

- Health promotion - Disease prevention - Disability postponement

These can be achieved with the help of timely intervention based on exercise, proper diet supplemented with Calcium and Vitamin D, and proper rest. An average woman is engaged in one of the three activities daily – school, employment or housework. None of these provides balanced activity for the body that is desirable for good physical fitness. Though it may involve a good deal of hard physical work, it does not account for flexibility of the muscles, nor does it work all the major muscle groups of the body.

The best preparation for menopause is exercise – it helps keep the weight down and reduces incidence of heart disease, helps reduce stress, and prevents osteoporosis. Only about 38% of women over the age of 19 exercise regularly. However, fitness and exercise are critical in the menopausal years, when a woman is at a dramatically increased risk for osteoporosis and fracture, heart disease, and chronic diseases such as diabetes and obesity.

Understanding Middle Age and Menopause

Changes before 45 years

Menopause is that time when permanent cessation of menstruation occurs following the loss of ovarian activity. The years prior to menopause that encompass the change from normal ovulatory cycles to cessation of menses, known as pre-menopausal (transitional) years, are marked by irregularities of menstrual cycles. Menarche (starting of periods) is followed by long cycles at first, and then there is increasing regularity as cycles shorten to reach the usual reproductive age patterns. In the 40s, cycles lengthen again. These irregularities of periods at two extreme ages are because of absence of ovulation. This pre-menopausal period lasts for around 2 to 8 years. When cycles' length exceeds 42 days, menopause predictably follows within 1 to 2 years. Menopause before 40 years is premature menopause. There are many reasons for premature menopause but hysterectomy (removal of uterus – surgical menopause) is one of the common causes. Pre-menopausal period is crucial as far as our body changes are concerned.

Ageing process starts in all the organs from the age of 35. Therefore, understanding middle age and making changes towards a healthy lifestyle are very important for approaching healthy menopause and healthy old age. From age 35 onwards women lose bone mass at about 0.75-1% per year and the loss increases to 3 to 5 % per year after menopause, most markedly from the lumbar spine. Osteoporosis may be asymptomatic till fractures occur. Beginning in the 4th decade of life, adults lose 3 to 5 % of muscle mass per decade, and after 50 years of age the rate increases 1 to 2 % per year. Loss of muscle mass is responsible for decreasing strength, stamina and endurance of muscle which produces imbalance and increases the chances of fracture. After 35 years obesity increases because of lower metabolism, sedentary life, and wrong eating habits, so the risk of obesity related diseases increases. Thyroid dysfunction also develops at this age disturbing many functions of the body. Gynecological problems include irregularities of periods because of hormonal imbalance, adenomyosis, fibroids (tumour) of uterus and gynaecological cancers. Changes in breast may cause benign or malignant lesions.

The overall objective of preventive intervention during pre-menopausal period has three main objectives :

- **To prolong the period of maximal physical energy, and optimal mental and social activity.**
- **To detect as early as possible any of the major chronic diseases including hypertension, thyroid dysfunction, diabetes, heart disease, cancer, as well as impairment of vision, hearing and teeth.**
- **Finally, healthy middle aged woman should be able to traverse smoothly thru the menopausal period.**



Changes after 45 years

Once menopause is established, all the problems that started before 45 years of age are gradually intensified if due care is not taken. Most common and troubling symptoms of menopause include hot flashes, vaginal dryness, weight gain, breast change, heavy bleeding and mood swings.

Stage 1

Hot Flashes

Hot flashes are the most common and most distressing menopausal symptom. Hot flashes manifest as a sudden flush of intense heat, often beginning around the neck and face and radiating to other parts of the body. This brings about episodes of profuse sweating and chills. When a woman is experiencing a hot flash, her heart rate increases. This may last for few minutes to half an hour. When this happens at night, it is called night sweats. When you suddenly feel hot, start perspiring, your heartbeat increases, you feel giddy – remember that these are not symptoms of any physical damage. They cause mental uneasiness and sleeplessness at night. These hot flashes occur suddenly and cause many problems in daily life.

Vaginal Dryness

When you pass through menopause or even during peri-menopausal period, because of decreasing level of estrogen, gradually the vaginal walls begin to lose their elasticity and become somewhat drier and thinner. Vaginal secretion becomes less acidic and there is more risk of infection. Recurrent infection and dryness cause painful intercourse. The tissue of the bladder also becomes thinner and more sensitive. This may increase the frequency of urination, with some women having higher frequency during night-time. It can also result in recurrent urinary tract infection, burning and pain while passing urine. Some women may experience leaking of urine on coughing or laughing, known as incontinence.

Weight Gain

Weight gain in middle age is because of :

1. Age related decline in Basal Metabolic Rate (BMR)
2. Lack of enough physical activity and exercise
3. Decrease level of estrogen
4. Irregular dietary habits

Those extra pounds that show at menopause may be due to a lack of progesterone. Estrogen, which is not balanced by progesterone, causes weight gain. Obesity and obesity related diseases like hyperlipaemia, hypertension, and age related diabetes increase the risk of heart disease and cerebral stroke.

Breast Change

Some women don't experience any changes in their breasts, whereas some experience pain and heaviness in their breasts before getting their periods, which disappears after their period gets over. This also occurs due to changes in hormone levels in the body, yet it is necessary to get an annual breast examination done by a doctor. This can be developed as a habit in yourself too. If while conducting breast self-examination after menstruation, a lump is felt, you can take the advice of your doctor, who will advise mammography if needed, that can detect even small lumps in the breast.

Irregularity in Menstruation

Some women experience decreased and delayed periods which gradually stop. 40-50% women experience excessive, earlier than usual and prolonged menstrual periods. It is necessary to get a check-up done with the advice of an expert doctor at this time. Many women use grandmother's tips (non-medical methods) during such times, believing that their menstruation is going to stop. When they finally go to the doctor, the amount of blood in the body has decreased, and sometimes they are suffering from some serious ailment which is diagnosed too late. The irregularity in periods occurring during this time is mostly due to changes in hormones in the body. Fibroids in the uterus, thickening of the uterine lining, or uterine cancer and occasionally complication of pregnancy can cause excessive bleeding. Instead of worrying that you might have any of these conditions, it is more important to have timely diagnosis to start appropriate treatment.

Mental Changes

Many women do not experience any significant mental changes, whereas others feel depressed, are unable to concentrate on their work, experience sleeplessness, become irritable and touchy, get angry on small things. Many women experience mood swings, anxiety, insomnia (sleep disturbances, sometimes related to hot flashes and night sweats). Shifting mood, depression and irritability during menopause may result from social and environmental stresses in combination with fluctuating and declining estrogen and progesterone levels. Mid-life for many women entails many more life changes than just menopause. It is a time when children leave home and the focus on child rearing ends. Onset of major illness or disability in a spouse, relative or friend or even death, problems of education or marriage of children, retirement from employment, financial Insecurity and other such issues also happen at this stage.

Stage 2

As age advances all the above changes, if due care is not taken, increase fast.

Osteoporosis

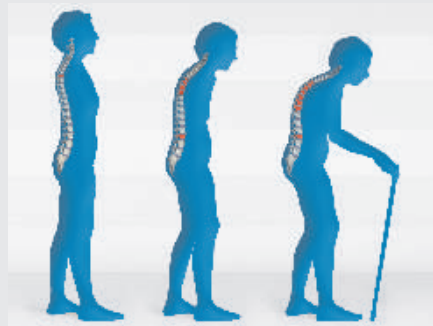
The biggest problem of menopause is that the amount of calcium in bones decreases, leading to bones becoming softer and more fragile. Estrogen helps in the deposition of calcium in the bones and keeps them strong. Lowered estrogen level causes bones to become softer and they tend to break easily with the slightest impact. Also, a broken bone takes a longer time to heal, as a result of which the patient remains bed-ridden or inactive for a longer time, which causes its own problems that remain till death.

Heart Diseases

Estrogen helps to reduce the level of LDL cholesterol (harmful cholesterol) and increase the level of HDL (beneficial cholesterol) which provides protection against heart diseases.

Memory Loss

Women over 50 years of age experience reduced memory (dementia) or even complete loss of memory (Alzheimer's Disease) which causes several problems during old age.



The Three Key Components of Good Health

Health is the level of functional and/or metabolic efficiency of a living being. In humans, it is the general condition of a person in mind, body and spirit, usually meaning to being free from illness, injury or pain. The maintenance and promotion of health is achieved through a combination of physical, mental, and social well-being.

The three key components of good health during middle age are :

- Regular Exercise
- Healthy Diet
- Proper Rest and Rejuvenation

If we are able to follow these three aspects consistently and properly in our daily life, we are sure to enjoy the benefits of good health and vitality. The combined result of making lifestyle changes of these three components can help prevent and reduce most of the symptoms of menopause and related problems.



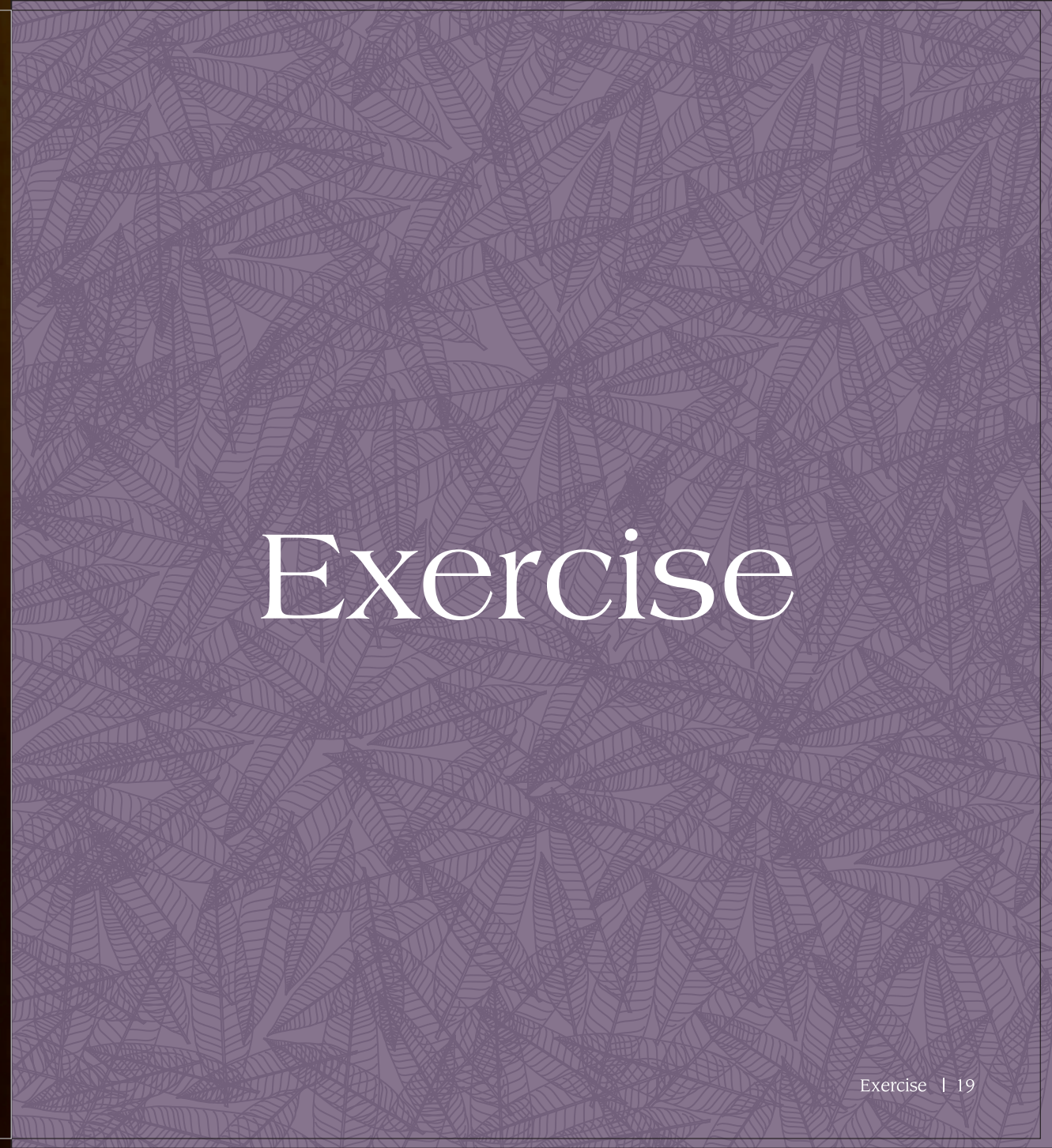


KIRAN BEDI
EX IPS OFFICER / SOCIAL ACTIVIST

“Right habits formed at right times is, to me, the key for mid-life management. My day is incomplete if I do not start it with a full hour of exercise which includes walking, cycling and a few specific floor exercises. One golden rule which I have made for myself is "no eating between meals"! I even avoid beverages between meals to keep away from those extra calories. Fried and junk food surely does not find place in my meals which consists of chapaati, daal, dahi, vegetables, milk and curd. I am vegetarian, however, I do ensure that I eat eggs on a regular basis to keep up with the protein requirements of my body. I am very fond of fresh fruit and vegetable juices.

However, all this is possible only because of a positive, healthy and disciplined mind. If one can keep the mind healthy, it helps in following the right habits. I strongly believe that keeping a watch over the mind can take care of almost everything that I do in the entire day. The mind controls all the senses, and hence if we can harness it, we can have total control over our work and physical health. However, to keep the mind fit and healthy, I feed it with proper and timely food in form of reading good books and living positively.

Physical health comes only from a healthy mind, which is based on the habit of simple living, which in turn is a result of feeling of gratitude to this life.”



Exercise

In 1989, when I was 46 years of age, and on the peak of my practice, busy with my family and social responsibilities, I met with a serious car accident that left me with a fractured hip joint and several other small injuries. The hip joint operation confined me to bed rest for 3 months. After recovering from the surgery, I started working again. I used to walk for 20-30 minutes as exercise, but was very irregular in that as it was not a priority in my life then. Later I developed blood pressure and obesity. By the age of 55, I started having pain in both my knee joints, and the operated hip joint had never become completely painless. I continued neglecting it in the name of work up to the age of 61 years. Being a medical professional, I knew I must reduce my weight and for that exercise was a must, but because of pain in my joints, I wasn't able to walk much too.

Swimming was a better alternative for me, but I didn't know how to swim! So, at 61, I decided to learn it. I struggled for a year, but was not able to balance myself in water as my left shoulder was not moving with full range. I consulted the trainer who used to come home for my husband's exercise, who told me that I should strengthen my back muscles first before swimming. I realized that due to the surgery on my left hip joint, the back muscles on the left side were short and stiff. With stretching exercises for back and continued efforts to learn swimming, I was finally able to swim my first independent lap after 1.5 years of trying. Swimming relieved the pain in my knees a bit, as well as helped me control my weight, though not reduce it.

In 2006, I developed severe pain in my operated hip joint due to avascular necrosis in the head of the joint, which had to be replaced, which meant I was in bed for 3 months again. The hip joint recovered, and I took up my stretching and swimming routine, and also lost 3-4 kg weight, but soon the knees started complaining. Due to severe arthritis, I had no option but to get my first knee joint replaced in 2008. The same year, my husband was diagnosed with cancer and for the next whole year, I was busy with his treatment, though I didn't neglect my health and reduced further 7-8 kg. After that both my operated joints were painless, but the 2nd knee joint was still painful, and so I had that one also replaced. I started learning yoga from my trainer Mr. Pravinbhai Patel, and his consistent and continuous training has helped make my body totally pain-free and fit.

Though I understood the importance of exercise too late, I know now by experience that it is never too late to be fit. Now I do yoga regularly 3 days a week, along with weight bearing exercises, and walking for the other 3 days. I can walk with moderate intensity for 2-2.5 km in 30 minutes, and can remain active throughout the day.



Benefits of Exercise

Exercise is the key to staying strong, energetic and healthy as you get older. It is important at any age from adolescence to menopause, but to start exercise at least at middle age is extremely important to maintain health in the later age. It can help you manage the symptoms of your illness and pain, maintain your independence and reverse some of the symptoms of ageing. Not only is exercise good for your body, it is good for your mind and memory too. No matter what your age or current physical condition, you can benefit from exercise. Even in elderly women, exercise can attenuate certain effects of ageing that are caused by sedentary lifestyles.

Obesity and lack of physical activity are associated with increased risks of diabetes, heart diseases and even cancers, including breast and endometrial (uterine) cancer. There is a high prevalence of osteopenia and osteoporosis and it is nearly 100% above the age of 65. Several studies have shown that women who were more active, benefitted from a reduced mortality risk compared to sedentary women, especially from cardiovascular and respiratory illnesses. Energy balance, which includes maintaining ideal weight through physical exercise, has been associated with decreased risk of breast cancer. Changes towards affluent lifestyles have reduced the physical activities to a minimum and increased the consumption of diets rich in fat. High fat diets during the pubertal age and obesity in the post-menopausal age are risk factors for breast cancer.

India being poor in resources, this high burden of diseases can be prevented to a large extent by timely intervention of lifestyle changes. Exercise is the mainstay of this change, along with proper nutrition and supplementation, especially calcium.

Benefits of doing regular exercise are:

- Strengthening the muscles involved in respiration to facilitate the flow of air in and out of the lungs.
- Increased HDL, reduced triglycerides, and body fats. Improved weight control, strengthening and toning of muscles throughout body, improved overall circulation and oxygen transportation, and reduced blood pressure.
- Improved mental health, including reducing stress and lowering the incidence of depression. Aerobic exercises stimulate your body to release Endorphins – natural painkillers produced by our body – such as Dopamine and Serotonin, which elevate the mood and reduce depression. In addition, high impact aerobic activities such as jumping, skipping, jogging can stimulate bone growth as well as reduce the incidence of osteoporosis for both men and women.
- Reducing the risk of diabetes and obesity.
- Increased storage of energy molecules such as fats and carbohydrates within the muscles, thereby improving endurance.
- Neovascularisation of the muscles to increase blood flow through muscles, helping in strengthening muscles, and preventing or treating sarcopenia.
- Regular exercise may decrease the incidence and severity of hot flashes, which occur in 75% of menopausal women.
- Weight-bearing exercise, resistance training and high-intensity fitness regimes can reduce a woman's risk of fractures and help retard sarcopenia.
- Cardiovascular effects of exercise are also dramatic. Perimenopausal women who are more physically active and gain less weight have lower elevation of LDL, total cholesterol and triglycerides than their heavier, less active counterparts.

Menopause, Weight Gain and Strength Loss

The average weight of a woman should be 100 lbs (1 kg = 2.2 lbs) plus 5 lbs for every inch above 5 feet height. An adult weighing 10% more than the standard weight is overweight and 20% overweight is obese. Body mass index (BMI) should ideally be between 20 and 25.

Waist Circumference

High risk waist circumference—

Men >40 inches (102 cms.) Women > 35 inches (88 cms.)

Waist/ Hip ratio should not be > 0.8 for women and >0.9 for men

Measurement of Body Fat

A more accurate definition of obesity and overweight should be based on the total amount of body fat. The upper limit of body fat for defining obesity has been set as 25% for male and 30% for female. Dual Energy X-ray Absorptiometry (DEXA) is one of the widely accepted and precise methods. It is a safe, convenient and non-invasive method.

It is seen that obesity in adult age rises in women in each decade until it starts tapering off in the seventies. Post-menopausal women have less fat-free body mass (3 kg vs 0.5 kg) and a greater increase in fat mass (2.5 kg vs 1 kg) as compared with pre-menopausal women. Lean muscle mass decreases 30–40% relative to total body mass as we age. This process begins at around 30 years of age and progresses exponentially with time. Muscle strength also decreases over the same period. Initial strength loss is usually not remarkable, but can often be recognized by the person at around 50 years of age. There is a consistent pattern of increased central adiposity during menopause. The waist to hip ratio (WHR) increases and strength decreases.

What causes these changes in menopause?

- Age-related decline in BMR-Basal Metabolic Rate
- Reduced physical activity, and
- Loss of ovarian function and luteal phase which results in decreased BMR



Ways of Controlling Weight Gain and Strength Loss

Menopausal status does not appear to lower a woman's ability to favorably alter her body composition and cardio-respiratory endurance. High-intensity strength training results in significant and progressive increase in strength in older women. Resistive training increases FFM (Fat Free body mass) and maintains RMR (Resting Metabolic Rate) despite weight loss in postmenopausal women. Resistive training is a valuable component of an integrated weight management program.

Exercise is particularly helpful for middle-aged women who want to control their weight because it reverses the diet-induced reduction in metabolic rate and increases fat-free mass (FFM). Resistance training especially targets the decrements in muscle mass and function typically seen in sedentary persons. Evidence now indicates that one is never too old to be fit for exercise; this is true even for frail institutionalized women as old as 100 years.

Lifestyle modifications that include dietary restrictions and regular exercise not only prevent weight gain, but also promote weight loss. Some effects of such lifestyle modifications are as under :

- Decreased waist measurement
- Decreased LDL-C factor
- Decreased triglycerides
- Decreased glucose levels
- So decreased incidence of CHD (Coronary Heart Disease)

Caloric Restriction **1**

This is the centerpiece of weight-loss efforts for most women; however, it further depresses metabolism, often leading to frustration and failure. It is clear that caloric restriction not only results in decreased RMR (Resting Metabolic Rate), but along with fat, muscle mass is also decreased. The end result is that stamina is further decreased and there is often rebound weight gain.



Regular Exercise **2**

Exercise is particularly helpful for middle-aged women who want to control their weight because it reverses the diet-induced reduction in metabolic rate and also increases fat-free mass (FFM). In fact, physical activity of sufficient magnitude can largely offset age-related changes in body composition.

The prevention of weight gain and its control has to be through caloric restriction along with aerobics and resistance exercises. Age is no bar. If you have tried exercising before but were unsuccessful, don't make a mistake by trying the same way this time. Do something new. Pick activities you can easily work into your day or find a friend to exercise with. Sometimes this makes the exercise a more natural part of your day or gives you someone to encourage you when you need it. You can also join an exercise group.

Exercise and BMD (Bone Mineral Density)

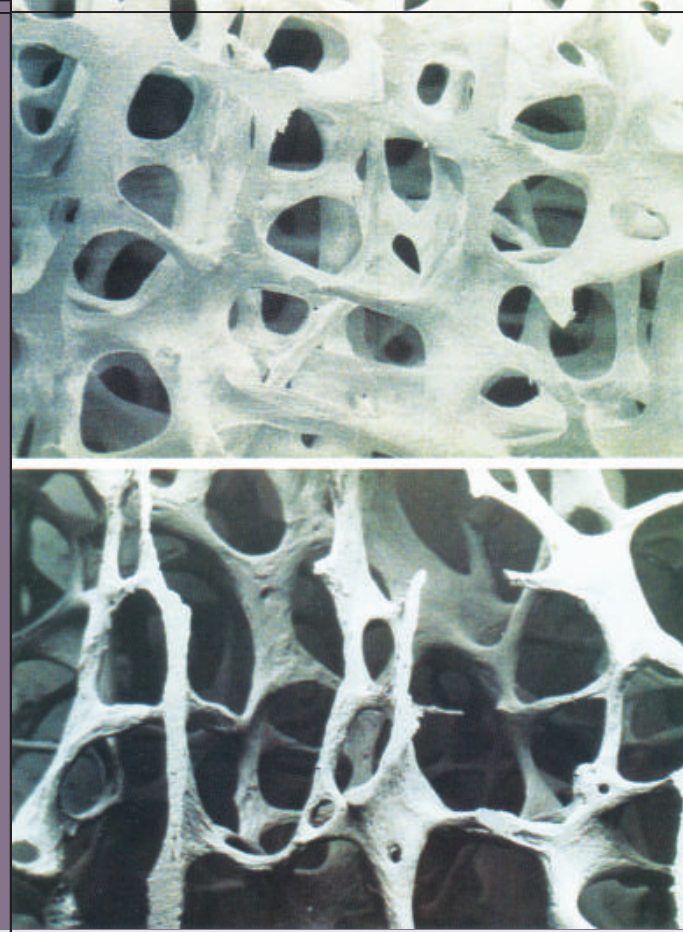
There is correlation between muscle strength and regional bone density. Young swimmers have more BMD in the radius (a bone of wrist) than non-swimmers. Tennis players have more BMD in the dominant arm.

Until the age of 25, we build up bone mass. Then there is almost plateau until about 35 years. Peak bone mass is attained by the age of 35. From age 35 onwards, women lose bone mass at a rate about 0.75-1% per year, and the loss increases to 3 to 5% per year after menopause, most markedly from the lumbar spine. Osteoporosis may be asymptomatic until fractures occur. Physical activity can reduce the risk of osteoporotic fractures by increasing bone strength and improving muscle and balance. Menopausal women typically benefit most from exercise in combination with estrogen replacement therapy. Weight-bearing exercise, resistance training and high-intensity fitness regimes can reduce a woman's risk of fractures and help to retard sarcopenia (weakness of muscles).

Sarcopenia, Osteopenia and Osteoporosis

What is most important is the loss of fat-free mass or muscle mass, i.e. sarcopenia, which occurs along with an increase in fat mass. The overall result is reduction in strength. There are many causes of sarcopenia, but estrogen and testosterone deficiency after menopause is an important cause. Neuro-immuno-endocrine factors may regulate the maintenance of muscle mass or its loss with age.

Decreases in muscle mass and strength are comparable to the loss of bone mass from young adulthood to old age. This in turn results in trouble in performing routine activities of life, which leads to loss of strength, stamina and stability. So prevention of these effects of ageing that are accelerated by menopause is a must which can be done with strengthening exercises and protein rich diet.



Normal Bone

Osteoporotic Bone

Types of Exercises

Physical exercises are generally grouped into three types depending on the overall effect they have on the human body. All three types of exercises are important for achieving and maintaining maximum health and fitness:

- **Aerobic exercises**, any activity that uses large muscle groups, which can be maintained continuously and is rhythmical and aerobic in nature, improves function of heart and lungs.
- **Anaerobic exercises**, such as weight training, and muscle strengthening, increase short-term muscle strength.
- **Flexibility exercises**, such as stretching, improve the range of motion of muscles and joints.

Aerobic Exercises

Aerobic exercise is physical exercise that intends to improve the oxygen system and refers to the use of oxygen in the metabolic or energy generating process of the body. Aerobic exercise includes any type of exercise, typically those performed at moderate levels of intensity for extended periods of time that maintains an increased heart rate. Activities such as brisk walking, stationary bicycling, swimming, aerobic dance or rowing, jogging, running, skiing, and rope skipping are examples of aerobic exercises.

Aerobic dance refers to a variety of activities such as high- and low impact aerobics and jazz dancing. They also can result in improved endurance, stronger bones, improved sleep, controlled weight and reduced stress, depression and anxiety. High impact aerobic exercises are one in which you lift your both the feet off the floor e.g. jumping, skipping, and they are not good for back and weight bearing joints e.g. hip, knee and ankle joints. Those with knee joint problem and those who want to prevent injury to the joints should avoid it. In medium to low impact aerobic exercises such as walking, jogging, swimming, dancing, cycling, running, stair climbing, etc. you always keep one foot on ground and one foot off the ground.

Try to include aerobic activity in your fitness program three to four times each week, with a goal of working in your target HR for 30 minutes in each session. You can work up to this goal slowly, starting with as little as

5 minutes and increasing as you get stronger and are able. The intensity will depend on your fitness, and the activity chosen depends on your interests, comfort, and convenience. Women who exercise regularly should work out for 20–60 minutes per session beginning and ending at a slightly slower pace to warm up and cool down. Previously sedentary women should begin by walking at a comfortable pace for 15 minutes, three times per week, gradually increasing time, frequency, and intensity.



Important to know before you start

RULE 1: Warm up Start out with an easy pace for each walking session. Allow your muscles to warm up before you speed up. Warm up for 5 minutes at easy pace.

RULE 2: Stretching All long muscles should be stretched gently for 5 to 10 minutes. It avoids injury to muscles and ligament. Never stretch cool muscles.

RULE 3: Cool down For the final 5 to 10 minutes walk at an easy pace.

Walking

Walking builds aerobic fitness at both high and moderate intensities. Power Walking, also known as speed walking, is a cross between regular walking and jogging. Develop a posture for power walking. In 30 minutes of power walking you can burn up to 250 calories.

- Stand up straight without leaning forward, holding your back straight will help your muscles work together and increase your walking speed.
- Look ahead, not down and focus on a point about 20 feet in front of you.
- Hold your head up with chin parallel to the ground to avoid neck pain.
- Relax your shoulders.
- Hold your abdominal muscles firm.
- Avoid allowing your hips to rock side to side. It will slow your speed.
- Keep your arms under control.
- Bend your elbows 90 degrees, keep them close to your body.
- Allow your hands to relax in a slightly curled position.
- Swing your arms forward alternating with your step; your hand should not cross your chest.
- Roll your feet as you walk.
- Stride forward with one foot with your heel striking the ground first.
- Roll your foot forward and push off with your toes.
- Bring your other foot forward just as you are pushing off with the toes of the front.
- Take smaller steps, over-striding is inefficient. It will slow down your power walk.

Getting dressed for a wonderful walk!

Clothes – Your walking clothes should be comfortable according to season. Hat, sunglasses, sun screen according to your need is necessary. Carry a small water bottle if you are walking for half an hour or more.

Shoes – Your shoes are your main walking tool.

- Fit – Your shoes must fit well, but leave enough space, so your feet can expand while walking. Your walking shoes should be one size larger than your shoes for routine use.
- Flex – good walking shoes should be flexible, as your foot rolls through each step.
- Flat – Walking shoes should be flat with little difference in height between heel and ball of the foot.





Cycling

Cycling is a physical activity that involves the riding of a moving or stationary bicycle. It is considered to be one of the most effective and enjoyable exercises that can be done by people of all ages and fitness levels. It is very easy as most people know how to ride a bicycle and enjoy doing so as well.

Effect on cardio-respiratory system – Cycling daily increases the heart rate, which increases the dilatation of heart muscles. Heart works with more efficiency providing more oxygenated blood through muscles. Cycling daily reduces the chance of heart attack and other cardiac diseases by 50 to 60%.

Burning of calories – Cycling is an excellent way of burning up excess stored calories of our body. An hour of cycling even at the speed of 12 to 13 miles per hour can burn 544 calories in our body. If speed is increased to 16 mph, over 800 calories can be burned in an hour.

Building up of strength and stamina – Cycling daily will build up stamina and increase strength of our entire body. Cycling mainly uses up the muscles of legs, which involve quadriceps, hamstrings, glutes, and calf muscles, all of which are in constant action. Cycling is a non weight-bearing exercise that builds up these muscles and makes them more active and stronger. It can be used by persons with arthritis, and even for people with hip or knee replacement it is a very good exercise.



Benefits of indoor cycling

- Compared to other gym equipments it is cheaper, can be done at home, and no special training is required.
- It is a non-impact activity and causes less stress on knee, hip and ankle joints than many other aerobic exercises.
- Superior cardiovascular workout both (aerobic and anaerobic) strengthens heart and helps lower heart rate.
- It stabilizes the core muscles of the body, and they get a good workout, which helps encourage good posture in everyday life.
- Weight loss goals are reached quickly because a rider burns 400 to 500 calories in one 45 minute session with 12 to 13 mph speed.
- It is a great way to reduce stress and tension.

Types of stationary exercise cycles – Standard upright cycles come in single and dual models. Dual action cycles have handles or levers to work upper body and give a more effective cardio workout. It also improves overall body tone more efficiently. Recumbent cycle – It is a type of stationary cycle with a more laid back seat. It places the body in a semi or fully reclining position. They are better for those with back problem, cerebral palsy and related diseases. Because of recumbent position, blood pressure remains lower, making it safer.



Swimming

Swimming is for everyone, because there is no pain, and plenty of gain from a water workout. The weightless feeling of swimming is what makes swimming a low impact exercise suitable for almost everyone – pregnant women, people with disabilities, those recovering from injury, the elderly, and those with obesity. Swimming includes all the major muscle groups including the shoulder, back, abdomen, legs, hips and gluteus, and water affords 12 times the resistance as air in all directions. It is cardiovascular and strengthening at the same time. Regular swimming builds endurance, muscle strength and cardiovascular fitness.

Good for Arthritis - Swimming offers relief from joint stress; because you are suspended in water, your joints never bear all weight. People with arthritis can actually improve their joint health through swimming. It can also decrease pain associated with osteoarthritis. Swimming can be an aerobic or anaerobic activity, depending upon the intensity of your workout, and it has a significant benefit for your cardiovascular system when it is done consistently. These benefits include increased heart rate, reduction in blood pressure and cholesterol, increased circulation, lowered resting heart rate resulting into reduced risk of heart disease. Water based exercise improves mental health, is relaxing, and less tiring.

Water Meditation – Relax and swim with a very low effort, let your mind wander focusing on nothing but the rhythm of your stroke. This form of meditation can help you gain a feeling of wellbeing.

Swimming does burn calories at a rate of about 3 calories a mile per pound of body weight. It takes 30 minutes to swim one mile. You will be using 900 calories per hour. However many swimmers do not swim that quickly, and many cannot swim for that duration and distance. Like running, swimming also should be preceded by warming up and stretching all the muscles.



Dancing

If you are tired of going to the gym, walking, running or jogging then try getting some dance exercise. Dancing is not only a fun and great way to socialize, but it is also a good way to stay physically fit. There are many health benefits of dancing.

- Dancing is a constant movement and it covers everything from cardio and strength training to balance and control, and also improves stretching and flexibility.
- Dancing aids in weight loss and it is a great way for people of all ages to get and stay in shape.
- Being an aerobic activity, it benefits your heart and lungs, and also tones and tightens the major muscles.
- It helps to burn those extra calories, while improving stamina. Dancing for 30 minutes can burn anywhere between 150 to 200 calories.
- Regular dancing can lower blood pressure and improve blood cholesterol levels.
- The constant and low impact movements of dancing allow joints and bones to strengthen, reducing sprain and arthritis later in life.
- Side to side movement of many dances strengthen the weight bearing bones (long bones of legs). It helps in preventing osteoporosis by reducing bone loss.
- Dancing helps you to relax, reduces stress and tension, and elevates the mood by raising endorphin levels.
- Dancing is a great way to meet new people and make new friends.

Measuring Intensity of Physical Activity

How much exercise one is doing in a given time, i.e. intensity of exercise can be measured by some simple methods.

- Talk test
- Heart rate test

Talk Test

The talk test method of measuring intensity is simple. At a light intensity level, one should be able to sing while doing the activity. At a moderate intensity level one should be able to carry on a conversation comfortably while engaging in the activity. If a person becomes winded or too out of breath to carry on a conversation, the activity can be considered vigorous. For example, moderate intensity walking is walking at 50 to 65 % of maximum heart rate, an intensity at which you may be breathing a little harder than usual but able to keep up a full conversation. High intensity is walking at 65-90% of MHR where you are able to speak only in short sentences.

Target Heart Rate (THR) and Estimated Maximum Heart Rate (MHR)

A second way of monitoring physical activity intensity is to determine whether a person's pulse or heart rate is within the target zone during physical activity. For moderate intensity physical activity, a person's target heart rate should be 50–70% of his or her MHR. This maximum heart rate is based on a person's age. An estimate of a person's maximum age-related heart rate can be obtained by subtracting the person's age from 220. For example, for a 50-year-old person, the estimated maximum age-related heart rate would be calculated as $220 - 50 \text{ years} = 170 \text{ beats per minute (bpm)}$. Physical activity heart rate should be between 50–70% of HRmax. The 50% and 70% levels would be: 50% level: $170 \times 0.50 = 85 \text{ bpm}$, and 70% level: $170 \times 0.70 = 119 \text{ bpm}$. So the range for THR is between 85–119 bpm.

Duration of training : 20–60 minutes of continuous or intermittent (minimum of 10-min bouts accumulated throughout the day) aerobic activity. Duration is dependent on the intensity of the activity. Moderate-intensity activity of longer duration is recommended for adults not training for athletic competition. Low frequency– 3 to 4 times a week for 30 minutes.

- **High intensity – low frequency** - 3 to 4 days a week at 65 to 90% of MHR for 30 minutes.
- **Moderate intensity – high frequency** - 5 to 7 days a week at 50 to 65% of MHR for 30 minutes.
- **High intensity – high frequency** - 5 to 7 days a week 65 to 90 % of MHR for 30 minutes.



DR. MANINDER AHUJA

CONSULTANT GYNECOLOGIST AND
OBSTETRICIAN / SECRETARY, INDIAN
MENOPAUSE SOCIETY

“When I look back into my younger age, suddenly I wonder how I evolved into what I am! Today I give talks on Quality of Life issues all over the country; ironically though, I was very far from exercise and physical fitness in my young age. I used to be a bookworm and the words sports and exercise were not in my dictionary.

But things changed when I got married to a doctor who also happened to be a vivid sportsman. As time progressed, I started playing games like table tennis, badminton and swimming along with our kids. However, this seemed not enough, and as a major initiative towards my mid-life management, I decided to join a gym at Faridabad. This was a huge turning point as within 6 months of disciplined training at the gym, my strength and stamina increased and I felt the vitality, balance and agility of a teenager. What more could I have asked for? My passion for dance and its training helped further in aligning the mind with the rejuvenated body.

At that juncture I realized and decided to work on spreading the knowledge about positive effects of lifestyle changes. And after my first talk at the Indian Menopause Society Conference (IMSCON) at Chandigarh in 2006, I was invited as International faculty to Pakistan and there was no looking back after that.

Moral? it is never too late to start! Never limit yourself according to your chronological age; age is a matter of mind and not of body, your body shall keep fit according to your mindset. ”

Anaerobic (Resistance / Strength Training) Exercises

Anaerobic exercises are done with more intensity for a short time. Strength training and sprinting (to cut long distance in short time) are examples of anaerobic exercise. Inclusion of resistance training in adult fitness programs is effective in the development and maintenance of muscular strength and endurance, fat free mass (FFM) and Bone Mineral Density (BMD). The effect of resistance training is specific to the area of the body being trained. For example, training the legs will have little or no effect on the arms, shoulders, and trunk muscles. Thus, resistance training should be performed through a full range of movement (ROM) for maximum benefit, and all the muscle groups should be exercised.

Muscular strength is best developed by using heavier weights (that require maximum or near maximum tension development) with few repetitions, and muscular endurance is best developed by using lighter weights with a greater number of repetitions.

Muscular strength and endurance can be developed by means of static exercises, like Isometric exercises where resistance is increased and length of muscles remains same like pushing your arms against a wall. In Isotonic exercises weight remains the same but length is increased or decreased, like doing biceps curls with free weights. Isokinetic exercises are same but they are done with specialized machines and resistance remains the same throughout the contraction of muscle and is used for treatment of specific muscle injury or for research purposes. These are used for specific treatment purposes.

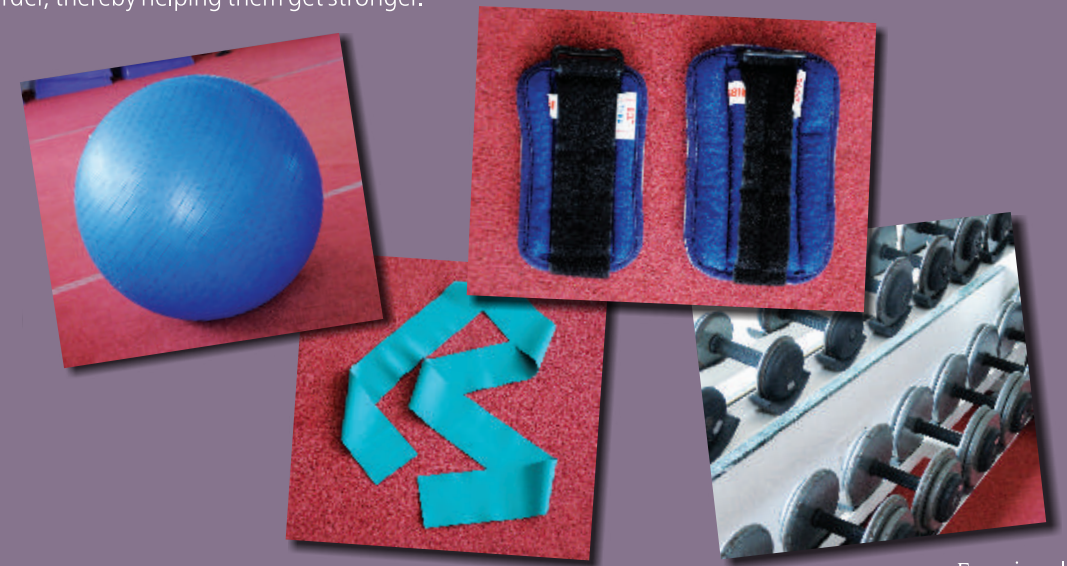
Although each type of training has its advantages and limitations, for healthy adults, dynamic resistance exercises are recommended as they best mimic everyday activities. Resistance training for the average participant should be rhythmical, performed at a moderate-to-slow controlled speed, through a full range of movement (ROM), and with a normal breathing pattern during the lifting movements.

Circuit Training

Circuit Training format utilizes a group of 6–10 strength exercises that are completed one exercise after another in one session. Each exercise is performed for a specified number of repetitions or for a prescribed time before moving on to the next exercise. The exercises within each circuit are separated by brief, timed rest intervals, and each circuit is separated by a longer rest period. The total number of circuits performed during a training session may vary from two to six depending on your training level (beginner, intermediate, or advanced), your period of training and your training objective (preparation or competition).

A circuit should be set up so that you work each body part as follows: Total body, Upper body, Lower body, Core and Trunk, etc. Also, studies involving elderly participants and young to middle-aged persons using lumbar extension exercise and weight training have shown greater than 100% improvement in strength after 8–12 weeks of training. There is no age bar for this exercise, and benefits can be achieved even at 100 years of age to increase muscular strength. Circuit training is an excellent way to improve mobility, strength and endurance.

Overall physical fitness should include a variety of strength exercises. Strength of muscles around joints is important with arthritis; we need strong muscles to lessen the stress on our joints. Strengthening is the use of resistance to the muscular contraction to build the strength, anaerobic endurance and size of muscles. These exercises can help build our muscles so they can absorb shock and protect our joints from injury, as well as help us get around better. These exercises use weight or resistance to make our muscles work harder, thereby helping them get stronger.



Types of Strengthening Exercises: Isometric and Isotonic

Isometric exercises are good for people with arthritis because they work by tightening the muscles without moving the joint. It is easy to target the muscles around the joints with isometric exercises, and that reduces stress on the joints.

Isotonic exercises strengthen the muscles by moving the joint; for example, straightening your knee while sitting in a chair is an isotonic exercise that helps strengthen your thigh muscle. These exercises can also benefit people with arthritis because they can be made easier when we have an inflamed joint or we can make them more difficult when feeling better by adding weights or repetitions. Strengthening exercises should be done every other day after warming up with some flexibility exercises.

When properly performed, strength training can provide significant functional benefits such as improvement in overall well-being, including increased bone, muscle, tendon and ligament strength and toughness, improved joint function, reduced potential for injury, increased bone density, improvement of metabolism, improved cardiac function, elevating HDL (good) cholesterol. Strength training is primarily an anaerobic activity, but can provide the benefits of aerobic exercise also if done through circuit training.

Women lack the hormone testosterone in their body so they cannot develop muscular hypertrophy but can develop a firm 'toned' physique, and can increase their strength through anaerobic exercises. The body's basal metabolic rate increases with increase in muscle mass, which promotes long-term weight loss.

Older people who take up weight training can prevent some of the loss of muscle tissue that normally accompanies ageing and even regain some functional strength and by doing so become less frail. They can start weight training even in their 80s and 90s. It also prevents osteoporosis.

Guidelines for Resistance Training

Resistance training should be an integral part of an adult fitness program. It should be progressive in nature; slowly as strength increases the weight should be increased. It should be individualized. It should provide a stimulus to all the major muscle groups.

Resistance training in the gym settings under the supervision of a trainer is recommended at all ages, for average healthy adolescent, adult and menopausal women. A minimum of 8–10 exercises involving the major muscle groups (arms, shoulders, chest, abdomen, back, hips, and legs) should be performed 2–3 days/week. Multiple-set regimens may provide greater benefits if time allows. Most persons should complete 8–12 repetitions of each exercise; however, for older and more frail persons (approximately 50–60 years of age and above), 5-10 repetitions may be more appropriate.

These exercises can be done with free weights or with resistance pulley machines. These exercises would increase Fat-Free Mass, decrease Fat Mass, increase strength, stamina and vitality. Also, endurance for walking would be increased and sarcopenia, which is hallmark of aging and menopause, would be reversed. Most important is that BMD increases. Strength training is safe for nearly everyone. But it is important to take some precautions like warming up, gentle stretching of all muscles, and cooling down which also make for more effective workouts.



Exercises for Flexibility and Balance

These gentle stretching exercises should be done every day, and are the most important of all exercises. Flexibility exercises can help protect joints by reducing the risk of joint injury. They help as warm-up for more strenuous exercise by getting our body moving, and help us relax and release tension from the body. These exercises can be particularly useful for easing those stiff joints in the morning. Good range of motion exercises includes Tai Chi and Yoga. Work up to 15 minutes of flexibility exercises a day. Once we can do 10 to 15 continuous minutes, we should be able to add strengthening and aerobic exercises to our routine.

Yoga for Maturing Women

Yoga is an art, science, a philosophy and culture. It is a primary daily need of an average woman facing stress of varying conditions of modern life. It not only helps in maintaining and improving physical health but also mental health. It is known that the respiratory, abdominal muscles and pelvic muscles are weaker in a woman, which requires special attention during pregnancy, pre-menopausal and menopausal period. Yoga should be a part of your regular work out. Yoga is absolutely non-violent, providing maximum benefit with minimum waste of energy and fatigue.

Corrective and Therapeutic Values

The asanas and yoga postures provide stretching of shortened and stiff muscles and joints. Therefore, yoga helps in increasing stretchability and mobility of muscles and joints. Yoga stretches can benefit both the body and the mind, bringing energy and balance. This is particularly helpful to women who are currently in menopause or in menopause transition because their hormonal levels and body chemistry may be fluctuating rapidly. This can leave women feeling out of balance and truly victims of their changing bodies. Yoga exercises level out this physiological instability by relaxing and gently stretching every muscle in the body, promoting better blood circulation and oxygenation to all cells and tissues. Yoga can be practiced after proper training from an expert of yoga vidya. If performed without training, it damages the body. Advanced asanas should be done under observation of an expert.



Planning your Exercise Routine

Everyone can benefit from exercise, but it is about finding the right type of exercise for an individual. The most meaningful exercise prescription for older women includes aerobic, resistance, and stretching components. Healthy women can probably undertake an exercise program without medical screening. For beginners who have never practiced exercise, consult your physician and take advice before you start your work out, especially in the following situations:

- Sedentary since long time, a year or more
- Over the age of 65 years
- You have been diagnosed with heart disease, and have chest pain on exertion
- Pregnant
- High blood pressure
- Diabetes
- You often feel giddiness
- Other medical conditions

Aerobic Exercises

- **Frequency of training:** 3–5 days / week
- **Intensity of training:** 55/65–90% of maximum heart rate (HRmax).
- **Duration of training:** 20–60 minutes of continuous or intermittent (minimum of 10 minute bouts of accumulated throughout the day) aerobic activity. Duration is dependent on the intensity of the activity. Moderate-intensity activity of longer duration is recommended for adults not training for athletic competition.

Resistance Exercises should be performed two to three times each week, using free weights or machines. To maximize strength gains and to minimize the risk of injury, women should do progressive resistance exercises with instruction and under supervision until they have mastered the techniques. Appropriate stretching exercises should be performed before each aerobic and resistance session to improve and maintain flexibility.

Exercises for Flexibility and Balance such as Yoga and Pranayam should be included in workout daily for 15 to 20 minutes. It is advisable to do gentle stretching, and pranayam should be done prior to aerobic exercises.

Losing Weight with Exercise

Weight loss is all about burning more calories than you consume. Burning more calories than you eat is not that simple, otherwise none of us would have weight problems. The true secret to weight loss is this: make small changes each day in your diet and workout both, get enough sleep, and you will slowly (but surely) lose those extra kilos. This is to forget about instant results.

To lose one pound of fat in a week, you must burn 3500 calories over and above what you already burn during daily activity, which means you have to lose 500 calories per day. If you are burning 250 calories in your workout, you can cut down 250 calories from your diet.

Normally a middle aged, average built woman will require 2000 to 2400 calories daily depending upon activities. If your goal is one kg. per month you can lose 12 kg. weight at the end of one year. Losing 12 kg weight from your existing weight will make you comfortable and confident and always motivated to maintain it or to lose further in the 2nd year.

Cardio (Aerobic) Exercise to lose weight

The best way to lose weight is combination of cardio, strength training and flexibility program and having right diet at right time. Most of the weight loss programs include cardio exercise because it helps you burn more calories in one session, getting your heart rate up, which means your heart is pumping more blood, you are breathing hard, you are sweating and burning more calories. You can do cardio exercise most days in a week without worrying for injury or over training.

Strength Training Exercises for Weight Loss

Strength training builds lean muscles and raises your resting metabolic rate. To burn the most calories stick with compound movements (that targets more than one muscle group) e.g. squats, lunges, pushups, pullups.

- Target- all your muscle groups at least twice a week.
- Keep your repetitions 4 to 8 with higher weights to build strength, and 12 to 16 with lower weight to build endurance.
- If you are beginner, start with one set of 8 to 12 repetitions of each exercise with a moderate weight adding a set gradually.
- Use enough weight that the last repetition is difficult but not impossible.

Discipline and Regularity are the keys to achieve weight loss results. The best activity is the one you will do regularly. The activity that involves some impact, like power walking, jogging, running will usually boost your heart rate quicker than non-impact activities like swimming or cycling. Aerobic dancing is also with more impact. That does not mean that non-impact activities are not effective.

Always remember, fitness is more important than slimness.

Exercises for Specific Body Parts

Examples of some of the stretching and muscle strengthening exercises are mentioned here which you can do at home after learning and practicing properly from an expert. Intensity and repetitions can be increased according to your capacity. Always warm up before stretching exercises with 5 minutes of walking, static cycling or marching/jogging on the spot. Warm muscles are more flexible. Never stretch cool muscles.



All the exercise demonstrations included in this chapter are performed by Dr. Heena Shah, 51, a practicing orthodontist at Surat.

Apart from being a full time practicing orthodontist, Heena has been a long distance cyclist and cycles every alternate day from Surat to Dumas and back. She has completed 78 kms of non-stop cycling and is a member of Gujarat Cycling Club. She is a sports lover, likes Trekking, Gymming, Wind Surfing and Water Surfing. She has taken training in Yoga and Meditation from yoga guru Mr. Gopal Dawn and practices the same everyday for 45 minutes to 1.5 hours. Her daily activities start at 5:30 am. She loves Music, and is learning Classical and Light music from learned gurus. In addition to all these activities, she also finds the time to write poetry.

Stretching Exercises

Neck Stretching

1. Tilt head from side to side

Let ear touch the shoulder, hold to count of 3 to 5. Now let other ear touch other shoulder.

2. Rotate head from side to side.

Slowly turn your head as far as you can. Count 3 to 5.



3. Tilt from front to back

Tilt your head slowly back as far as you can. Hold to count of 3 to 5. Look down to allow the chin to touch the front of chest.



Shoulder Stretch

This stretch will improve your posture and the flexibility of your back, shoulders and knees. It is a great tension reliever.

Starting position: Stand with your feet hip-width apart, knees slightly bent, and shoulder blades drawn slightly back. Lace your fingers together and then rotate your wrists so that your palms face up. Press your palms out and away from your body until your arms are straight but unlocked, keeping your shoulders down and back.

The stretch: Press your palms away from you until you feel gentle tension across your back and shoulders. Also, be sure not to lock your elbows. Check for tension in your neck-your entire body, except for the parts you are stretching, should be relaxed. Raise your heels and stand on your toes. Hold the stretch for twenty to thirty seconds, breathing normally.

Reps: Perform one stretch. Repeat if desired. You will feel the stretch across your back, shoulders, and arms and knees.



Side Stretch

Stand straight with two arms straight overhead, bend on one side of body gradually. You will feel the stretch across the opposite side of the body, shoulder joint and back of arm (Triceps muscles).

Pelvic Tilt

Starting position: Lie on back, your hand resting under your head. Keep both the knee bent.

Turn your knees to one side slowly towards floor as is comfortable and turn your head in the opposite direction. Hold for 3 to 5 counts. Return to starting position. Pause. Turn to opposite side. Repeat 5 to 10 times.



Back Muscle Stretching

The Cat-Camel Exercise: Part-1

These exercises stretch the entire trunk, and are good for back muscles, legs, arms and to develop a correct posture.

1. Starting Position



2. Lift tailbone allowing lower back, then mid upper back to drop downward. Inhale as you drop tummy towards the floor and keep body weight evenly distributed. Exhale as you bring your tummy back up.



3. Round your back as you tuck your chin in and tuck your tailbone in. Repeat the movements five times.

Avoid this exercise if you have osteoporosis or thoracic hump or slipped disc.



The Cat-Camel Exercise: Part-2

1. Same starting position

2. Tuck your tummy in. Lift your right arm up in front without tilting pelvis. Count 3 to 5. Return to original position. Repeat with opposite arm.

3. Lift right leg up. Count 3 to 5. Relax. Lift left leg. Relax.

4. Lift right leg and left arm up and hold for a count of 3 to 5. Relax. Lift left leg and right arm. Relax.



Stretching exercises for muscles around Knee Joint

Stretching the muscles that support the knee with knee exercises is also important in preventing injury. Flexible muscles are not as easily injured as tight muscles. Tightness of muscles connected to the knee can also pull the knee out of alignment.



Hamstring Stretch
(Muscles of Back of Thigh)

Sitting on the ground, with one leg straight and the other one comfortably bent in front of your body, bend at the waist and lean forward, keeping your back as straight as possible and don't arch it. Reach with your arms towards the foot until a stretch is felt under your thigh. Hold each stretch for 15 to 30 seconds; any less than 15 seconds and the muscle will not conform to the new increase in length. Do 3 reps, 3-6 times a day. Any pain you feel with this exercise should only be a local stretching sensation to the back of your thigh.

Sit in a position of butterfly, keeping the back straight. Hold for a count of 15 to 30 seconds. Repeat 5 times.



Active Hams Stretching

Stand on the back side of a sturdy chair. Stand up taking support with the same hand; bend your other leg from the knee. Try to keep heel nearer to hip joint for a count of 3 to 5.



Stretching of Adductors
(Muscles of inner side of thigh)

Lying on your back use a towel to pull thigh to slightly less than vertical position (80 degrees), keeping upper arms resting supported at your side. Strengthen knee until you feel a pull in the back of your thigh and knee. Hold for 10 to 30 counts. Repeat 5 times. Repeat on other side.

While doing this exercise you can keep one leg bent.



Active Hams stretching (with towel assist)

Starting position. Lie on left side with left leg bent from knee, head supported by left hand.

Raise the right leg up to 45 degree with tummy tucked in and without moving the pelvis. Hold for 3 to 5 counts, relax, and repeat 5 times. Repeat the same on the other side.



Stretching of Abductor muscles
(Muscles of outer side of thigh)



Gluteus Stretch

1.

Stand in front of a chair or a stool with your arms facing in front. Now lower yourself from your hips rather than your knees as if you want to sit on the chair, but don't actually sit down. Hold 3 to 5 counts, relax. Repeat 5 to 10 times.

2.

Lying down on your back, bend your right knee, and place your left leg over the right leg, resting the outside of the left ankle slightly above the right knee. Place your right hand around your right thigh and place the left hand around the inside of your right thigh. Lock the two hands together and pull right thigh towards your chest to achieve a stretch in the left gluteus portion of your buttocks.

Do the exact opposite to achieve a stretch in the right gluteus muscle. Hold each stretch for a minimum of 15 to 30 seconds, any less than 15 seconds will not be effective for lengthening of muscle. Do 3 reps, 3-6 times a day. Any pain you feel with this exercise should only be a local stretching sensation to the back of your thigh and buttocks area, without aggravating your condition. Repeat with alternate leg.



Muscles Strengthening Exercises

Inclusion of resistance training in adult fitness program is effective in the development and maintenance of muscular strength and endurance, fat free mass (FFM) and BMD (Bone Mineral Density). The effect of resistance training is specific to the area of the body being trained. Thus, resistance training should be performed through a full ROM (range of movement) for maximum benefit, and all the muscle groups should be exercised.

Muscular strength is best developed by using heavier weights (that require maximum or near maximum tension development) with few repetitions, and muscular endurance is best developed by using lighter weights with a greater number of repetitions.

1.

Stand facing the wall and push your forehead against your hand. This exercise strengthens the muscles at the back of the neck.

2.

Push your head against hand on one side, repeat on opposite side. It strengthens side muscles of neck. All these exercises should be repeated 5 to 10 times, preferably 3 times a day.



Isometric Exercises of Neck (Exercises done against resistance)



3.

Stand against the wall. Push your head against your hands to strengthen muscles of the neck.

Exercises for Shoulders, Elbows and Wrists with free weights or Dumbbells

Start with half kg weight; gradually increase up to one kg or more depending upon the strength of your muscles. Starting Position : Stand straight with dumbbells in your hands.

Bend the elbows without moving the arm. Count 3 to 5 and come back to original position. Do 5 to 10 repetitions.

Lift both the arms up, up to 45 degree at an angle neither completely in front nor at the side, Hold for 3 to 5 counts. Relax. Repeat 5 to 10 times

Lift both the arms up while breathing in, keeping the elbow straight. Count 3 to 5. Again return to original position while breathing out. Repeat 5 to 10 times.



Bring both your shoulder blades together and extend both your arms backward. Keep your neck and back in natural position. Hold for 3 to 5 counts.

Starting position: Hands bent from elbows towards shoulders

Keeping your elbow bent, stretch the shoulders behind and keep the body straight. This exercise is good for posture, upper back muscles and shoulders.

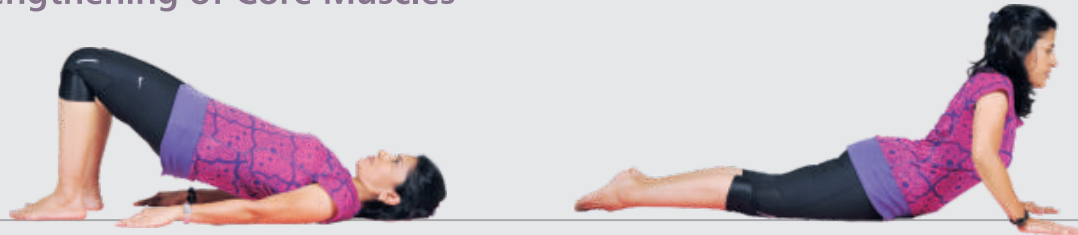
Exercises for the Back

Stretching and Strengthening back muscles in maturing women

In menopause, the weakest part of the skeletal system is the spine, which is the central support system of our body. So, strength of back muscles is of utmost importance, especially in menopause. As our legs and arms also become weak because of loss of muscle mass, if we don't have strong support consisting of back bones and abdominal muscles, our chances of falling down and sustaining fractures are more. Back strengthening exercise along with Calcium and Vitamin D is the key to prevent and treat Osteoporosis. You have to start these exercises at 35 years and beyond, as at this age muscle mass and bone mass start decreasing at the rate of 0.5 to 0.75% per year, and loss increases 3 to 5 % per year after menopause.

Weak muscles cause back pain. They are often at the root of back pain, especially lower back pain. The muscles of the back, the abdomen, and the buttocks all support the spine - these muscles are called the core muscles. Back muscles are the spine's main defense against gravity. Strengthening the muscles that support the spine with exercises, can prevent, reduce and even eliminate back pain. Strong abdominal muscles (especially the deep abs) are as crucial as strong back muscles for supporting the lower back and preventing lower back pain. Strong quadriceps (front of thigh muscles) are important to prevent back injuries when lifting. Proper lifting techniques involve using your legs, and if your legs are weak, you may end up using your back.

Strengthening of Core Muscles



Bridging

Lie flat on the back, keeping your legs bent, feet flat on the floor. Tuck your tummy in and then lift your back up. Hold for 3 to 5 counts, relax. Repeat 5 to 10 times.

Cobra pose or Bhujangasan

Lie on the abdomen. Place your hands under your shoulders. Taking weight on your hands, lift head, chest and abdomen up to umbilicus slowly. Count 3 to 5 times. Repeat 3 to 5 times.

Shortened Muscles Cause Back Pain

Shortened muscles can throw the spine out of alignment and cause back pain. Stretching exercises lengthen shortened muscles and relieve back pain. Tight back muscles, tight buttock muscles, tight muscles in the front of the hip and even tight quadriceps (front of thigh muscles) or tight hamstrings (back of thigh muscles) can affect the alignment of the spine. Stretching the back with stretching exercises also increases mobility of the joints of the spine.



Ardhashalabhasan (Half Locust Pose)

Lie down on abdomen, lift one leg without bending from knee up to 15 to 20 degree. Count 3 to 5. Come to starting position. Repeat on opposite side. Keep chin on floor and neck relaxed.

Purnashalabhasan (Locust Pose)

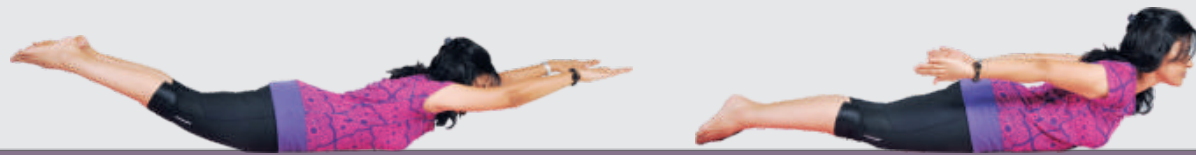
Lie on abdomen, keep legs straight, arms straight under thigh. Lift both the legs straight. Count 3 to 5. Come to starting position.

Sarpasana-1

Lie on the back lift both arms and both the legs straight count 3 to 5. Repeat 3 to 5 times.

Sarpasana-2

Lie on abdomen. Lift head and chest up keeping the arms straight and shoulders drawn back.



The Plank

Lie on stomach, place elbow and arms in a push up position, balance yourself on your toes and elbows. Keep your back and legs straight (like a Plank) and tuck your tummy in. Hold for 5 to 10 seconds. Relax. If this exercise is too difficult balance on your knees instead of toes. This exercise strengthens the whole spine, abdomen, neck, arm and legs.

Ek-Pad-Pavanmuktasan

Lie on your back, keep one leg straight, and bend the other leg from hip and knees towards your chest. Press firmly for 3 to 5 counts. Relax. Repeat the same for other leg. Do 5 to 10 repetitions.



Exercises for Knee

Strengthening the muscles that support the knee with knee exercises is very important in protecting your knees from injury and knee pain. Weak or fatigued muscles cannot adequately support the knee joint or absorb shock before it gets to the knee, and the extra stress placed upon the knee can cause injury to the structures of the knee. Strength exercises should follow stretching exercises.

Main muscle groups affecting knee stability

The Quadricep – is a four parts powerful muscle that runs along the front of the thigh and is attached to the front of the shinbone just below knee. The quadriceps control the strengthening of the knees and movement of the knee cap. It is useful for standing up, climbing up and down, and running.

The Hamstrings – are the muscles at the back of thigh. They are used to bend the knees. Other muscles affecting knee stability to a lesser degree than quadriceps and hamstrings are calf muscles, hip abductors located on outer side of thigh, and adductor located on inner side of the thigh. It is important to do exercise of all the muscles that stabilize the knee and hip.

Quadriceps Strengthening Exercises

Sit on a chair, extend one leg up from the floor. Keep knee straight (as much as possible). Hold for a count of 10. Relax for count 3 to 5. Do 10 repetitions. This you can do with or without 0.5 to 1 kg weight.



Straight Leg Raise (S.L.R.)

Helps in strengthening quads and hips. Lie flat on the back. Keep both the legs straight on the floor. Lift left leg straight. Count 3 to 5 and lower the leg. Repeat with right leg.



Isometric Static Quadriceps Exercise

Lie down on back or sit with back supported by wall, with towel roll under knee. Press towel with knee count 10 and release. Do it 20 to 30 times. Repeat with other leg. Use your front thigh muscle. Don't use hip muscles. Repeat 2 to 3 times or more in a day.



Static Exercise for Hamstring muscles

Keep roll of towel under heel and press the towel with heel. Count 3 to 5. Release. Repeat 10 to 20 times 2 to 3 times in a day.



Front Lunges

Take large step forward with your right leg. Land your right foot on the floor. Keeping body erect, bend both the knees so that your hips drop straight down, your front thigh should be almost parallel to the floor and the knee of your back leg should approach the floor. The knee of your forward leg should be over the ankle, not past your toes. The heel of your back leg will come off the floor. Your weight will be equally distributed between front foot and the ball of your back foot. Hold for 3 counts. Push back with the front leg to return to the starting position. Relax and then repeat the move changing your legs. Do 5 to 7 repetitions with each leg.

Same can be done with the weight in hands to make it more effective.



Strengthening Exercises for Thighs (Quads and Gluteal Muscles)

Stand against the wall supporting back, arms in front, both feet shoulder width apart and away from wall. Tuck your tummy in, tighten your buttocks. Slide down from your knees keeping back against the wall. Make sure your knees do not go beyond your toes. Hold for 10 count.



Taadasan

Stand on your toes. Hold for 10 counts. Come down gradually. Repeat 3 to 5 times. Stand near a chair or a wall in case you want support.

Stand on toes and raise your both the arms up as much as possible above the head. It is a good distraction of spine, good for posture and good for stretching of calf muscle and arms.



Mini Squat

Stand in front of chair and try to sit on the chair by partially bending legs. Count 3 to 5. Repeat 5 to 10 times.



Adductors Isometric Exercise

Press the pillow or a roll of towel between your knees for a count of 5 to 10. Repetitions – 5 to 10.



Good Posture

Whether you are sitting or standing, your body should be relaxed but straight, as if someone had fastened a string to the top of your head and was pulling you up. Check yourself in a mirror:

While bending to take an object from the floor take care of your back.

Wrong posture:

don't bend back to pick up an object from the floor.



Right posture:

bend your knees to reach the object on the floor keeping your back straight.



Exercises for Balance

Stand on toes with hands above the head. It is a good distraction of spine, good for posture, balance and good stretching of whole body muscles.

Walk on the toes . Walk on the heels.

Try to walk on one line with short steps.

Walk backwards. Walk sideways.

Aim to do the balance exercises at least three times per week after your strength training workout. They are a great way to cool down.



Pelvic Floor exercises or Kegel's exercises

The importance of pelvic floor muscles

These are very important muscles for a woman, pregnant or not, young or old. It is vitally important to exercise them regularly. They lie in the base of pelvis like a sling surrounding the openings to the back passage, the middle passage and the front passage. They are an important support system supporting abdominal and pelvic organs. They are muscles through which a baby passes during vaginal delivery.

Learn to control these muscles. Exercise them daily to avoid embracing leakage whenever you laugh, cough or sneeze. If you have never worked your pelvic floor muscles, you may find difficulty in locating them. Practice just once to locate them. While you are urinating, simply stop in mid stream and pull up hard to stop flow of urine.

Keep finger or vaginal cone in vagina and try to contract muscles around it as if you are holding the urine back. Keep thigh and abdominal muscles relaxed. If you contract the abdominal or thigh muscles and don't work on pelvic muscles, these incorrect contractions can worsen pelvic floor tone and incontinence.

Performing Pelvic Floor Exercises

- Begin by emptying the bladder.
- Tighten the pelvic floor muscles, and hold for a count of 10.
- Relax the muscles for a count of 10.
- Do 10 repetitions 3 times a day.
- You can do 30 to 80 repetitions per day.
- Don't over exercise or your muscles may get fatigue, worsening the condition.

If you feel any discomfort in your back or abdomen while doing this exercise you are probably doing wrong. It should be done daily and for lifetime but very importantly during and after pregnancy, and after 35 years. It is very effective in reducing and preventing stress. This exercise can be done at any time in any position, while doing your work in sitting or standing position, even while lying down.

Stair Climbing in Proper Way for Weight Loss and Strength

We come across stairs at many places. So we should use stairs instead of escalators or elevators. As with any form of exercise, it is important to start off slowly and then increase our workouts, and it is the same for stair climbing. To help our body acclimatize to this form of exercise, we should start by limiting ourselves to walking up two flights of stairs followed by five minutes of walking on the spot. At the end of the 5 minute walk on the spot, when our heart rate has come down a bit, we can try walking up another two flights followed by another five minute walk on the spot. This may be enough of a workout for us in the first week or two.

When we start to get even fitter and stronger, then we can go further by lengthening the time of our workouts (doing more sets). Climbing two steps at a time instead of one, adding to our body weight with a weighted belt, weighted vest or carrying dumbbells, reduce our rest intervals, are different ways to increase the intensity of our workout.

Proper stair climbing is one of the best ways of integrating exercise into our daily routine as most of us are doing it or can do it daily. Most Indian women have knee problems and they are because of our habits of squatting on the floor, which damages our knees. Second important cause is improper stair climbing. So here I would like to share with you advantages and techniques of proper stair climbing.

Stairmaster machines are among the most popular pieces of exercise equipment in gyms all over the world but these machines can be substituted by stair climbing in a proper way in our own homes or wherever we find them and some of the reasons are:

- It is totally free and all of us can get access to stairs.
- It is against gravity and the heavier we are, the harder we are forced to work and the more calories we burn.
- It is a relatively intense exercise that quickly increases our heart rate and in doing so, can greatly improve our cardiovascular fitness.
- It helps strengthen and shape our most common problem areas like calves, thighs, buttocks and tummy. Climbing stairs for weight loss and fitness is an excellent exercise.
- It is a very efficient way of burning maximum calories and is good for those of us with limited time to exercise.
- It can easily be mixed with other exercises like walking, skipping and weight training to maximize results, and stair climbing workouts are easy to increase progressively.
- It can be done by almost anyone, regardless of fitness level.
- Because it is weight bearing, it helps build bone strength.
- It is low impact and safe for the knees (provided correct technique is used and a pre-existing condition doesn't exist).



Getting the most out of stair climbing

To get the most benefit out of any aerobic exercise, we should do it at least 3 times a week, for at least 20 minutes per session, at an intensity that elevates our heart rate to between 60% and 90% of our maximum heart rate. For a combined aerobic and anaerobic workout, alternate five minutes of stair climbing with sets of exercises like push-ups, sit-ups, dumbbell curls and presses.

A combined workout example might include a five minute warm-up, thirty to forty minutes of intervals (consisting of 2-3 minutes of stair climbing followed by 1 minute of muscle toning exercises), a five to ten minutes cool-down and stretches. Use music to motivate yourself - wearing a portable radio, CD player or an iPod allows you to listen to all your favorite songs while climbing. Keep an exercise diary and track your progress - nothing motivates like success!

Aerobic versus Anaerobic stair climbing workouts

Depending upon how we use them, stairs can predominantly improve our aerobic fitness or our muscle strength, it is better to keep breathing properly and not to go beyond our aerobic stamina. For strength improvement, it is best to walk up two steps at a time and limit the number of sets of stair climbs we do per workout to between 1 and 5 sets. And instead of running up 20 flights of stairs, it may only be necessary to walk up a total of 15 to 30 steps per leg. We can change styles for our various thigh muscles.

Most important thing to learn is that when we put one foot forward we should lift the back foot and we should bend our knees such that our knees don't go beyond our toes. This way we don't transfer our body weight to our knees and we don't damage our knees.



Tips for working the inner thigh, hips and buttocks using stairs

To work the inner thigh: Stand sideways at the bottom of the stairs, place your hand on the rail (if available) for balance. Lift your right foot and place it on the first step. Transfer your weight onto your right leg as you lift your left leg and cross it over your right and up to the next step. Continue up the stairs in this fashion until you've reached the desired number of repetitions.



To work the buttocks: Start at the bottom of a flight of stairs, step up with your left leg and kick your right leg back (contract your right buttock when you do this), and then repeat with the right leg and left kick. Continue this until you've reached the desired number of reps.



To work the hip abductor (the muscle on the outside of your hip that moves your leg out to the side): Stand on a stair step sideways with one foot on the step. Without bending the supporting leg, lower the unsupported leg a couple of inches by tilting your pelvis, and bring it back up. Repeat 10 times and switch to the other leg.



Safety Tips for Stair Climbing

Generally speaking, stair climbing is relatively safe for most of us, but as with anything it is not totally without dangers.

- Always warm up and stretch before climbing stairs, paying particular attention to the major leg muscles (calves, hamstrings, thighs and buttocks).
- Start out slow and easy, and don't increase your intensity by more than 10% each week.
- Be very careful coming down stairs. Don't come down too quickly and NEVER run down stairs, it's far too dangerous for no or little gain.
- Put your safety first and go at a speed that ensures you don't lose your balance or strain too hard.
- Wear a heart rate monitor so that you can see how hard your heart is working and to ensure you stay within the desired target heart rate, or according to talk test.
- Take lots of water in-between.
- Stop if you feel faint, dizzy or in pain. Take sufficient rest breaks during your workouts.
- Always consult your doctor before beginning any new exercise routine. Do not climb stairs if you have orthopedic or medical complications (such as high blood pressure, etc)
- Maintaining the correct posture while climbing stairs is very important to get the most out of our workout and minimize the chance of injury.
- Cool-down period that allows your heart rate to gradually return to about 100 beats per minute is important.
- Dress comfortably and suitably. Newer synthetic workout fabrics tend to pull moisture away from the body and help keep you cool and dry.
- Always wear appropriate footwear in the form of comfortable, well-cushioned cross-training athletic shoes.
- Always use stairs that have good light and ventilation.

Over Exercise

Over Exercise (over 2 hours of strenuous, non-stop activity on a daily basis) can actually lead to calcium loss in a thin woman. Over exercise can also lead to hormonal imbalance. Increased losses of body fat, brought on by strenuous exercise can cause first progesterone to drop, then depletion in estrogen store resulting in menstrual irregularities. Over exercise can result in an eating disorder like anorexia (loss of appetite). The answer is balanced stretching, aerobic and weight bearing exercises.

How much is too much exercise?

Thirty minutes of moderate exercise three times a week is the minimum you should aim for. About sixty minutes a day of moderate or vigorous exercise is the most you should do. More fitness is required for athletes.

Guidelines for Exercise Safety

Warm up and cool down. The times before and after exercise are critical times for preventing unnecessary pain and injury. By warming up for 5 minutes prior to exercise with gentle activities such as running in place or a slower version of your activity, you can increase the blood flow to inactive muscles and gradually raise your heart rate to its target zone. Similarly, you can gradually lower your heart rate to its resting rate by simply walking for five minutes or so after vigorous exercise.

Stretch. Gentle stretching is actually a part of the warm up and cool down process. Stretching before exercise limbers tight muscles and improves joint flexibility, reducing the risks of strains and sprains. Concentrate on stretching the muscle groups used in your particular activity. Static stretching is also recommended after exercise to prevent muscle soreness and to improve overall flexibility.

Use the Right Equipment. Improper equipment, worn exercise shoes for example, can cause more harm than good. Be sure to check all equipment before and after exercise to identify any repair needs. Be sure to have repairs completed prior to the next use of the equipment.

Use Safety Devices. Helmets, goggles, gloves, mitts, braces, pads and even sunscreen are just a few of the numerous safety accessories available for today's active person. Each activity carries its own risks, and which devices you use will depend on your particular activity. The point, however, is to use them. The awkwardness of a safety piece or the 'looking funny' of a safety piece are inconvenient, but are outweighed by the risk reduction you will benefit from. Use common sense. The most important factor in fitness injury prevention is common sense. Be patient. Rather than suddenly diving right into a vigorous activity, make sure your muscles are conditioned and use the right equipment, safety devices and accessories. Fitness should be fun. The best way to enjoy your activity and prevent unnecessary injuries is to use your common sense.

Areas of Caution

How we Move & Why we Fall?

It is well known that ageing brings an elevated risk of falls and serious injuries, as well as other adverse medical and psycho-social outcomes. In recent years, exercise has been widely promoted as a potential means of reducing the risk of falling in older adults. There is no doubt that exercise and physical fitness are associated with a myriad of health benefits, and that older adults are able to improve strength, flexibility, aerobic capacity and other fitness measures as a result of exercise programs.

Precautions To Prevent Falls

Since most falls occur at home, let's examine some simple precautions to take to make things safer at homes.

Flooring

Check for loose rugs, runners, and mats. Be aware of uncarpeted, slippery areas. Avoid waxing floors, and clean up spills as soon as they occur. Look for obstacles such as electrical cords and other small objects that might present a hazard. Also check carpet edges, and any area where there is a sudden change in ground surfaces (e.g. from tile to carpet).

Stairways

Do the handrails run the entire length of the stairs, and are they sturdy and well attached? Is the area well-lit, with a switch at both top and bottom of the stairs? Are any steps uneven, or in need of repair? Consider the use of tightly woven carpet here, or non-skid treads.

Bathrooms

Grab bars in the shower and tub are a good idea, as are non-skid mats. Check also for poor lighting, and consider a nightlight. (Many falls occur at night, when an urge to use the bathroom sends us running. Consider keeping a flashlight beside your bed.)

Kitchens

Avoid placing frequently used items in hard-to-reach areas, or areas where they have to bend over. Better to place items within easy reach. Avoid climbing if possible, but if it is must, make sure their step stool is stable, with a handrail and wide steps.

Keep all rooms free from clutter, especially the floors. Check the condition of shoes, and avoid loose-fitting items such as sandals and slippers, high heels, shoes with excessive cushioning, and stocking feet. Make sure eyeglasses are properly fitted and of the correct prescription. These simple measures can make a world of difference in helping to avoid accidents and falls.

KAAJAL OZA-VAIDYA

(WRITER / ACTOR / ANCHOR)

“ I don't know when my mother encountered menopause, and I don't remember anybody explaining me the seriousness of menopause in a woman's life. It was only when Dr. Maltiben gave me a broad insight into the process of menopause and its effect on a woman's body and mind, that I realized that just like beginning of menstrual cycle on the advent of adolescence is a process; similarly the ending of it is a process too.

After my first tubal pregnancy (ectopic) and two caesareans, at the age of forty, when the doctor suggested hysterectomy for me, lot of people warned me about the effects of it on the body like weight gain, and issues related to physical fitness and sexual life. And I remember that lot of times due to excessive bleeding during my menstrual period, my haemoglobin count used to come down to just 8. Hence, I decided to get it done and informed my husband Sanjay about it. The doctor insisted that I should take permission of my husband, however, I was amused to think why I needed somebody's permission to get rid of an organ of my body which is giving me lot of pain!

Anyway, since the hysterectomy, at 45, I am very healthy. I regularly work 16-18 hours a day, and hardly feel bored since I keep myself very busy. I haven't put on any weight, my mind is peaceful and balanced like never before. Physically, I am very fit and can easily climb a four storey building, walk about 2-3 kilometers, and for my performances, I do not feel exhausted even after traveling for over 14 hours. I strongly believe that the real secret behind this health and fitness are my disciplined and balanced food habits. One should not deprive oneself from the food of choice, however, it's equally important not to feel guilty after you've hogged it. I relish everything... cheese, chocolate, ice-cream, sweets, pastry, spicy, fried... just everything! I don't shy from either soft drinks or hard drinks! However, having said that, I also try to avoid all of the above as much as possible. I always try to finish my dinner by 6.30 pm. If I have been traveling extensively for work/performances, the menu for the week after my return would consist of khichdi-moong-juice-buttermilk-soups. I am particular about fulfilling my body's requirements for Vitamin E, Beta Carotene, Calcium, Iron and Folic acid through my food. I drink about 5 litres of water every day.

My mantra for life is 'Live, Love and Laugh!' ”

Diet & Nutrition

When I was struggling for reduction of my weight, I attended a workshop by Rujuta Diwekar. I felt it was very scientific, and tried to follow her principles of having the right diet at the right time (which I have discussed later in this chapter). Not only did I lose weight, but I was feeling more fit and energetic. I improved my bone mineral density too, and today at 68, I have normal bone density, of course with the right medication and supplements according to the advice of my orthopedic surgeon, Dr. Ritesh Patel.

Nutrition Basics

Eating a balanced diet is the foundation of good health. Between the late twenties and mid-thirties is a crucial time for weight gain. As we age, our basal metabolic rate (BMR) slows down, we do not burn up calories easily, and it gets more difficult to lose weight. Our health at mid-life has its roots in our teens, twenties and thirties. It is during these decades that we need to start taking enough bone-building minerals, getting proper and consistent exercise, cultivating good dietary habits, have adequate sleep, and develop a healthy lifestyle.

Menopause can be a positive motivational factor to make the dietary and lifestyle changes that will ease not only our passage through menopause, but benefit our health for the rest of our life. Let us first understand what a balanced diet is – where do we get our nutrients from, how much of which nutrients to consume.

Our diet consists of two types of nutrients: Macronutrients and Micronutrients.

Macronutrients –

- Carbohydrates	50 % of daily calories	1 gm contains 4 calories
- Protein	30 % of daily calories	1 gm contains 4 calories
- Fat	20 % of daily calories	1 gm contains 9 calories
- Water	no calorie	
- Fibre	no calorie	

Micronutrients –

- Vitamins - Vitamins A, D, E, K, C and B Complex
- Minerals - Calcium, Iron, and other minerals such as Selenium, Zinc, Chromium, Magnesium, Manganese, Copper and Iodine



Carbohydrates

Carbohydrates are required for providing our body with energy for our routine functioning. Besides, they play the following very important roles :

- Synthesize and form our DNA and RNA
- Synthesize hormones and fatty acids such as cholesterol
- Generate powerful antioxidants and protect our cells from damage and ageing
- Help hormone and immune functions
- Because of their fibre content, they regularize bowel function.
- Help in the functioning of our brain cells and neurons.

If we are hungry for a long time, we feel irritable; lose our sense of reasoning and judgment. Carbohydrates are found in all plant foods like fruits, vegetables, grains, legumes, sugar, honey; as well as in milk and milk products. Carbohydrates are classified as simple and complex. They are classified by their glycemic index (GI) and glycemic load (GL).

High GI or fast carbs lead to a quick sharp rise in the blood glucose levels and low GI or slow carbs lead to a slow steady rise in blood glucose levels. High GI foods (fast carbs) get converted to fat quickly and low GI foods (slow carbs) have a much better chance of getting utilized for energy instead of getting stored as fat. Carbohydrates help in burning fat. In fact, in the absence of carbs, fat cannot be utilized for energy.

Selection of Right Carbohydrates

Include slow carbs in your food. Carbs that retain their fibre are low on GI, e.g. if you look at brown rice and white rice, the main difference is in the fibre content. Brown rice contains all the fibre, and that is why it has higher nutrient content and better fat loss properties, while white rice has lost all its fibre because of processing, so it is high on GI and low on fat burning properties. Other low GI foods are jowar, barley, bajra, nachani, legumes, dals, whole-wheat, vegetables, and fresh fruits. All sweets, biscuits, pizzas, pastas, processed juices, jams and jellies are high on GI because they have no fibre. Your body can take high GI food only after exercise, when your body needs instant sugar.

Restricted carbs in dieting may reduce weight but that also reduces your health. Low carb diets lead to depletion of Serotonin – a neuro-transmitter in the brain responsible for the feeling of well-being, happiness and satisfaction. Carbs help you burn fat, keep your bowels clean, reduce bloating and aid metabolism.





Protein

If we remove the water content of the body, 50% of our body is made up of protein. Protein is required for development and growth of our body up to the age of 22 years, and after that to repair and regenerate the cells of our body. It has many roles to play in our body.

- It is used in making muscles, antibodies, tendons, ligaments, cartilages, bones, and blood.
- It is also used in making various hormones and enzymes.
- It is useful to maintain health of hair, nails and skin.

Amino acids, which are the building blocks of protein, are what make up all the different parts of our body. Protein requirement varies at different stages of life. Young and adolescent children, pregnant and nursing women, ageing and/or stressed individuals require more protein than 1 gm/kilogram of ideal body weight. Average middle-aged women require 1 gm/kilogram of their ideal body weight per day.

Selection of Right Protein

Protein is found in all meat, fish, eggs, legumes, milk and milk products, nuts, and soy. Whey protein, a powdered milk product has the best biological value, and can be used to meet your daily requirement of protein. The body wastes about 40% protein in just few days of experiencing mental stress such as due to surgery, or prolonged sickness. During this period not only protein but total quantity of calories should be added. When your protein intake is adequate you will feel strong, sleep well and look great.

Proteins you should never eat (as they contain more saturated fat) include sausages, processed meats, beef, lamb and pork. Proteins to eat through the day that ensures optimum fat burning and sustained release of blood sugar are eggs, fish, chicken, all milk products (paneer, cheese, yogurt, milk), soy milk, tofu, sprouts, lentils and nuts.

Proteins should be consumed after exercise or any stressful activity in the form of protein shake made from good quality protein powder, or 4 to 5 egg white. The protein shake/eggs should be consumed within 10-20 minutes of completing your workout.

Fats

Fat is the only nutrient that can help us survive through the toughest phases of our life. Other than survival, fat also performs following functions in our body :

- Transports vitamin A, E, K, and D, which are known as fat-soluble vitamins.
- Prevents loss of body heat.
- Stimulates flow of bile and emptying of the gall bladder.
- Is a part of protective sheath of nerves and helps in nerve transmission.
- Is required for the normal growth of fetus and milk production in pregnant women.
- More than 60% of brain tissue is composed of fat, and it helps in function of brain.
- Lubricates joints.

There are two types of fats :

- **Saturated Fats**
- **Unsaturated Fats**

Saturated Fats

These are solid at room temperature: butter, animal fats (especially red meat), milk and milk products, coconut oil and palm oil. Animal fats contain long chain fatty acids, which are hard to digest and damage cardiovascular health. Ghee (which is clarified butter) has short chain fatty acids, which are easy to digest and promote good health. As a rule, the fat in the animal fats are tough to digest, while the ones found in dairy products are easily absorbed.

Unsaturated Fats

These fats are liquid at room temperature; including all oils except coconut oil. Just like proteins have essential amino acid or EAA, which cannot be synthesized by the body and need to be provided to our diet, fats also have essential fatty acids which are required to maintain optimum health. Unsaturated fats are further divided in to three groups.

Mono Unsaturated Fatty Acids (MUFA)

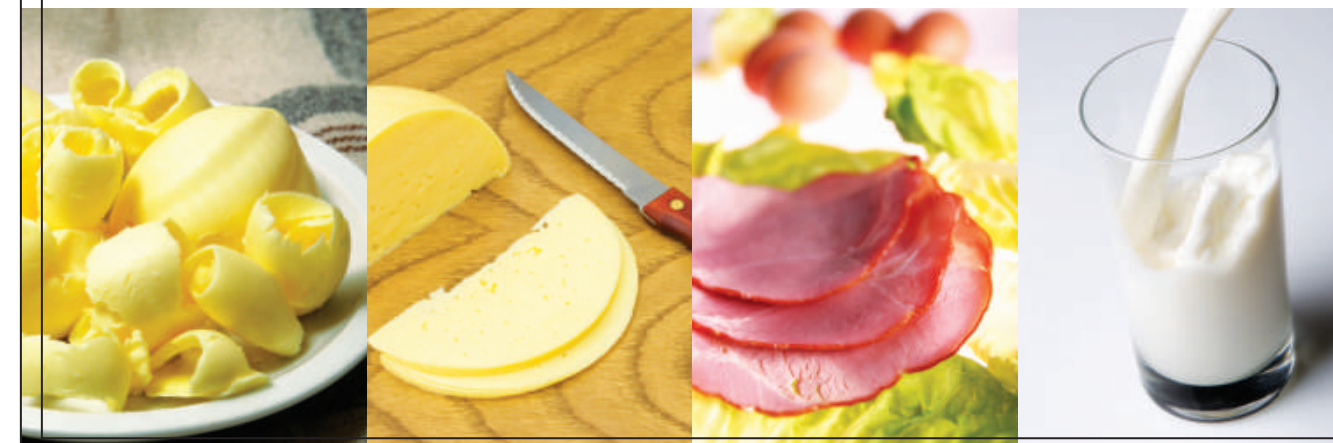
These are present in vegetable sources such as olive oil, canola, almond oil and groundnut oil. They lower LDL without lowering HDL cholesterol and do not raise triglyceride levels. These are found in peanuts, olives, avocados, almonds. They are very crucial in maintaining the health of the heart. Peanut oil and rice bran oil, have strong content of MUFA. Oleic oil (content of MUFA) is good for moisturizing skin, and some hair growth vitamins are made with it.

Poly Unsaturated Fatty Acids

These comes in two types: Omega 3 and Omega 6. Omega 6 is found in sunflower, safflower (kardi) and soybean oil. Most vegetable oils are predominantly (PUFA). Omega 3 is found in flax seeds (alsi), walnuts, mustard oil, canola oil, soyabean oil and the oils in fish. Polyunsaturated fats have heart-protecting values. We should have equal amount of omega 3 and omega 6 fatty acids. A skewed ratio of Omega 6 to Omega 3 can lead to the hardening of arteries and increase in cardiovascular diseases.

Trans Fats

This is a new kind of fat, which was created to preserve food and give texture. It is made by converting unsaturated fat into saturated fats by a process called hydrogenation. Trans fats are commonly used by restaurants, fast food chains and commercial purposes as it is cheaper. Most processed foods such as cakes, biscuits and fast foods such as pizzas, burgers and fries have these kinds of fat. This fat increases LDL - low density lipo-protein or bad cholesterol, and is the kind of fat that is best avoided. Trans fats are responsible for the hardening of arteries and obesity related diseases.





How to Eat Fat

It is not just enough to eat food cooked in oil, but include nuts, cheese, paneer, ghee or any other dairy product in your diet. For a lean, toned body, healthy heart, supple skin and lustrous hair, fat has to be made a part of all three main meals. Including fats in your diet is also known to reduce mood swings. It also provides your facial skin with the moisture and raw material that it needs to keep from wrinkling. Fat also helps you to burn body fat effectively thereby not allowing your body fat level go up. **So eat fat to lose fat.**

Limit deep fried stuff but don't avoid it completely. Deep fried but homemade food is advisable. Take it once or twice in a month. Reuse of oil should be avoided. Avoid excess salt and soda-bi-carb in food. Fat that you get from red and processed meat, fat in deep fried food, mithai - especially made of nuts, biscuits, cakes and pastries, and pizza are best avoided. All these things should be taken occasionally, and whenever taken, it should be in the earlier part of the day as a small snack, or after a good workout.

Fats you should take through the day, which ensure optimum fat burning and sustained release of blood sugar – nuts, olives, milk and milk products (cheese, paneer, ghee, yogurt). Oils can be used to prepare food, ghee as seasoning and the rest as meals by themselves, in a right quantity. If you feel dull after a main meal, have fatty acids supplements which contain omega 3-fish oil or flaxseeds. Fat should be taken in the proportion of -

1 : 1 : 1
Saturated Fat : MUFA : PUFA

Which Cooking Oil should you use?

We should know the difference between filtered oil and refined oil before deciding about which cooking oil to use. Filtered oil involves a process where the seeds from which the oil is extracted are subjected to lower temperatures than “refined” oils. Lower temperature means less damage to the fat soluble vitamins like A, D, E (rich in antioxidant properties), less damage to the molecular structure of fatty acid bonds in the seed (heart protecting properties), and the need to use good quality seeds because the smell and impurities will not be destroyed at low temperature.

Refined oil is prepared in an economical way by using solvents, high temperature and technology to extract maximum oil from the seeds. Because the squeezing is so complete, they can use a lower grade of seeds. While processing naturally existing antioxidants are destroyed and molecular structure bond within fatty acids are changed which can be potentially damaging to the heart. These oils are added with antioxidants and vitamins from outside.

So use 'filtered' or cold processed oils to get maximum nutrients from your oil.

Combinations of Cooking Oils

Use of more than one source of oil gives an additional advantage of providing greater variety of minor components present in oils which may enhance their antioxidant properties. The various combinations possible give the consumer the option to select oils according to their pattern of purchase and culinary habits. Government of India has permitted admixture of any two edible vegetable oils, which are available in the market. Such blended oils can ensure optimal balance of fatty acids.

Some recommended combinations of oils and their proportions for optimal health benefits include:

Groundnut Oil : Mustard Oil	3 : 1	Safflower Oil : Palmolein Oil	1:2
Groundnut Oil : Canola Oil	2:1	Sunflower Oil : Palmolein Oil	1;1
Groundnut oil : Soyabean Oil	2:1	Sesame Oil : Palmolein Oil	1:1
Palmolein Oil : Soyabean Oil	1:1	Safflower Oil : Groundnut Oil	1:3
Safflower Oil : Palmolein Oil : Mustard Oil	1:1:1	Sunflower Oil : Groundnut Oil	1:3
Sunflower Oil : Palmolein Oil : Mustard Oil	2:1:1	Sesame Oil : Groundnut Oil	1:3

Fibre

This nutrient in our diet not only prevents constipation and regularizes digestion, but also prevents you from overeating. It is zero on calories and just adds bulk to your intake of food. It is clear that fibre has many benefits for all of us. It clears the stomach, keeps body lean and maintain good fitness level. Try to take fibre-containing food in combination with fat containing food. Gaajar ka halva is a better digested sweet than kaju katri. We find fibre from unprocessed wholesome foods, which are naturally rich in fibre like brown rice, whole wheat, barley, ragi, jowar, bajra, chhole, legumes, nuts and sesame seeds, green vegetables and fruits. Cut down white bread, burger, biscuits, pizza and maida (refined flour) in any form.

Avoid over cooking subjis and killing fruits and vegetables in the juicer.

Tips for adding fibre to your diet

- Choose fresh fruits rather than canned fruits or juices. Raw foods contain more fibre than processed ones.
- Choose whole-grain cereals and pulses.
- Leave the skins on fruits such as apples, pears and peaches.
- Leave the skins on vegetables such as potatoes, squash and carrots.
- Have a salad every day.
- Use brown rice rather than white rice.
- Choose raw vegetables and fresh fruits for snacks.
- Have a serving of dried beans or peas daily.
- Eat foods in their most naturally occurring state.

Water

Water is the most important nutrient in our body (for survival). Water is the primary transporter of nutrients in the body. Without water you cannot use the nutrients that come from carbohydrates, protein and fat. About 70% of our body is water. We cannot survive without water for more than 4 or 5 days. Any dehydrating condition impairs circulation, reduces muscle tone, joint and bone health, and leads to overwork of kidneys, heart and lungs. Enzymes, digestion, circulation, even fat loss are slaves to adequate level of hydration in our body.

How much water you should take? Drink enough so that your urine is always crystal clear, not light yellow, dark yellow or reddish. There are many ways in which water escapes from the body - urine, excretion, sweat, and breathing. The way to hydrate ourselves is by sipping water all the time as against drinking large quantities at a single go, and by eating wholesome unprocessed food. Try to drink 4 to 5 liters of water daily.

Some elderly women have fading sense of thirst and may go for long periods without fluid. Others avoid liquid for fear of incontinence. Dehydration can result in mental confusion, headaches, and instability. So elderly people should take some fluid at regular interval even if they are not thirsty.



Micronutrients (Vitamins and Minerals)

All vitamins and minerals play an extremely important role in our body as catalysts, enzymes and coenzymes (which help enzyme and co-factors of our metabolic process). Vitamins and minerals don't provide any energy or calories to our body but they help our body to use energy from calories well.

A high intake of processed food, stress and other lifestyle factors like smoking, incomplete rest and inactivity are increasing our need for vitamins and minerals. None of these nutrients can work in isolation; calcium needs vitamin D and magnesium to perform its work, while iron needs adequate amount of protein, vitamin B and C to form hemoglobin. You will need a well-rounded diet, and regular exercise to be in a relaxed state, and to improve the efficiency of micronutrients.

Vitamin A

It is found in whole and low fat milk, leafy vegetables, all the orange and yellow vegetables, and in the liver and kidney. Forms of vitamin A found in plant sources are called carotenes. We need it because it supports our immune functions, helps improve eyesight, is crucial for the growth and development of our body, and is potent antioxidant, which protects cells against free radicals. Carotenes also help prevent cancer and maintain a healthy reproductive system. The best time to take supplement of vitamin A is after the most stressful period of the day.

Vitamin D

It is the sunlight vitamin; our skin when exposed to sunlight produces it. The best time for sun exposure is around sunrise (when the sun is not harsh and harmful to the skin). We can also get vitamin D from milk, egg yolk, fish and green leafy vegetables. We need it because it helps in absorption of calcium. Deficiency of vitamin D produces weakness of bone at any age, rickets during childhood and osteoporosis in elderly. It helps in preventing cancer of breast and colon. So take daily dose of vitamin D by exposing your skin to early morning sunrays for 10-15 minutes.



Vitamin E

It is found in polyunsaturated vegetable oils like corn, soy, sunflower, safflower oil and seeds, nuts, and whole grains. Processing and overcooking foods drastically reduce their vitamin E content. Therefore, when you make maida out of whole-wheat or pulp your vegetables as you do in pav bhaji, there is almost no vitamin E left in them. Green leafy vegetables, berries, tomatoes and asparagus are good sources of this vitamin. We need it because it protects the heart, keeps the skin young, prevents nerve and muscle weakness, and is a powerful antioxidant. It can be useful in higher dose in treating hot flushes too.

Vitamin K

It is found in green leafy vegetables like green peas, green tea, oats as well as in whole grains. Vitamin K deficiency is rare. We need it because it plays important role in the blood clotting mechanism.

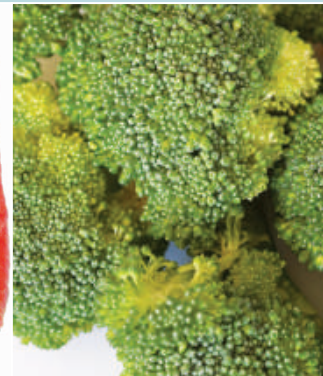
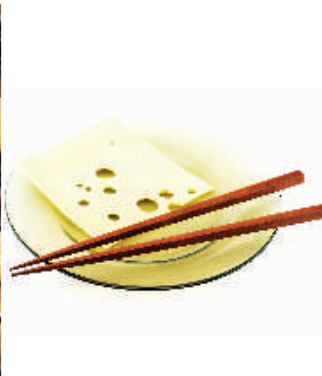
Vitamin C

It is found in most fruits and vegetables. Human body cannot make this vitamin in the body but there is plenty of vitamin C in most of the food we eat. Vitamin B and C are water soluble so they are also depleted as our body loses water. Vitamin C can be easily lost by cutting fruits and vegetables. We lose it more when keep them covered in refrigerator. So cut the fruits immediately before you want to consume. We need Vitamin C because it is crucial for our immunity. It helps in preparing hormones, regulates respiratory functions and is also a powerful antioxidant. It has a supporting function with vitamin E in protecting against heart disease. Take it as a regular supplement. It is vital if you are smoker, have hectic social life and have lot of stress.

Vitamin B Complex

This includes many vitamins clubbed together: Thiamin (B1), Riboflavin (B2), Niacin (B3), Pantothenic acids (B5), Pyridoxine (B6), Biotin (B7), Folic acids (B9), and Cobalamine (B12). It is found in fresh fruits, vegetables, whole grains, nuts, eggs, fish and cheese. Of these, B12 is found in non-vegetarian sources, so vegetarians have to take extra care to include this vitamin in their diet as a supplement. Curd and cheese have good level of vitamin B created through fermentation process. We need it because it helps in metabolism and digestion, improves nerve function and prevents depression. Vitamin B6 and B9 (folic acid) diminish risk of heart disease, whereas B12 reduces depression. Take it as supplements at the start of your day so that you can utilize it throughout the day.

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Minerals

Calcium

It is found in dairy products, tofu, green leafy vegetables, nuts, and in fact in almost all wholesome foods. We need it because it maintains the health of bones, joints and teeth, is responsible for all muscular contraction, for clotting of blood and regulation of blood pressure. It helps in absorption of B12. Take it as a supplement daily. Calcium is essential in maintaining blood pressure and bone health. Diet rich in processed foods, caffeine, alcohol, sugar, sodium, aluminium containing antacids and regular laxative reduce absorption of calcium.

Calcium requirement - from 10 to 18 years of age - daily 1300 mg
from 19 to 65 years of age - daily 1000 mg
After 65 years - daily 1300 mg

Calcium should not be taken more than 2000 mg per day. It may produce urinary stones in high doses.

Iron

It is found in meat, fish and eggs, green vegetables (particularly leafy), green peas, dark fruits, bajra, jowar, other whole grains, date etc. For iron to be absorbed effectively, we need adequate amount of vitamins C and B12 in our body. Processed foods, sugar (mithai, chocolate, dessert) caffeine, anti-depressant drugs, sodium, reduce absorption of iron. We need it because it is a part of hemoglobin, which transports oxygen from lungs to different parts of body and carbon dioxide from different parts of the body to lungs.

Other Minerals – Selenium, Zinc, Chromium, Magnesium, Manganese, Copper, Iodine

These minerals are gaining importance as they are necessary to prevent diseases; they have antioxidant and fat burning properties. They increase insulin sensitivity. They are found in fish, eggs, whole grains, and fresh vegetables.

Zinc and chromium are very important for good skin and hair growth, to prevent acne and wrinkles. Zinc also plays a role in normal testosterone function and aiding muscle growth. **Copper** is necessary for optimum iron absorption. **Selenium** is vital for protection against free radicals. It decreases the incidence of breast cancer and improves immune system while **manganese** is responsible for thyroid function and blood sugar control. **Magnesium** helps lower blood pressure, and lower LDL, to improve mood, and bone density. **Glucosamine** repairs damaged cartilage and helps in treating osteoarthritis.

Iodine is required for proper function of thyroid gland which helps in burning of fat and reduces obesity. It is found in iodized salt or the grains cultivated in properly iodized land. Long term deficiency causes Goiter (an enlargement of thyroid gland).



Supplements and Functional Foods

There are 46 essential nutrients that are critical for total body function. These include 20 minerals, 15 vitamins, 9 amino acids (the building blocks of protein), and 2 fatty acids (the building blocks of fat). These nutrients cannot be made from other substances; we must get them in the natural state from foods, or in some cases, dietary supplements. Dietary / food supplements are concentrated sources of nutrients or other substances with a nutritional or physiological effect whose purpose is to supplement the normal diet. The supplements that we need on a regular basis are vitamins like A, E, C and B and minerals like selenium, zinc, chromium and calcium. It is better to take calcium before you get fracture and vitamin E before you get heart attack. If they are good for recovery, they are even better before the damage, to maintain good health.

A functional food is any food that has positive effects on a person's health, physical performance or the state of mind. They are not capsules or pills, but are a part of the normal food pattern. A functional food acts as antioxidant, detoxifying agent or blocking or suppressing agent. Food rich in fibre helps in excreting harmful substances. Probiotics help in maintaining intestinal bacterial balance. Food, not the nutrient – plays an important role in the prevention of disease and promoting health. Natural antioxidants are easily absorbable in the body. Some of the foods which are considered as rich sources of antioxidant phytochemicals are garlic, onion, ginger, oats, sweet potato, soyabean, tea, oilseeds herbs and spices.

Sources of Nutrient Oxidants

Nutrient	Sources
Beta Carotene	Green leafy vegetables, ripe yellow fruits like papaya, musk melon, mango, carrots, pumpkin, etc.
Vitamin C	Citrus fruits like orange, lemon, sweet lime, guava, gooseberry, and also sprouted pulses
Vitamin E	Cereals, cereal products, oil seeds and nuts
Selenium and Zinc	Meats, sea foods, and cereals
Copper	Oysters, liver, mushroom, nuts, chocolate
Iron	Meat, liver, green leafy vegetables, cereals, millets, pulses

These nutrients are not synthesized in the body. If not acquired from diet, they can be supplemented.



Rujuta Diwekar's Four Principles of Eating Right

After knowing the basics about nutrients, we should know how to take them in the right way so as to gain optimal health benefits. The most scientific way of taking food suggested by Rujuta Diwekar (a renowned Nutritionist of India) in her book "Don't Lose Your Mind, Lose Your Weight" is very important for middle aged women, as taking food in this way primarily improves the Basal Metabolic Rate (BMR), which is one of the reasons of weight gain at this age.

Rujuta Diwekar works out of Mumbai, practises yoga in Rishikesh, ideates in Uttarkashi and treks in rest of the Indian Himalaya. Winner of the Nutrition Award 2010 from Asian Institute of Gastroenterology, she is amongst the most qualified and sought after practitioners in India today and the only nutritionist to have accreditation from Sports Dietitians, Australia.

In the plethora of diet fads and fears, Rujuta's voice rings loud and clear, urging us to use our common sense and un-complicate the act of eating. Cultivate a habit of taking healthy food, substitute quantity with quality in your diet, instead of taking three meals divide your daily diet in 6 to 7 meals, don't miss your meals, never do crash diet, take adequate water - are only some of her weight loss tips. Rujuta has suggested the following Four Principles of Eating Right.

Principle 1

Never wake up to tea or coffee.

Instead, eat real food within 10 to 15 minutes of waking up. When you sleep, your blood sugar levels drop in the night. When you wake up, your liver stores are almost empty. Low blood sugar is also a reason why we feel low in the morning. The body sometimes takes to wasting or breaking our muscle down to keep our sugar from dropping to abnormally low levels. To be able to burn fat effectively, you have to train your body to preserve lean tissue (muscle); as soon as we get up, to try to keep blood sugar up we must eat real food – something that will lead to slow and steady increase in our blood sugar levels. This increases sensitivity of insulin, which facilitates our hungry cells to get the nutrient and increases our BMR.

Any stimulant like tea or coffee which has caffeine (in all varieties, with or without milk, with or without sugar) increases the blood pressure, heart rate and respiratory rate and the body feels stress and kicked and we mistake this for feeling awake. In the morning, the heart and breathing rates are at lowest as this is the reflection of relaxed state of mind and body. Real food keeps the system relaxed. Start your day with any seasonal fruit within 15 minutes of getting up. You can take tea or coffee with your morning breakfast. Always take healthy, fresh and heavy breakfast, which is rich in fibre. It is important to remember that stress is biggest enemy of an efficient digestive system and the fat burning process.

With sunrise, the metabolism peaks up. This is the time to eat and eat big. If you are not used to take morning breakfast, start with the fruit. After one hour, take your breakfast. Eating first thing in the morning will lead to:

- Increase in blood sugar and energy level, which will lead to an
- Increase in metabolic rate and fat burning and
- Decrease in acidity and bloating and will
- Reduce chances of overeating later in the day, means less chances of getting fat.



Principle 2



Eat every two hours

You will be able to follow Principle 2 if you follow Principle 1. Eating first thing in the morning lays us the foundation to efficiently receive hunger signals from our body. Instead of eating twice or thrice in big quantity, when we eat every two hours it goes without saying that we will eat small. So calories you consume every time will also be lesser. Calories consumed should be proportionate to your activity level. Not eating for long hours (more than 3), or starving is an act of punishment. When our body gets fewer calories at a time, they are utilized better and not stored as fat. So in short, eating after every 2 hours will lead to:

- A conducive environment in the body to burn the fat
- Fewer calories converted to fat
- Less dependence on stimulants
- Smarter thinking as brain gets a regular flow of sugar
- Flatter stomach, no need to hold on to fat stores.

Now how does this work? It is not that complicated. All we are doing is 3 main meals (breakfast, lunch and dinner), cutting the portions, and then adding some in between meals to these core meals. You start with fruit for meal 1, and you can have your traditional meal upma paratha, idli, dosa, boiled egg, etc. After that, lunch should include no more than three things, for example roti, subzi, dal or rice, curd subzi or any other combination you like. Don't include meat if you are working, instead you can add in the dinner. Dinner should be light like roti subzi or dal subzi. For all in between meals eat only one thing at a time: peanuts, cheese, nuts, milk, or lassi, coconut water with cream, fresh fruit, boiled egg or omelette, salad, protein bar, sprouts salad, yogurt, soy milk or whey protein. These foods are wholesome and are higher in protein content. Food should be individualized but these are general guidelines. Again, it is not difficult to plan out. Main meals do not require major planning. Other foods you can keep in your purse or you can store in office fridge or in your desk. Taking those small meals requires only few minutes.

Principle 3

Eat more when you are more active & less when you are less active.

You have to follow principle 1 and 2 if you want to follow no. 3. Only when you eat all the time you can vary your meal size according to your activity. When you are in touch with your system, it will want more food when you're more active and less when you are not so active. The metabolic rate is more in the morning than it is post sunset. So you should eat more in the first half of the day. Time of the day and activity affect our calorie burning. Mornings lead to higher calorie burning in the body. Cheese, paratha, peanuts paneer, banana, mango, potato, rice, etc. are misunderstood only because they are taken at the wrong time. None of these foods are fattening if they are taken at right time. Avoid dessert post dinner. If you like to take dessert including chocolate, take it post exercise or in the morning hours as one of your meal in moderation.

Avoid coffee after dinner because it will come in the way of your sleep, it will interfere with the digestion, especially in the absorption of minerals like iron and calcium and on low levels of calcium and iron, fat burning suffers. Coffee makes your stomach acidic so you wake up bloated and constipated.

Skip the alcohol—There is no place for alcohol when you are trying to lose weight at mid life, not only is alcohol packed with empty calories, but its effect is amplified because it also speeds up your fat storing hormones and shuts down your fat burning hormones. Alcohol is extremely dehydrating. If you want to take alcohol, drink not more than once in a week, not more than 60 ml, not with empty stomach and take a lot of water with alcohol.

Any type of physical exercise, intensive thinking and work involving concentration, times of stress, traveling and illness would also be high demand periods. Low activity means any time you are passive, or relatively inactive, not using your mental energies, like watching TV, making small talk on phone, checking emails, any activity which require less physical or mental energy. We need to up our eating during high demand periods and cut down when relaxing.

To summarize:

- Eating more food when you are more active will make your body an efficient calorie burner.
- Which will increase the metabolic rate of your body
- This will help you stay energetic through the day, and will help you lose fat more effectively.



Principle 4

Finish your last meal at least 2 hours prior to sleeping.

Simply an extension of principle 3. We need to start eating less post sunset and as our activities wind down. Basically your activity is lower than what it was in the morning, so is your metabolism, and digestion capacity of your stomach. The worst thing of course is eating a lot at dinner time and then sleeping immediately.

Eating the last meal 2 hours before bedtime is crucial for long term health, increase in muscle and body weight, decrease in fat weight, that glowing complexion, and restful sleep and clear bowel in the morning. But it requires serious and permanent change in lifestyle. The day you wake up feeling hungry with an urge to clear the stomach, know that you have started on the path of permanent 'results'. Hunger is a sign of youth, health, happiness and peace.

To summarize, to eat 2 hours before bedtime will lead to:

- Most of your foods being digested before you go to bed.
- This will lead to sound sleep.
- This will leave your body free to do its repair work.
- This will make your body more effective in burning fat.

Healthy diet is one that helps, maintain or improve health, It is important for prevention of many chronic health risk such as obesity, heart disease, diabetes and cancer. Balanced diet works as a medicine in our body, required for complete physical and mental health. Our diet should include 30% cereals, 30% fresh fruits and vegetables, 15% dry fruits, nuts, lentils, soya, and 15% dairy products.



Diet Recommendations for Specific Menopausal Problems

Hot Flashes

Hot flashes are the most common and distressing menopause symptom. Hot flashes manifest as a sudden flash of intense heat, often beginning around neck and face and radiating to other parts of body. Vitamin E has been recognized for its effectiveness against hot flashes for close to fifty years. The recommended daily dose starts from 400 IU to 1200 IU. Women who are diabetic or hypertensive should not take high doses of vitamin E.

In addition, bioflavonoid (also called vitamin P) and vitamin C have been found to help minimize the intensity of flashing. Bioflavonoid is found in the white inner skin of citrus fruits. Food sources include lemon, grapes, plums, black currants and grape fruit. As bioflavonoid is often found with vitamin C, it is wise to choose a vitamin supplement that includes both.

Changing dietary and lifestyle habits can also help in relieving hot flash discomfort. Adding soy (in the form of tofu or soy flour) to the diet can reduce the severity of hot flashes. Consumption of coffee and other hot drinks, hot spicy foods and eating large meals appears to trigger hot flashes in some women. Substituting water and cool fruits for hot beverages and eating small meals more frequently can help. Elimination of alcohol and tobacco can do a lot to make our passage through menopause easier.

Evening primrose oil provides a direct source of GLA (Gamma Linolenic Acid), which is essential for hormone production. This essential fatty acid is also necessary for normal reproductive system and the adrenal gland. GLA supplement decreases hot flashes. Regular exercise and weight reduction can also help in controlling hot flashes. By making healthy choices we can do a lot to minimize hot flashes and make a pleasant passage through menopause.

Vaginal Dryness

Deficiency of estrogen makes the vaginal skin thinner, drier, less acidic and less elastic resulting in making it more susceptible to recurrent infection, due to which intercourse becomes more painful and difficult. There are many things that can be done to help vaginal lubrication. There are natural choices available to increase moisture in the vagina. Increased level of Selenium and vitamin A, B, and C help keep vaginal tissue membranes lubricated during and after menopause. Vitamin C is particularly key to synthesis of hormones in the adrenal glands. Vitamin C requirement increases during and after menopause. Vitamin C is found abundantly in citrus fruits, broccoli and tomatoes.

Dietary changes should include increased amount of Vitamin A rich foods like leafy green and brightly coloured orange and yellow fruits and vegetables. Vitamin B can be enhanced in the diet by including more whole grains and wheat germ. Essential fatty acids are crucial to the cardiovascular system, immune, reproductive and central nervous systems. Specifically, during menopause, deficiencies in these “good fats” are directly related to the drying of vaginal tissue, as well as of skin, hair and nails. We get essential fatty acids from oil of flaxseeds, sesame seeds, groundnut and olive for cooking. Avoidance of dehydrating substances, such as alcohol, diuretics, coffee and drinking enough water can help with the dryness and itching. Regular intercourse helps increase the blood flow to the vaginal tissues, which improve tone and natural lubrication.

Depression and Anxiety

During menopause, depression and mood swings can be related to the imbalance of estrogen and progesterone. In addition, falling estrogen levels affect calcium and magnesium metabolism, two minerals important for nourishment of nervous system as well as bones and heart. Maintaining a healthy calcium/magnesium balance is vital. High calcium without required magnesium can cause magnesium deficiency symptoms such as nervousness, anxiety and depression. Stress fighting vitamin B and amino acids can help decrease anxiety and depression and improve our sense of well-being.

Eliminate the consumption of vitamin-robbars like caffeine, alcohol, sugar, antacids, soda, and antibiotics (unless needed). The prescribing of tranquilizers or antidepressants for menopausal women with anxiety and depression has been common practice for many years. This practice does little to identify or solve the root of the problem, and introduces addictive substances with unpleasant side effects. Exercise, relaxation techniques and counseling are also helpful.

Osteoporosis and Osteopenia

Bone is more than just calcium, and it takes more than calcium to keep it healthy. Bone is an active, living tissue that has nutritional requirements for optimal health. The role of many of the following vitamins and minerals-essential for bone strength and integrity, as well as for absorption and utilization of calcium-has been ignored. Lack of these minerals and vitamins are partly because of the depletion of minerals in our soil.

Importance of Calcium

Low calcium intake put people at risk for osteoporosis, especially older women whose estrogen levels decrease because of menopause. Estrogen is especially important in shifting calcium from blood stream into bones. In addition to its vital role in forming and maintaining strong bones and teeth, calcium is the key mineral for maintaining muscle tone and elasticity. It is needed for muscle growth, for contraction and relaxation of muscles including heart, and prevention of muscle cramping. Calcium metabolism plays a role in ameliorating hypertension too. Calcium can only function optimally in the body when it is in balance with other minerals and vitamins especially magnesium.

Calcium Robbers

Sugar - may be the number one cause of calcium imbalance. This sweet substance, is found in so many of favorite foods. In the process of being metabolized, refined sugars rob the body of other valuable nutrients, including magnesium, manganese, chromium, zinc, copper and cobalt. This imbalance not only contributes to osteoporosis, but other degenerative diseases as well, including heart diseases and diabetes. Everything from cigarettes to French fries has sugar in it.

Soda and soft drinks - Most sodas not only contain sugar, but they also contain large amount of phosphoric acid, a phosphorus containing substance. So many of us have fallen into the destructive cycle: drinking soda, which depletes our calcium and mega dosing of calcium supplements in an effort to restore calcium levels, which leads to deficiency of magnesium and further loss of calcium.

Caffeine - Calcium, as well as other important minerals, are lost in the urine due to caffeine consumption. Excessive consumption of coffee, tea, regular soft drinks, chocolate and other food containing caffeine will increase your risk for osteoporosis by reducing blood calcium levels, triggering calcium to be pulled from bone and flushing needed calcium out of body. Caffeine is also found in carbonated soft drinks, so combination is still worse.

In addition to above three factors Saturated Fats found in full-fat dairy products like cheese and ice cream, tropical oils-including coconut, palm oil, pork and beef combine with calcium in the intestine and make the calcium unusable. On the other hand, essential fatty acids found naturally in seeds, nuts, vegetables and botanical oils, and cold water fish are essential to make calcium available for tissue use. Excess consumption of food containing oxalic acids (pain relievers, weight control products, anti-allergic drugs, and aluminum contained in antacids) and lack of HCL in stomach are unexpected calcium robbers too.



Calcium Sources

It is true that milk is rich in calcium, but we cannot totally rely only on dairy products for our calcium intake as milk is equally rich in phosphorus, which interferes with calcium absorption. Milk and milk products also neutralize the hydrochloric acid in stomach and generate excessive mucous in the intestines. Both of these factors interfere with calcium absorption. Another factor in calcium absorption is magnesium. Magnesium reduces calcium need, but calcium increases the body's need for magnesium. Milk has ten times more calcium than magnesium. So excessive milk and milk products cause imbalance in the calcium/magnesium ratio and cause magnesium deficiency. So with dairy products we have to select other foods rich in calcium and balanced in their phosphorus level. Such foods are green leafy vegetables, dry fruits, sunflower, pumpkin and sesame seeds, tofu, peanuts, raisins, black currents, dates, dried apricots, wheat bran, millets like ragi, jowar, bajra and beans.

With diet containing calcium and other factors, aerobic and muscle strengthening exercise is mandatory to treat and prevent osteoporosis. Exercise aids in calcium metabolism and helps to strengthen existing bone as well as stimulates new bone formation.

Amount of Calcium available from 100 gms of various food items

Name of Food Item	Amount of Calcium (in mg)	Name of Food Item	Amount of Calcium (in mg)
Cauliflower	130	Chicken	30
Fenugreek	170	Mutton	150
Spinach	60	Pork (Muscle)	30
Ladies Finger	90	Prawns	1370
Beetroot	200	Eggs	50
Cabbage	80	Wheat Flour whole	50
Figs	90	Wheat Flour	20
Grapes	30	Bajra	50
Dates	90	Ragi	330
Oranges	50	Soyabean	240
Raisins	100	Dal	160
Banana	10	Black Gram Dal	200
Almonds	230	Cow's Milk	120
Pistachio	140	Buffalo's Milk	210
Groundnut	50	Curd (Cow's Milk)	120
Milk Powder (Skimmed)	1200	Cheese	790

Source : Nutritive Value of Indian Foods (1985), by C. Gopalan, B.V. Rama Sastri and S.C. Balasubramanian, Revised and Updated (1989), by B.S. Narasinga Rao, Y.G. Deosthale and K.C.Pant (Reprinted 2007).

Heart Diseases

Women develop heart diseases 10 years later than men, but women who have heart attacks are twice as likely to die as their male counterparts within the first few weeks after attack. Heart disease is being ignored and remains undiagnosed in women and gets far more advanced by the time women seek and receive medical care. Cardiovascular disease results when the lumens of the coronary arteries, which carry blood, nutrients and oxygen to heart, become smaller. This constriction can be due to excess salt in the blood pulling fluid from the arteries. Arteries are further narrowed by a buildup of fats, oxidized cholesterol and plaques in the artery wall.

Hypertension is one of the major factors contributing to cardiovascular disease. Almost 50% of all middle-aged women are diagnosed with hypertension by age 50. There is a direct relation between high salt intake and hypertension, because it causes fluid retention which adds stress to both the heart and circulatory system. Hypertension left undiagnosed or untreated can result in stroke, heart attack, kidney failure, and other serious diseases. Diet and lifestyle have also been clearly implicated as causative factors. Dietary factors that are related include excessive intakes of salt, sugar and non-essential fats. Smoking and excessive alcohol consumption, high cholesterol, obesity, diabetes and sedentary life can contribute to heart attack.

Hold that salt - Lowering your salt intake is important for lowering your blood pressure. First step is to remove all processed foods, means removing snack foods, canned pickles and instant foods, from diet. Limit consumption of dairy products. **Try to keep your salt intake down to 2000 mg. per day. Remember 1 tsp. of salt equals 2000 mg.**



Cholesterol – When we talk about heart diseases we are always concerned about cholesterol. Let us understand a few facts about cholesterol. We have two types of cholesterol – LDL and HDL. LDL is considered as bad, while HDL is good cholesterol. In women, LDL below 130 and HDL above 55 is optimum. In general, total cholesterol level higher than 200 can be a sign of increased risk of heart disease. More important than just this single level, the ratio of total cholesterol to HDL should be below 4.5 : 1 (for women).

The fact many of us do not know is that cholesterol is found in every cell of our body. Our brain and spinal cord contains 25 % of the cholesterol in our body. It lies in the skin where it is converted into vitamin D by sunlight. It is found in bone marrow and adrenal glands where it is essential for production of sex hormones, especially after menopause. Cholesterol is essential to good health and its deficiency has been associated with anemia, acute infection, and excess thyroid function. High cholesterol in diet is not related to heart disease, but high cholesterol in blood is harmful. Cholesterol accumulates in arteries and damages the arterial walls.

Diet remains the first line of treatment for patients with high cholesterol levels. A diet that is low calorie, low fat (particularly low saturated fat), low cholesterol, high in PUFA with Omega 6 and Omega 3 fatty acids, low carbohydrate and normal protein, minerals and vitamins are suggested. High fibre diet with increased amount of anti-oxidants is also recommended.

The first step involves restriction of fats to no more than 20% of the total calories consumed. It is not desirable to restrict all forms of fat as severe restriction can result in mental depression. According to Indian Council of Medical Research, the proportion of polyunsaturated fat to saturated fat should be 0.8 : 1.0.

Fish are good sources of Omega 3 fatty acids, especially salmon. Consumption of 100-200 gm of fish two to three times a week helps to prevent heart disease. Vegetable substances such as mustard oil, flaxseed oil, canola oil, soyabean oil, and walnuts are good sources of Omega 3 fatty acids.

Triglycerides -What we eat and the way we live affect our Triglycerides. Too much refined carbohydrates, white sugar, too much fruits and fruit juices, fatty foods increase triglycerides. **A few drinks before fatty foods, followed by sugary dessert can spell disaster.** By skipping breakfast and/or lunch and making up for it with a heavy dinner will increase triglycerides. Lack of exercise, our reaction to emotional stress, consumption of caffeine, certain drugs like diuretics, long term use of oral contraceptives and long term estrogen replacement are potentially causative factors for heart diseases.

Heart protective oils such as flaxseeds, sesame, olive etc., food rich in antioxidants vitamin A, C and E, beta-carotene and selenium are a must for healthy hearts. Fresh fruits, leafy vegetables, a variety of whole grains, garlic should be included in daily food. Heart diseases are related to deficiency of these nutrients including Vitamins E, C and A and the minerals selenium, chromium, zinc and magnesium. For women, levels of HDL are key. Both chromium and vitamin C have been shown to decrease cholesterol and increase HDL. Vitamin E is known as a potent antioxidant, which helps in thinning of blood and inhibits blood platelets from becoming sticky. Vitamin E is protective of two other vitamins A and C. Garlic, olive and omega 3 containing foods are also effective to reduce LDL and triglycerides.



Breast Cancer

Both heredity and lifestyle factors play a strong role in the incidence of breast cancer. When it occurs before menopause, it is mainly due to heredity; while occurrence after menopause is more the result of lifestyle influences such as diet, exercise and environment. One factor which comes after menopause, over which we have control, is long term estrogen therapy. Breast cancer can be diagnosed in early stage by regular self examination, examination by doctor and Mammography. Mammography should be done once at the age of 35 years (baseline), every two years after age 40, and every year after age 50.

Lifestyle habits that contribute to your risk are things you can control. What you eat, what you drink and what you weigh is important. Overweight women have more chances developing breast cancer. High dietary fat intake has become the main focus of breast cancer risk, and high intake of sugar is also equally important factor. Sugar presents major risk, for women over 45, of development of breast cancer. There is a relationship between excess sugar and loss of calcium from the body, so sugar should be cut out from the diet as much as possible.

As far as fat in the diet is concerned, the type of fat is important not the quantity. Flaxseed oils, sesame and olive oils are some of the best oils for overall health, including cancer prevention. Cut back on foods high in non essential and hydrogenated fats such as pork, full-fat dairy products, margarines, and processed vegetable oils. Cabbage, cauliflower, broccoli, beta-carotene rich foods also appear to be powerful cancer fighter. Carrot, sweet potatoes, peaches and dark leafy vegetables such as spinach, mustard, all contain beta-carotene. Soybean is also included in list of cancer fighters. Painful lumps in the breast, known as fibrocystic disease or benign breast disease affects 60 % of women. Diets high in caffeine, sodas, chocolates and tea have been strongly connected to fibrocystic disease of the breast. Breast lumps are reduced by the proper intake of vitamin E.

Diabetes

Diabetes is one of the most common diseases facing women as they grow older. Heredity plays strong role in developing childhood origin (Insulin deficient) and adult onset (insulin resistant) diabetes. Obesity, lack of exercise and a diet high in fats and sweets are preventable causes for diabetes. Regulating our sugar is crucial in the prevention and control of diabetes. We need to eliminate all products that are high in sugar and white flour such as cookies, cakes, ice-cream, candy, sweets etc., as well as natural sources of sugar like honey and fruit juices. A good way to reduce craving for sweets is to keep protein level steady. Excessive non-essential fat found in full-fat dairy products like cheese, butter, ice-cream which blocks insulin activity in blood should also be avoided.

Fiber is the key element in the diet to combat diabetes. We need to emphasize more complex carbohydrates from vegetables and fruits which provide us more fiber to help slow the release of sugar into the blood stream. When you take more fiber, you need to take more water to prevent constipation.

Two specific minerals - Zinc and Chromium - act as insulin co-factors and should be in a diabetic's diet. Zinc forms a part of the insulin component secreted by the pancreas, and is directly involved in carbohydrate metabolism. It also has powerful wound healing and disease resistance property. Some of the best sources of zinc include eggs, pumpkin seeds, whole grain cereals, dried beans and legumes. Chromium, an essential trace mineral, is necessary for proper insulin function because it regulates carbohydrate metabolism. Food processing and depleted soils leaves little chromium in our diet. Dietary supplement is suggested as most people don't take enough chromium rich food.



Hypothyroidism

The Thyroid hormones, thyroxin, keeps all bodily processes operating, including heart rate, body temperature, muscle contraction, calorie use, protein synthesis and production of enzymes used to break down carbohydrates to glucose. Women are five times more likely than men to suffer from low thyroid function most commonly developing symptoms the ages between 35 to 60 years. It is also important to know that estrogen can decrease thyroid hormone uptake. It is not uncommon for women on estrogen replacement to complain of tiredness and lack of energy – primary symptoms of hypothyroidism. Other symptoms are muscle weakness, stiffness, cramping, loss of appetite, weight gain, headaches, nervousness, lowered body temperature, constipation, memory loss, inability to concentrate, brittle hair and nails and scanty or heavy bleeding. Most of these symptoms are mistaken for premenopausal and menopausal symptoms.

Individuals suffering from hypothyroidism are also prone to recurring infection because of sluggish immune system. Most of the time this condition remains undiagnosed or misdiagnosed. It is now believed that nutritional imbalances contribute to the growing occurrence of hypothyroidism. When thyroid levels are low, estrogen levels tend to be high; high estrogen levels are known to develop and increase a woman's risk for uterine and breast cancer. Low thyroid levels can affect new bone formation, and excessive use of synthetic thyroid medication both increase bone loss in postmenopausal women.

Diet for hypothyroid includes iodine, vitamin B - especially B1, zinc, manganese, and the amino acids phenylamine and tyrosine that are essential for proper functioning of thyroid glands. The common use of iodized salt has virtually eliminated goiter. Daily supplement of zinc 25 mg for one month and then 15 mg three times a week is recommended. There are other salts containing calcium, sodium, magnesium and potassium that also help to regulate thyroid function.

Correcting underlying vitamin and mineral imbalances can do much to correct thyroid function without synthetic hormones. We nourish the thyroid by eating vitamin B rich foods such as wheat germ, whole grains, nuts, seeds, dark leafy vegetables and legumes, as well as natural iodized salt. Vitamin E is essential for the absorption of iodine. Foods such as milk, meat, eggs, legumes, nuts, bread and cheese are concentrated in the amino acids phenylalanine.

For women taking synthetic thyroid hormones, certain foods containing thyroid-blocking substances should be limited. These foods include soybean, cabbage, cauliflower, mustard green, sprouts etc (only if they are uncooked.) As you supplement nutritionally, your need for medication may decrease.

Obesity

Obesity is a chronic disease. Excess body weight predisposes heart diseases, high blood pressure, diabetes, gall bladder diseases, osteoarthritis of weight bearing joints, and varicose veins. Usually obesity is due to positive energy balance. That is, the intake of calories is more than the expenditure of the calories. It can be genetic. If both the parents are obese, there is 80 % chance of obesity in children, and there is a 50% chance of obesity in children if one parent is obese. It is found in certain endocrinological conditions like hypothyroidism, hypogonadism, etc.

Obesity is a common problem in middle-aged women. Slower metabolism and hormonal imbalances are frequently the reason for the difficulty in reducing overweight. The main reasons at this age between 35 and 60 years are sedentary lifestyle, decreased metabolism and reduction of muscle mass. Basal metabolic rate is what your body needs at rest to maintain normal functions like beating of heart, respiration and the maintenance of body temperature. About 60 to 75 % of energy is spent by body at rest, and we use another 10 % of calories to digest and metabolize food.

Facts of Metabolism

- The amount of calories you burn varies with the type of food. You can burn more calories to break down a chapatti than a banana. Low glycemic index carbohydrates burn more calories.
- You have very high BMR at your birth. At mid thirties metabolism slows by 3 to 5 % per decade. By the age of 55, you require 150 calories less per day than in your mid thirties.
- Men generally have 10 to 15 % faster BMR than women, because male body has greater percentage of lean muscle tissue.

Causes of Low Metabolism

- Fasting
- A low calorie diet
- Snacking throughout the day on high sugar foods (candy, colas, cakes, chocolates etc.)
- Eating and drinking too much sugar containing foods
- Lack of physical activity
- Under-active thyroid glands
- It is important to remember that stress is the biggest enemy of an efficient digestive system and fat burning process

How to Increase (speed up) Metabolism

- Do not skip meals. Eat 5 to 6 meals during the day; starving will slow down your metabolism.
- Exercise daily. Build up your muscles, because 1 pound of fat burns only 2 calories a day while 1 pound of muscle burns 50 calories a day. The more muscle you build, the faster your metabolism will be, and the more calories you will burn while at rest.
- Avoid alcohol, sugar and excessive coffee or tea.
- Drink plenty of water.
- Eat food with high nutrition values.
- Natural metabolism boosters - chilly, mustard, garlic, green tea, water, dietary fibers, foods with complex carbohydrates and proteins can be added to the diet.



How to manage weight loss and maintain weight

- Diet therapy
- Physical exercise
- Stress management
- Drug therapy
- Weight loss surgery

The last two are not advisable options unless the person is very highly obese.

Diet Therapy

Very low calorie diet i.e. < 800 calories per day – Although more weight is initially lost on very low calorie diets, more is usually regained once the diet is stopped. Very low intake will not provide adequate micronutrients, and is not advisable.

Reducing diet - The initial goal of weight loss therapy is to reduce body weight by approximately 10 % of baseline in a time period of 6 months, and if this goal is achieved, further weight loss can be attempted. The person should be put in negative energy balance ideally 500 to 1000 calories less than required daily allowance. An ideal reduction of 500g-1kg/week is approved. Once the target is fixed, progress should be checked once a month. Usually 3 kg are lost in the first month. Reducing diets should provide adequate amounts of proteins, vitamins and minerals and fluid.

Calorie restriction for weight reduction is the safest and most effective method. One pound of body fat is equivalent of 3500 kcal; therefore intake must be reduced by 500 kcal daily to produce a loss of one pound per week. Calorie deficit should not be more than 1000 kcal/day because it may not be nutritionally adequate food. The calorie intake should be recommended from actual food intake and not from formulas. A detailed 24 hour food recall and 3-day diet history is generally adequate to determine intake.

Principles of Dietetic Management

Low calorie - Normal protein, vitamin and mineral (except sodium), restricted carbohydrate, restricted fat, liberal fluid and high fiber diet should be taken.

Energy - About 20 kcal per kg. ideal body weight per day is prescribed for a sedentary person, and 25 kcal for moderately active person.

Proteins - About 0.8 to 1 gm. of protein/kg body weight is prescribed for tissue repair and for specific dynamic action.

Carbohydrates - High carbohydrate content foods like potatoes and rice, fruit juice, sweet should be avoided. Carbohydrates with low glycemic index should be included.

Fat - Low fat to cut down energy is advised. Skimmed milk should be the choice.

Vitamins - With prolonged restriction of fat, there is a deficiency of Vitamin A and D. They should be supplemented or diet containing some fat specially having essential fatty acids should be included.

Minerals - Restriction of sodium as common salt is helpful in weight reducing diet. Calcium rich diet should be included.

Fluid - Fluids can be taken liberally. Also a glass of water before meal helps to cut down food intake.

High fiber - High fiber, low calorie foods like green leafy vegetables, fruits, vegetable salads, whole grain, cereals and pulses can be included in diet.

Physical exercise - Most obese persons lead sedentary lives. A low calorie diet with moderate exercise will be effective in reducing weight. The details of weight loss and exercise has been mentioned in the previous chapters.

Stress - Is a major reason for over eating and relapse of weight gain, so measures for stress management should be adopted.

Weight Maintenance - These diets provide 1500 to 1800 kcal per day. When the body weight is reduced to optimal level on weight reducing diets, these diets maintain weight at these levels.

Dietary Modifications for Old Age

Successful ageing is defined not by longevity alone, but also by sufficient well being in multiple domains – social, physical and mental. The three components for successful ageing are avoiding disease, engagement with life and maintaining high physical and cognitive function. The goal of nutritional care should be to help the aged achieve a healthy, purposeful and independent living.

The general principles for planning a nutritious diet for the elderly are similar to those for younger adults. The most important guideline is to provide meals and snacks that are nutrient-dense, visually appealing, tasteful and of the appropriate consistency. Four or five smaller meals are often more acceptable than three substantial ones.

Specific Nutritional Requirements for Old Age

Protein : A protein intake of 1.0 g/kg of body weight, the normal adult requirement, is safe during old age too. Since caloric requirements are decreased without the corresponding decrease in protein, the food should be protein-rich compared to normal adult food. To meet this adequate quantities of protein foods such as milk and curd can be included. Of the total caloric intake, 11-12 % should be from protein.

Carbohydrate : An impaired glucose tolerance in the elderly can lead to hypoglycaemia, hyperglycaemia, and type II diabetes mellitus. Insulin sensitivity can be enhanced by balanced energy intake, weight management and regular physical activity. Emphasis is placed on complex carbohydrates and controlling the intake of simple sugars. Whole grain cereals and pulses should be included in the diet. It is necessary that at least 50% of calories are derived from carbohydrates.

Lipids : Emphasis should be placed on reducing the intake of saturated fat and choosing monounsaturated or polyunsaturated fat sources. Elders who take sufficient Omega-3 fatty acids have better visual acuity. Omega-3 fatty acids may help in conditions such as hair loss, impairment of vision, improper digestion and gas, poor kidney function, tissue inflammation, osteo-arthritis, painful joints and muscles and mental depression.

Minerals

Calcium needs during old age increase. Women over 50 years of age who are not receiving estrogens require more calcium as there is increased loss resulting in demineralization of bone and osteoporosis. For women over fifty, 1000 mg/day is recommended for the following reasons :

- a. Calcium is available only from a limited number of foods.
- b. To compensate age-related bone loss and to improve calcium balance.
- c. To decrease the prevalence of fractures and dental decay.

Iron deficiency is seen in the elderly due to inadequate iron intake. Mild anemia affects the health of old people due to less efficient circulation of blood. Iron intake should be adequate to prevent anemia. Iron requirement can be same as adult person – 30 mg. If there is anemia, supplemental iron can be given.

Vitamins

Elderly people are at risk for Vitamin D deficiency due to decreased exposure to sunlight or decrease in renal mass. Prudent dietary supplementation with Calcium and Vitamin D improves bone density and may prevent fractures in a healthy elderly population. The antioxidant vitamins such as vitamin E, carotenoids, and vitamin C have been promoted as agents that enhance the health of the elderly. Vitamin C may be protective against cataract at an intake level of between 150 and 250 mg per day which is possible to achieve from dietary sources alone. Requirements for the Vitamin B6 are increased in many elderly persons owing to atrophic gastritis which interferes with absorption. Diets are often lacking in folate, so consumption of folate rich foods should be encouraged. All vitamin requirements remain same as the adult requirement.

Water

Water is as essential for the elderly person as it is for younger individuals. Some elderly individuals may have a fading sense of thirst and may go for long periods without fluid. Others avoid liquid for fear of incontinence. Dehydration can result in mental confusion, headaches and instability. The elderly should be advised to consume some fluid at regular intervals even if they are not thirsty.

Fibre

Fibre stimulates peristalsis. Fibre also helps in reducing cholesterol which may reduce the incidence of atherosclerosis. Excess of fibre may reduce the absorption of iron and certain trace elements. Consumption of fibre containing foods should be increased gradually to avoid bowel discomfort.

Dietary Modification	Sources
Foods must be soft and easily chewable	Problems of dentition, fallen teeth or dentures
Foods should be easily digestible	Decreased production of digestive enzymes
Restricted fat in the diet, inclusion of PUFA	Susceptible to heart disease
Foods rich in fibre should be given	To prevent constipation and reduce cholesterol level, also to prevent colon cancer
Coffee, tea and cola beverages should be restricted	May result in insomnia due to over stimulation
Foods rich in calcium like milk should be given	To compensate the bone loss and reduce the incidence of osteoporosis
Green leafy vegetables can be given liberally	Source of nutrients like carotene, calcium, iron, riboflavin, folic acid and vitamin C, besides supplying fibre. Rich in antioxidants
Foods of the elderly should consist of familiar foods, new foods are difficult to accept	Unfamiliar or changes in the food pattern may lead to psychological problems like depression
Clear soup at the beginning of meal	Aids digestion
Small frequent meals instead of three heavy ones	Favour more complete digestion and free from distress
A glass of hot milk just before going to bed	May induce sleep
Heavy meal at noon and light evening meal	Sleep is less likely to be disturbed
Too many sweets with too of fats and sugar should be avoided	Too much of sugar may cause fermentation, discomfort due to indigestion and cause toothache, and may increase cholesterol level. May lead to obesity
Plenty of fluid	To prevent constipation and dehydration

Source : *Dietetics by B. Srilakshmi*



ELA BHATT

SOCIAL ACTIVIST / FOUNDER
OF SEWA (SELF EMPLOYED
WOMENS' ASSOCIATION)

“ I must have been about 48 in 1981 when 'menopause' descended on my life. However, during that period as my menstrual cycle got disturbed for about 4-6 months, I re-read about the subject to educate myself about the changes expected in my body and mind. Hence, there was not much apprehension in my mind about it. In fact, co-incidentally, there was another important but dreadful turn of events in my life which was testing my mental strength. The Anamat Andolan (demand for reservation of seats in medical college for Dalit and Tribal students) had begun, and it gave me a very rough time including severe stone pelting at my residence. However, I remained calm, in-control and did not get depressed about either menopause or the Andolan. Looking back, I would credit this to two major factors: firstly, the unconditional support of my husband Ramesh in my activities and secondly, the fact that I was completely absorbed in my work. Also, I believe that my regular food habits had a role to play in the way I have handled my menopause. I cooked food for my family and our routine diet was regular and healthy. However, let me confess, my Surti taste buds did demand something masaledar at times.

Today, at 78, my mornings start with forty minutes of yoga followed by a thirty-minute walk. Normally, I work from 10.30 am to 2.30 pm, and after a brief nap, I get busy in meetings or even travelling whenever required. As such, I have not been physically strong and sturdy but I have been healthy for sure! Of course, now age takes its course. ”

REST & REJUVENATION

During the illness of my husband, and one year after his demise, I was feeling very depressed and defeated. I was not able to sleep till late into the night, and whatever sleep I got was very disturbed. I was prescribed tranquilizers and sleeping pills, which did help me get some good sleep. A few months later, I was almost addicted to them, though I knew that any such medicine taken for a long time would not be without side effects. There was no other option for sleeping for 5-6 hours.

Again, while I was reading up various material for writing this book, I realized that I should learn and practice meditation for mental peace. I began doing pranayam and meditation regularly and soon I was able to let go of the sleeping pills and tranquilizers. I am very happy that now I rarely have to resort to those pills. Meditation has really helped me regain my mental peace.

Sleep

A healthy lifestyle is a condition of living by which the person engages in various activities and practices that promote health. Health is a holistic concept which embodies the body, mind and emotional spirit. After exercise and diet for healthy lifestyle now we will take care of our mental and emotional health.

Sleep is an important resource that keeps us healthy, mentally sharp, and able to cope with stress. A good quality, restful and peaceful sleep is the backbone to losing fat and remaining fit. While we are sleeping, our body balances the hormones, rejuvenates the cells of our body, and repairs the damage that we have put our cells through during the day. Without peaceful sleep, all these are not possible. Sleep is as important as diet and exercise.

Try to sleep at the same time daily. Usually 6 to 7 hours sleep is required for most middle aged people. As we grow older, our sleep becomes lighter and duration is reduced. Sleep is required to maintain our physical and mental health. Those who are unwell, or have undergone any surgery will require more sleep as the body requires more repair work to be done. Proper sleep keeps us healthy, happy and alert throughout the day.



Why is quality sleep required?

Learning and Memory - Sleep helps the brain commit new information through a process called memory consolidation. Deep sleep is required for his function.

Metabolism and Weight - Chronic sleep deprivation may cause weight gain by disturbing normal metabolism and increasing storage of carbohydrates and fats.

Mood - Sleep loss may result in irritability, impatience, inability to concentrate.

Cardiovascular Health - Serious sleep disorders have been linked with hypertension, increased stress hormone levels, and irregular heart rate. If you wake up feeling tired, irritable, depressed or angry, you have not slept well.

Benefits of Napping

Napping during daytime is not only an effective and refreshing alternative to caffeine, it can protect your health and make you more productive. Napping reduces stress and improves memory, cognitive function and mood. Those who have difficulty of sleep at night should not nap for a long time. Napping for 30 minutes is enough.

How to get good sleep?

- Have and adhere to a regular bedtime and waking schedule on most days of the week.
- Eat your last meal of the day 2 to 3 hours before you sleep.
- Don't eat fried food at night, and also avoid desserts, sweets, fruits, coffee, tea or alcohol before you sleep.
- Leave laptop, T.V., including video watching at least one hour before you sleep, because your eyes and brain are stressed.
- You can read entertaining or inspiring books or listen to light music before you sleep.
- You should be active during day time.
- Do not do strenuous exercise within two hours before going to bed.
- Learn and practice pranayam and meditation. Do some exercise during day time.
- Tryptophan, an amino acid can induce natural sleep by increasing serotonin and melatonin which help the brain calm down and induce sleep. These amino acids are found in almost all dairy products. If you have disturbed sleep, you can take one glass of low fat milk before you go to sleep.
- Your bedroom should be clean, comfortable, properly lit.

Middle age and Sexuality

Sexuality is the capacity for sexual feeling. It also increases a person's performance. Losing sexuality means losing that part of emotions, which are either the cause, or the result of sexual drive. There is no doubt that women's childbearing ability ceases after the final menstrual period but it does not denote the end of sexuality. Though the relevance of sexual activity declines with age, the sexual feelings continue to stay much beyond menopause. Sexual feelings and activities are a natural part of living. Sexuality is an important phenomenon and sexual life is linked to quality of life. It is imperative that the QOL should not be compromised due to physiological changes occurring during and after menopause.

Sexuality is a lifelong need of human beings like food, water and air, because the need for closeness, caring and companionship is lifelong. The decline in sexual activity with ageing is influenced more by cultural attitudes than by nature and physiology (or hormones). The two most important influences on older sexual interaction are the strength of a relationship and the physical condition of each partner. Vaginal atrophy is found less in sexually active women, because the activity maintains vaginal blood circulation, lubrication and vaginal elasticity.

Menopause and Sexual Desire

Sexual problems are common for both women and men of all ages. But they are 2 to 3 times more in ageing women. The factors affecting sexual desire in post menopausal women are as follows:

- Reduced ovarian production of sex hormones at menopause is responsible for hot flashes, and night sweats disturb restful sleep of a woman, and that reduces desire.
- Estrogen deficiency also causes vaginal dryness, recurrent vaginal infection and soreness and painful intercourse. There is a treatment for estrogen deficiency - causes of factor one and two.
- Other factors that cause reduction of desire include social changes, worry about education and marriage of children, illness about family members, fatigue and stress of demanding life, financial problems etc.
- This age group is more vulnerable to develop medical diseases like diabetes, hypertension, heart diseases, osteoporosis and osteoarthritis. Certain drugs taken for the problems may reduce desire. Perimenopause estrogen deficiency alone is not responsible for diminished sexuality. There are several factors that modify sexual behavior and sexuality, out of which emotional bonding between partners is most important.

You should not be hesitant about taking advice from your doctor if you have problem with your sexual life because it is part of your Quality of Life. Remember, whenever you go to the doctor, you should always go with your partner.

Live a tension-free life

Relaxation is our natural state of being, and it promotes good mental and physical health. It increases the function of immune system as well as digestive and respiratory systems. It will improve your relationship with yourself and thus with others. The kind and amount of damage that is caused by prolonged mental tension cannot be improved with any amount of physical exercise, good diet or hormone intake. Therefore women going through middle age should try to control and reduce tension and live a stress-free life.

How to manage stress?

Stress is the bio-psycho-somatic response of the body to a demand - mental or physical. Stress is the cause of many diseases, and on the other hand, disease also causes stress. When the stress is long term and chronic it leads to chronic psychosomatic ailments. Stress affects muscles, tissues, blood vessels and organs. It speeds up heart rate and respiration, raises blood pressure and body temperature and can interfere with metabolism, appetite, digestion, fertility and sleep. It can result in early menopause too.

The first step in managing stress is to develop a stress-free personality. A high self-esteem, assertive behavior and a positive attitude help in building a stress-free perception. Locate the source of stress, and use a problem solving approach to deal with it step by step.

In order to do this, be creative and try to learn new things. Restart or develop hobbies. You should leave laziness and feel motivated all the time. Books are very good friends, cultivate a habit of reading inspirational books. Learn or listen to music. Try to help people around you. Try to live with children and nature. Remain in touch with your friends. Spend time with the friends who have optimistic and supportive outlook. Live in the present and think for better future. Forgiveness and habit of expressing gratitude always keep your mind calm and happy. Communication is the key to relation building. Listen well and your conflicts will dissolve.

Learn to operate a computer, by which you will learn new things every day and will be able to keep in contact with the world. Try to remain mentally and physically active, constantly involved in work of your choice. Learn and practice pranayam and meditation. Exercise of your choice can elevate your mood.

Exercise—not only makes the body fit but also acclimatizes the heart and lungs to increase activity, as in stressful situations. Relaxation and meditation techniques result in calming brain waves and reducing the effect of stress. This is especially effective with stress-resulted ailments such as hypertension, headaches, digestive ailments, cardiac problems and sleep problems.

Spirituality and Ageing

Ageing brings changes and loss, and with it dependency, isolation, loneliness and depression. But it can also be a time of spiritual growth and awareness. People of all ages share basic human needs - love, faith, hope, peace and worship, and older people are not exception.

Older adults often become more spiritual. There are two major reasons for this. First, the lives of elderly people have become less crowded with activities and they have more time to practice spirituality. Second, as they approach the end of their lives, their bodies and minds may declines but their spirit continues to grow.

By late middle age, most adults have long since discovered that the modern prescriptions to life meaning materialism and social achievements do not meet the needs of the soul. In later adulthood, many people find that their attention shifts from competition toward affiliation and from self-centeredness to broadness- care and concern for younger generation. Successful ageing promotes continued engagement with the wider community and pursuit of physical and psychological activities. The spiritual journey searches to find meaning of life and therefore, reason for continued life and hope.

There are many forms of spirituality and it is described in several different ways by different people. We know that it is nourishing and that people with strong spiritual beliefs often feel well and heal better than people who have none.

Healthcare for ageing people is not just caring for their physical needs, spiritual care is a way of helping older people in their search for hope and meaning, especially as they face issues of grief, loss and uncertainty. Depression in older people is one aspect of loss of meaning and hope. For some older people Spirituality may be expressed in a relationship with God or a higher being, while for others it may be expressed through family and friends, nature and/or the environment. For some, spirituality is a religious faith. For some, spirituality is a prayer and meditation. For some, it is helping others.

Meditation and Prayer give you empowerment - Spirituality. Cultivate a habit to read books on Spirituality written by spiritual teachers and hear them whenever it is possible. You will get strength to overcome mental and physical stress of ageing. Think more creatively about the nature of ageing. May you live long, live strong, and happy without the fear of death.



A close-up portrait of Dr. Asha Kapadia, a woman with dark hair pulled back, wearing glasses and a dark top. She is looking slightly to the left of the camera with a neutral expression.

DR. ASHA KAPADIA
(PRACTICING ONCOLOGIST)

“As an active oncologist, I was engulfed in my busy practice and never even paused to reflect on the impending 'M' and its devastating effect on mind and body. Then suddenly, in the prime of my professional life in my mid forties, I was overwhelmed with hot flushes, anxiety, mood swings and weight gain. Really, a life filled with misery. I was even prescribed HRT (Hormone Replacement Therapy) to deal with these symptoms. At that juncture, I decided to take control of my body and soul. I rigorously endorsed the dietician's recommendations. With a personal trainer, a strict workout routine now occupied my every morning. In couple of years, I returned to a healthy and radiant self. My life, filled with endorphins, started sailing again. I regained harmony with my family, friends and professional colleagues. Today, in my sixties, I am enjoying my body and soul.

My crusade now is to bring awareness in mature women. This led me to become one of the founder members of Indian Menopause Society in 1995 and later became rotating President in 2005. I was also instrumental in establishing Mahek Foundation towards this goal. My ordeal is now beneficial to all my patients. I am working towards awakening mature women to the impending 'M' and its repercussions to free them from any anxiety in facing this scourge. With timely professional assistance, the psyche unaffected, they would continue to enjoy the sweet rhythm of life. ”

A decorative background for the right page, featuring a dense, repeating pattern of stylized leaves in a reddish-brown hue.

IMPORTANT TOOLS & REFERENCES

On the path to a healthier and fitter lifestyle, self awareness is vital. It is important to be able to notice, record and interpret the various signals that our body gives us. Learning this helps us get in tune with our body by knowing it better. While noticing the body's signals is an individual thing, recording and tracking it over time would help interpretation either by ourselves or by our healthcare providers. Regular tracking can help identify potential problems and diseases early, giving a better chance of fighting it.

This chapter provides a few basic tools for body monitoring in terms of tracking its fitness as well as charts to record dates for various tests and note their results to serve as reminders as well as for monitoring purposes. This chapter also includes a few helpful charts to plan an exercise regime, or a diet plan.



List of Tests to be done at Specific Intervals

This table is intended to serve as a schedule for various tests to be done periodically from age 35 onwards to rule out various diseases. The dates for this chart have to be filled up as per your doctor's directions. The first round of all these tests should be done at the age of 35 years, or at the earliest, preferably before any symptom of a problem has manifested, so that it can serve as a baseline level to measure future tests. These tests have to be repeated according to the advise of your doctor.

Investigation	Date 1	Date 2	Date 3	Date 4	Date 5
PAP's Smear					
Mammography					
Ultrasound - Breast					
Trans Vaginal Sonography (TVS)					
Lipid Profile					
CBC					
Blood Sugar					
Bone Density Scan					
TSH					
Urine Routine					
Stool Examination					

Body Measurement Tracking Chart

This chart can be used to track your body measurements before starting an exercise regime and then at monthly or other regular intervals. Measurements are generally taken in inches, though they can be taken in centimeters too.

Date						
Weight (kgs)						
Height						
Neck						
Shoulder						
Upper Chest						
Chest (normal)						
Lower Chest (at end of rib cage)						
Upper abdomen						
Waist at navel						
Lower abdomen						
Hips (largest part of hips)						
Upper arm (L R)						
Wrist (L R)						
Thighs (upper) (L R)						
Thighs (lower) (L R)						
Calves (L R)						
Total Inches or cm						

Calories burned in various activities per 30 minutes

Gym Activities	57 kg (125 lbs.)	70 kg (155 lbs.)	84 kg (185 lbs.)
Stretching, Hatha Yoga	120	149	178
Aerobics: low impact	165	205	244
Stair Step Machine: general	180	223	266
Aerobics: high impact	210	260	311
Bicycling, Stationery: moderate	210	260	311
Elliptical Trainer: general	270	335	400
Bicycling, Stationery: vigorous	315	391	466
Training & Sport Activities			
Bowling	90	112	133
Volleyball: non-competitive, general play	90	112	133
Gymnastics: general	120	149	178
Tai Chi	120	149	178
Walk: 3.5 mph (17 min/mi)	120	149	178
Badminton: general	135	167	200
Walk: 4 mph (15 min/mi)	135	167	200
Dancing: disco, ballroom,	165	205	244
Dancing: Fast, ballet, twist	180	223	266
Swimming: general	180	223	266
Walk/Jog: jog <10 min.	180	223	266
Soccer: general	210	260	311

Tennis: general	210	260	311
Basketball: playing a game	240	298	355
Bicycling: 12-13.9 mph	240	298	355
Football: touch, flag, general	240	298	355
Running: 5 mph (12 min/mile)	240	298	355
Football: competitive	270	335	400
Martial Arts: judo, karate,	300	372	444
Rope Jumping	300	372	444
Swimming: laps, vigorous	300	372	444
Home & Daily Life Activities			
Sleeping	19	23	28
Watching TV	23	28	33
Reading: sitting	34	42	50
Cooking	75	93	111
Child-care: bathing, feeding,	105	130	155
Food Shopping: with cart	105	130	155
Moving: unpacking	105	130	155
Playing w/kids: moderate effort	120	149	178
Occupational Activities			
Computer Work	41	51	61
Light Office Work	45	56	67
Sitting in Meetings	49	60	72
Desk Work	53	65	78

Source : <http://www.health.harvard.edu/newsweek/Calories-burned-in-30-minutes-of-leisure-and-routine-activities.htm>

Major Food Groups and their Major Nutrients

Food Group	Major Nutrients
Cereal Grains and Products Rice, Wheat, Ragi, Maize, Jowar, Barley, Rice flakes, Wheat flour	Energy, Protein, Invisible fat, Vitamin B1, Vitamin B2, Folic Acid, Iron, Fibre
Pulses and Legumes Bengal gram, Black gram, Green gram, Red gram, Lentils (whole as well as dhals), Cowpeas, Peas, Rajmah, Soyabeans, Beans	Energy, Protein, Invisible fat, Vitamin B1, Vitamin B2, Folic Acid, Calcium, Iron, Fibre
Milk and Meat Products Milk, Curd, Skimmed Milk, Cheese, Chicken, Liver, Fish, Egg, Meat	Protein, Fat, Vitamin B2, Vitamin D, Calcium
Fruits and Vegetables Fruits – Mango, Guava, Tomato, Papaya, Orange, Sweet Lime, Watermelon; Vegetables – (Green Leafy) Amaranth, Spinach, Gogu, Drumstick Leaves, Coriander Leaves, Fenugreek leaves, Other Vegetables - Carrots, Brinjal, Ladies Fingers, Beans, Capsicum, Onion, Drumstick, Cauliflower	Carotenoids, Vitamin c, Fibre, Invisible Fat, Vitamin B2, Folic Acid, Iron Carotenoids, Vitamin B2, Folic Acid, Calcium, Iron, Fibre Carotenoids, Folic Acid, Calcium, Fibre
Fats and Sugar Fats : Butter, Ghee, Hydrogenated Fat, Cooking oils like Groundnut, Mustard, Coconut Sugar : Jaggery and Sugar	Energy, Fat, Essential Fatty Acids Energy

Source : Dietetics – B. Srilakshmi

Portion Size and Nutritional Values

Food Groups	Portion g	Energy kcal	Protein g	Carbohydrates g	Fat g
Cereals and Millets	30	100	3.0	20	0.8
Pulses	30	100	6.0	15	0.7
Egg	50	85	7.0	-	7.0
Meat, Chicken or Fish	50	100	9.0	-	7.0
Milk	100	70	3.0	5	3.0
Roots or Tubers	100	80	1.3	19	-
Green Leafy Vegetables	100	45	3.6	-	0.4
Other Vegetables	100	30	1.7	-	0.2
Fruits	100	40	-	10	-
Sugar	5	20	-	5	-
Fats & Oils	5	45	-	-	5

Source : Dietetics – B. Srilakshmi

Calories in some common food items

Food Item	Measure	Weight (gms)	Calories (Kcal)
Cooked Rice	1 cup	100	110
Phulka Roti	1	35	80
Brown Bread Toast	2	50	170
Khichdi	1 cup	100	210
Poori	1	25	80
Poha	1 cup	100	200
Upma	1 cup	130	200
Fada ni Khichdi	1 cup	100	210
Idli	1	60	75
Dal	1 cup	140	170
Sambhar	1 cup	160	81
Chhole	1 cup	150	115
Subzi with Gravy	1 cup	130	130
Dry Subzi	1 cup	100	115
Bhajiya	1	7	35
Samosa	1	65	210
Kachori	1	45	200
Bataka Wada	1	40	100
Cutlet	1	30	70
Boiled Egg	1	50	86
Omlette	1	65	155
Fried Egg	1	50	155
Mutton Curry	1 cup	145	240
Chicken Curry	1 cup	125	260
Fried Fish	2 pieces	85	220
Biscuits	2	40	220
Cake	1	40	220
Pastry	1	50	350
Laddoo, Barfi, etc.	1	60	250
Rawa Sheera	1 cup	130	430
Chikki	2	60	300
Jalebi	2	100	500

Gulab Jamun	2	50	400
Beetroot	1	65	30
Cabbage	1	250	70
Cucumber	1	90	12
Carrot	1	40	20
Onion	1	50	25
Radish	1	60	10
Tomato	1	50	10
Apple	1	100	65
Banana	1	80	90
Grapes	30	100	70
Guava	1	100	50
Jackfruit	4	100	90
Mango	1	250	80
Orange / Sweet Lime	1	100	40
Papaya	1	250	80
Pineapple	1	100	50
Chikoo	1	80	80
Custard Apple	1	130	130
Watermelon / Muskmelon	1 piece	100	15
Coffee	1 cup	150	100
Tea	150 ml	60	90
Lemonade	1 glass	200	60
Carbonated Drinks	1 bottle	200	150
Buffalo's Milk	1 cup	150 ml	300
Cow's Milk	1 cup	-	100
Curd (Cow's Milk)	-	-	85
Buttermilk	-	-	45
Paneer	-	100	350
Ghee	1 teaspoon	10 ml	100
Butter	3 teaspoon	15	100
Skimmed Milk	1 cup	150 ml	45
Fresh cream	1 tablespoon	15	50
Cheese	1 packet	30	100
Rabdi	1 cup	150	525

A close-up portrait of Mallika Sarabhai, a woman with dark hair pulled back, wearing a bindi on her forehead and large, ornate earrings. She is looking slightly to the right of the camera with a calm expression.

MALLIKA SARABHAI

CLASSICAL DANCER / SOCIAL WORKER

“ *I had always heard that it could be an awful period of life – one that was never understood by the sufferer nor by anyone around. My mother spoke of her anxieties, her fears, her not believing her own reactions to things happening around.*

I had never had any difficulty with my periods so I didn't know what to expect. Truth be told, I hadn't really given it much thought. As a dancer and someone who considers her body as her temple, I have always listened to my body's needs. I have, for years, eaten well, healthily. I have exercised hard, and always maintained high energy and fitness levels. And my body has been kind. It has always stood me well in my stead, never given me trouble through my hard performance schedules. SO actually, I presumed that I would sail through menopause. And I did. I didn't notice it coming. No hot flushes. No depression. No strange behaviour or change in moods. My gynaecologist had some years earlier put me on oil of primrose capsules and on vitamin e capsules and I still take them. My period stopped. Nothing else changed. And hasn't since.

I continue a very fit and active life. I continue to eat healthy and take all the precautions necessary, like mammographs and pap tests, bone density tests and whatever else is needed. And I continue listening to and trusting my body and mind. ”

Conclusion

I wish the conclusion of this book becomes the commencement of your personal journey towards a fitter, healthier and happier you as you move towards and through your menopause, as well as life after it. By reading this book you have understood that menopause does not happen overnight. It is the culmination of years of lifestyle habits – both good and bad. Now you know how heredity, smoking, alcohol, diet, exercise and stress – all contribute to the “change of life”.

It is never too late to change your habits—all it takes is your desire and commitment to build a sound foundation for a comfortable menopause and quality longevity. Start simply cutting back on sugar, coffee, artificial sweeteners and saturated fat. Start adding the good oil to your diet. Add sesame oil and flax oil to your regular diet. Add more beans, nuts, whole grains, flaxseeds, fresh fruits and green vegetables. Slowly increase your exercise. Remember that regular walking, light aerobics, and weight training help to strengthen bone mass. Not only is exercise good for your body but it is a great stress reliever. Take some quiet time out for yourself on a daily basis. Meditation and deep breathing are excellent tools for calming and soothing your mind. Treat yourself well and listen to your body / mind signals. Menopause can be a wonderful time for taking inventory of all aspects your life.

Taking control of your menopause now will start you on a journey that will be blessed with health and happiness for you and your family. May you live long, live strong, and happy without the fear of death

Ageing happens, but good health is planned!

"Nothing in life is to be feared;
Its only to be understood."

Marie Curie (1867-1934)



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About the Author



After more than 40 years of a successful and busy practice in Gynecology and Obstetrics, with women having successfully delivered more than 50,000 babies under her care and supervision, and having successfully performed more than 12,500 family planning operations, Dr. Malti P. Shah has now focused her practice on the well being of maturing women. She is now a qualified menopause practitioner, running a clinic for menopausal women. She is also the founder of 'Club 35 Plus' in Surat, a club focusing on educating women of age above 35 through multiple social, cultural and medical activities.

In spite of having a busy professional schedule, Dr. Malti Shah has always taken keen interest in public health education. She believes that preventive interventions are equally important as curative medicine, and prevention always requires awareness and education. This firm belief led her to write several educational books throughout her career in the regional language – Gujarati – to maximize the reach of her books to more people and even in rural areas.

She loves to spend her spare time enjoying and actively participating in the upbringing of her grandchildren, and exploring and learning new things such as operating the computer, classical vocal singing, swimming, among others.