

*You ask... We answer!*

# HANDBOOK FOR MATURE WOMEN



Edited by

- Dr Duru Shah
- Dr Reena Wani
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*You ask... We answer!*

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## **HAND BOOK FOR MATURE WOMEN**

[www.indianmenopausesociety.org](http://www.indianmenopausesociety.org)

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## *Editorial*

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Dr Duru Shah



Dr Reena Wani



Dr Safala Shroff

“Life begins at 40!!” This has been said many a time...but how many of us truly believe in this? We do... and want each one of you to join us in the celebration of the rest of our lives!!!

“Me-no-pause” has been the object of much discussion, puns and jest lately. We as women need to focus on these special years not only because we should focus on all age groups but also because unlike in the last century, there are more and more women surviving for a significant period of time beyond this milestone. In fact most women of today will spend nearly a third of their lives after menopause.

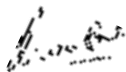
“With great power comes great responsibility”...And with the power to heal, is the responsibility to protect and prevent problems.

As gynecologists we are often the first point of contact for women like you. We have a dual responsibility on

our shoulders when it comes to your health care issues. Not only do we need to tackle the actual problem for which you have come to us, but we also need to suggest certain holistic and preventive health care options to safeguard your future. Hence you may find that your doctor may ask you to start some therapy, which may not seem essential for your current problems.

There are many queries related to issues about menopause- many myths, many misconceptions and many doubts, which we come across. This compilation is a small attempt at clearing the air around some crucial questions related to menopause. All the contributors have given their personal touch to the answers, based on current scientific thought and their experience in the field.

We hope you will find this handbook useful as a 'ready reckoner' for your questions!!!



**Dr Duru Shah**

President Indian  
Menopause Society

**Dr Reena Wani**

Co-ordinator

**Dr Safala Shroff**

Assistant Editor

## *President's Message*

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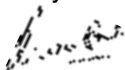
Human beings are living longer today to a large extent because of the medicine we practice... And women are outliving their male counterparts! As society ages, there are millions of women in the aging group who require attention, such attention which will give them a quality life with dignity and meaning. What is achieved by just existing if one does not have the physical or mental capacity to live? What is the value of a life, which is wasting, immobilized on a bed with multiple fractures due to osteoporosis? We fail to find answers to such questions. My only answer is prevention.

As gynecologists we are practically the primary care physicians for women, their first person of contact. It is our responsibility to offer preventive healthcare that is holistic. Besides preventing serious diseases such as cancer of the reproductive tract through pap smear, pelvic ultrasound and mammography, we should also be preventing common conditions like osteoporosis and cardiac disasters in the high risk groups.

The Indian Menopause Society (IMS) is an organization, which focuses on women's health both in the perimenopause and postmenopausal eras. IMS has been in existence since 1995. It is an Organization with a difference, because it brings together not only gynecologists who are responsible for women's health, but also members from allied specialties such as orthopedics, rheumatology, endocrinology, dermatology, oncology and associated professions such as public health, social sciences, physiotherapy, etc. With such a varied membership, there are varied areas of interest, which makes this Organization so very unique. Woman's health is thus seen in its entirety and not microscopically focused only on her reproductive system alone!

The IMS website is very dynamic. You could get all the information you need about IMS there. So check [www.indianmenopausesociety.org](http://www.indianmenopausesociety.org) out and send in your queries!

Educating women themselves is half the job done. It has always been by passion to create health awareness. We propose to have as many public meetings/ forums as possible to sensitize all of you towards better health and a better quality of life. You, the women of today are the spirit behind our motto for the year 2008 *"Better Care in her Changing World"*.



**Dr Duru Shah**

President Indian Menopause Society



## ***Acknowledgements***

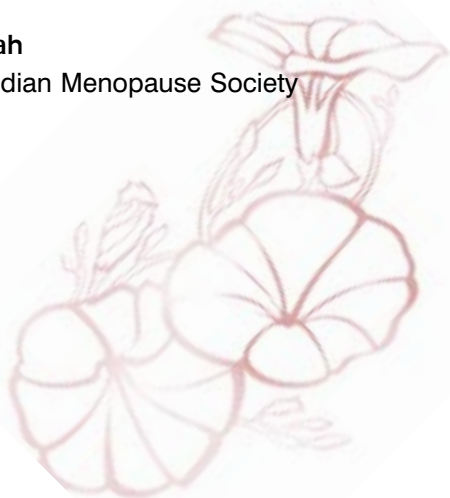
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“Individually we achieve, Collectively we excel” – is what I believe in since I first led a team. I have found that collaboration and co-operation have surmounted many hurdles in various endeavours. This project would not have been possible without the tremendous support and help I received from the following:

- Dr Reena Wani and Dr Safala Shroff for editing the book most efficiently
- All the contributors for their time and valuable inputs
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- Mrs Sunita Kesarkar Dy.General Manager, Marketing, Elder Pharmaceuticals for coordinating the activities
- Mrs Farida Gandevia for efficient secretarial assistance

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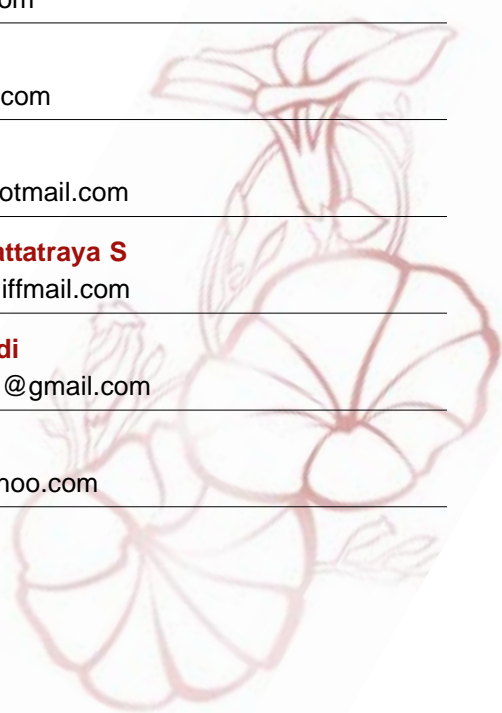
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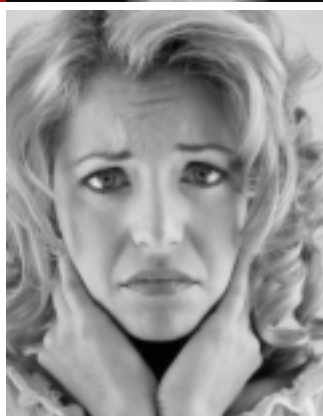
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# Menopause ...

*What is it all about?*





# ***Menopause – What is it all about?***

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## **What does the word menopause mean?**

The term “menopause” comes from the Greek words *meno* (month) and *pause* (to end). Thus, it literally means permanent physiological, or natural, cessation of menstrual cycles. The absence of menstrual periods for 12 months is usually used as the definition of ‘natural’ menopause.

---

## **What is menopause?**

The word is commonly used to signal the end of the fertile phase of a woman’s life happening more or less in midlife. Menopause is perhaps most easily understood as the opposite process to menarche (first menstrual period). Menopause in women can simply be defined as the permanent ‘stopping of the monthly periods’.

---

## **What is surgical menopause?**

Due to some medical conditions, the uterus is sometimes surgically removed –a procedure called ‘hysterectomy’, due to which the menstrual periods will cease permanently and the woman will technically be infertile. But as long as one or both her ovaries are still functioning, the woman will not be in menopause. This is because even without the uterus, the ovaries continue to release the reproductive hormones until the time natural menopause is reached. If the ovaries are removed only then surgical menopause truly occurs.

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### **Why does natural menopause happen?**

Menopause is triggered by the faltering and shutting down (or surgical removal) of the ovaries, which are a part of the body's endocrine system of hormone production. During menopause the hormones that make reproduction possible and influence sexual behavior reach extremely low levels.

The process of the ovaries shutting down is a phenomenon that involves the entire cascade of a woman's reproductive functioning, from brain to skin. This major physiological event usually has some effect on almost every aspect of a woman's body and life.

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### **Does menopause occur only with age?**

Menopause occurs when the ovaries cease to secrete the sex-hormone (estrogen and progesterone). Usually it occurs as the age advances and ovaries mature. However, in certain cases like cancer- chemotherapy, radiation therapy or operative surgery on the ovaries or rarely, pre-maturely the ovaries stop functioning and/or are removed leading to the symptoms of menopause. Other operative surgeries to remove uterus and the removal of uterus with ovaries (Hysterectomy) will also lead to menopause.

---

### **At what age does a woman typically reach menopause?**

The average age of menopause worldwide is 51 years old. But there is no way to predict when an individual woman will enter menopause. The age at which a woman starts having menstrual periods is also not related to the age of menopause onset. Most women reach menopause between the ages of 45 and 55 years, but menopause may occur as early as the 30s or 40s or may not occur until a woman reaches her 60s! As a rough 'rule of thumb,' women tend to undergo menopause at an age similar to that of their mothers.

---

### **What is the age for menopause in India?**

Mean age at menopause ranges in Indian women from 40.32 to 48.84yrs and in the Western world from 48.0 to 51 yrs.

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### **Why is knowledge about menopause important for me?**

Menopausal health demands priority in the Indian scenario due to the increase in life expectancy and growing population of menopausal women. Large efforts are required to educate and make women aware of menopausal symptoms. This will help in early recognition of symptoms, reduction of discomfort and enable them to seek appropriate medical care to avoid disability in future.

---



### **What causes menopause?**

Menopause is the time in a woman's life when the function of the ovaries ceases. The ovary, or female gonad, is one of a pair of reproductive glands in women. They are located in the pelvis, one on each side of the uterus. Each ovary is about the size and shape of an almond. The ovaries produce eggs (ova) and female hormones such as estrogen. During each monthly menstrual cycle, an egg is released from one ovary. The egg travels from the ovary through a Fallopian tube to the uterus.

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### **What is estrogen?**

The ovaries are the main source of female hormones or estrogen, which controls the development of female body characteristics such as the breasts, body shape, and body hair. The hormones also regulate the menstrual cycle and pregnancy. Estrogens also protect the bone.

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### **What is the effect of less estrogen?**

A woman can develop osteoporosis (thinning of bone) later in life when her ovaries do not produce adequate estrogen.

As part of the aging process the ovaries begin to produce less estrogen and progesterone. This decrease signals the beginning of the end of a woman's

reproductive years. Eventually the menstrual periods stop and it is no longer possible for a woman to become pregnant.

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### **Menstruation - What is it?**

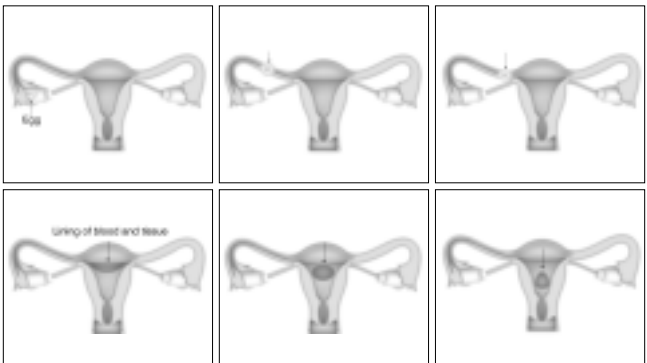
Menstruation is the periodic discharge of blood and other materials from the reproductive organs of women. A menstrual cycle usually lasts around 28 days, but different women can have different menstrual cycles.

When a baby is not conceived in the womb, the lining of the uterus is shed during menstruation. Pregnancy is a phase when menstruation does not take place, because the lining is required to nourish the growing embryo.

---

### **What happens during the Menstrual Cycle?**

The menstrual cycle does not take place only during the period when you are bleeding. It is an ongoing



process, with different events happening during every week. By understanding what happens during each week of the menstrual cycle, you can understand what stage of the menstrual cycle you are in at any time.

- **Week 1.** Week 1 is considered to start from the **first day of bleeding**. After the bleeding has stopped, women may be more energetic and have less vaginal mucus.

- **Week 2.** The mucus becomes thinner and abundant as ovulation approaches.

**Ovulation.** This occurs somewhere around **day 14** of the ovulation cycle. The mucus is very wet. Breasts may be tender. There may be mood swings and cramps.

- **Week 3.** The mucus production slows down and the moods start to become more normal again.

- **Week 4.** This is the pre-menstrual phase. PMS symptoms may start, which can include bloating, cramps, headaches and mood swings.

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### **What is menopausal transition or climacteric?**

The menopausal transition starts with frequent periods and ends with the final menstrual period. The transition can begin as early as the 30s and last even into the 60s. This span of time is also referred to as the **change of life** or the **climacteric**.

'Experiencing Menopause' is experiencing a transition in life for a woman. No more periods, no more childbearing, no more milk producing capability, are some of the changes that immediately hit a woman. There are also changes in physical appearance and a dry vagina.

Climacteric can be divided into three phases:

**Premenopause:** during this phase there is little disruption of ovarian function and the menstrual cycle remains regular. Some symptoms may begin to occur in this phase.

**Perimenopause:** represents declining ovarian function with menstrual irregularities and symptoms commonly start or become trouble some during this time.

**Postmenopause:** when there have been no menses for 12 months, the postmenopause phase is entered.

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### **What is Premenopause?**

Premenopause is a word used to describe the years leading up to the last period, when the levels of reproductive hormones are already becoming lower and more erratic, and symptoms of hormone withdrawal may be present.

---

### **What is perimenopause?**

Perimenopause means "around the time of menopause." It is not officially a medical term, but is

sometimes used to explain certain aspects of the menopause transition in lay terms. Perimenopause is different for each woman. In this stage women begin to experience the symptoms of menopause even though they are still experiencing ovulation and having menstrual periods. In this phase hot flashes and irregular periods begin to occur and it may be four to five years before full menopause sets in. It can begin up to 10 years prior to the last menstrual period.

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### **What happens to our bodies during perimenopause?**

During perimenopause, the production of most of the reproductive hormones, including the estrogens, progesterone and testosterone, diminishes. Periods becomes more irregular, often with wide and unpredictable fluctuations in hormone levels. During this period, fertility diminishes.

Not every woman experiences symptoms during her perimenopause. Approximately one third of all women get no noticeable symptoms other than that their periods become erratic and then stop. Another one third of women have moderate symptoms. The remaining one third of women have very strong symptoms that tend to have a longer duration. The tendency to have a very strong perimenopause may be inherited in some cases.

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## **What is Postmenopause?**

Postmenopause is the entire period of time that comes after the last menstrual period. When twelve months have passed with no menstrual periods occurring, a woman has reached full menopause. The ovaries produce significantly less estrogen and progesterone and no longer release eggs; consequently pregnancy is no longer possible.

Any period-like flow that might occur during postmenopause, even just spotting, must be reported to a doctor. The cause may be minor, but the possibility of endometrial cancer must be checked for and eliminated.

---

## **What is the effect of this “transition” period before menopause?**

This transition can be the most traumatic and at times psychologically depressing but there are two sides to it: on one side there is sadness and gloom of losing youth but on the other side there is liberation and freedom from the monthly routine and a new found status of wisdom and maturity.

---

## **How does it affect me?**

The symptoms of menopause are caused by changes in estrogen and progesterone levels. As the ovaries become less functional, they produce less estrogen/

progesterone and the body subsequently reacts. Some women experience no symptoms, while others experience mild to severe symptoms. This variation is normal. A gradual decrease of estrogen allows the body to slowly adjust to the hormone change, but in some women a sudden decrease in estrogen level occurs, causing severe symptoms. This result is often seen when menopause is caused by surgical removal of ovaries (Surgical Menopause). Menopausal symptoms are part of a natural biological process experienced by all women as their child-bearing years come to an end.

---

### **Does menopause cause any symptoms/complaints?**

The symptoms of menopause are not an illness, just a natural consequence of aging. All women experience “the change” in different ways. Some will have no symptoms or only mild issues while others will battle a range of annoying alterations in their body like hot flashes or mood swings, which can negatively affect their daily lives.

---

### **Does menopause cause complications?**

After menopause there are chronic conditions that tend to appear in women. Declining estrogen levels increase the risk of cardiovascular disease. To combat this potential problem, women should stop smoking, maintain their blood pressure in normal limits, exercise

regularly, and eat a diet rich in fruits, vegetables, and whole grains and low in saturated fats.

Bone density decreases at a rapid rate after menopause and some women develop osteoporosis. In this condition brittle or weak bones break easily, especially those in the hip, wrist, and spine. Adequate amounts of calcium at dosage of 1500 mg a day as well as 400-800 mg of Vitamin D will help to decrease this risk. Strength training and walking or jogging are extremely important ways to decrease the risk of fractures.

---

### **What are the signs that menopause is starting?**

Menopause manifests at different times and in different ways for individual women. Some are lucky enough to get through the experience with no significant problems but for others, menopause disrupts both their lives and their interpersonal relationships.

There are a number of signs and symptoms to indicate the onset of menopause beginning with irregular menstrual periods. The irregularity may be apparent with increased or decreased frequency or in the amount of flow present. As ovulation begins to get erratic, a woman is less likely to get pregnant. The possibility of conception is almost nil after menstrual periods have been absent for a year.

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## **What happens to the genitals and urinary area with menopause?**

The linings of both the vagina and of the urethra (urinary outlet) become drier, thinner, and have less elasticity with the onset of menopause. Consequently women tend to experience burning and itching and have an increased chance of urinary or vaginal infections. A frequent urge to urinate is common with minor incontinence or leakage occurring especially when laughing, sneezing, or coughing. (These problems can continue after full menopause.) In addition, sexual intercourse may become increasingly uncomfortable or even painful.

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## **What is a “hot flash”?**

One of the most common menopause symptoms, the hot flash, is a consequence of dropping estrogen levels that cause blood vessels to expand rapidly with an attendant increase in skin temperature. Generally women experience sweating and a flushed appearance during a hot flush. This can last from 30 seconds to several minutes and can occur as often as once an hour. Although hot flashes can occur at any time of the day or night, night sweats are a related problem that severely disrupt the sleep cycle. Women report waking up from a deep sleep to find their nightclothes and bedding soaked with sweat.

---

### **Will my appearance change with menopause?**

Most women gain some degree of weight during the onset of menopause, usually an average of 2 - 3 kgs. The increased weight concentrates around the waist and abdomen. Other changes in appearance can include sagging of the breasts, thinning hair, wrinkles, adult acne, and coarse hair (usually on the chin, upper lip, and sometimes on the chest and abdomen).

---

### **How is menopause diagnosed?**

Women are simply adequately attuned to their bodies to know when signs of menopause begin to appear. If irregular periods or hot flashes get out of hand, talk to your doctor to calm your concerns and to learn about some of the therapies available to alleviate your symptoms.

In some cases doctors will request for blood tests to check levels of Follicle-stimulating hormone (FSH) and estrogen. FSH increases and estrogen decreases at the onset of menopause. Additionally, a thyroid test may be in order as hypothyroidism can cause some of the same symptoms as menopause.

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### **What conditions can affect the timing of menopause?**

Certain medical and surgical conditions can influence the timing of menopause.

### **1) Surgical removal of the ovaries**

Menopause can be surgically induced by bilateral salpingo-oophorectomy (removal of both ovaries and both fallopian tubes), which maybe done in conjunction with hysterectomy. Cessation of menses as a result of removal of the ovaries is called “surgical menopause”. The sudden and complete drop in reproductive hormone levels usually produces extreme hormone-withdrawal symptoms such as hot flashes, etc.

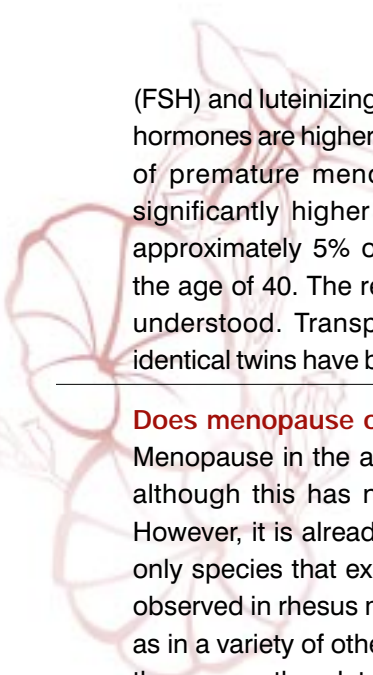
### **2) Cancer chemotherapy and radiation therapy**

Depending upon the type and location of the cancer, its treatment either chemotherapy and/or radiation therapy can result in menopause if given to an ovulating woman. In this case, the symptoms of menopause may begin during the cancer treatment or may develop in the months following the treatment.

### **3)Premature ovarian failure (Premature menopause)**

Premature ovarian failure is defined as the occurrence of menopause before the age of 40 years. This condition occurs in about 1% of all women. The cause of premature ovarian failure is not fully understood, but it may be related to autoimmune diseases or inherited genetic factors.

Premature menopause is diagnosed or confirmed by measuring the levels of follicle stimulating hormone



(FSH) and luteinizing hormone (LH). The levels of these hormones are higher if menopause has occurred. Rates of premature menopause have been found to be significantly higher in fraternal and identical twins; approximately 5% of twins reach menopause before the age of 40. The reasons for this are not completely understood. Transplants of ovarian tissue between identical twins have been successful in restoring fertility.

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### **Does menopause occur in other species?**

Menopause in the animal kingdom is somewhat rare, although this has not been thoroughly researched. However, it is already known that humans are not the only species that experience it. Menopause has been observed in rhesus monkeys, some cetaceans, as well as in a variety of other species of vertebrates including the guppy, the platyfish, budgerigars or “parakeets”, laboratory rats and mice, the opossum, and all primates.

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### **How did the evolution of menopause occur in humans?**

The “grandmothering” hypothesis states that human female reproduction stops early so that the grandmothers can help out with their grandchildren,

leaving the mother the ability to have even more children.

By provisioning grandchildren, grandmothers ensure the children's survival, boost their daughters' fertility and improve the chances that their own genes are passed on. With grandmothers providing food, daughters can breast-feed infants for a shorter period and so bear more babies during their fertile years. According to the theory, menopause helps aging females avoid the increased complications and risks of childbirth, freeing them to pitch in with child care.

But a new study finds no evidence for this “grandmother hypothesis”, three researchers suggest that menopause carries no evolutionary benefit or cost. Menopause, they say, is simply a consequence of aging, and how long females live after menopause depends upon how long a species needs to raise last-born infants to the age of independence.

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### **Does education/ race/ethnicity affect menopause?**

Studies have shown that women with is higher education are less likely to report symptoms such as hot flashes, suggesting that increased knowledge might help women to overcome them.

Vasomotor symptoms vary significantly by race/ethnicity in various studies. Significantly more African Americans and Hispanics and significantly fewer Chinese women have reported vasomotor symptoms as compared to Caucasian women.

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### **What is the Indian Scenario of menopause?**

If adequate menopausal health services and awareness programmes are not available to the aging Indian women, the emotional and financial strain to the family, society and country will be significantly high. Unfortunately in India, the awareness and management of menopause has been limited. This is due to multiple factors such as inadequate understanding of menopause and its consequences by laypersons, primary care physicians and medical specialties. Indian women accept menopausal symptoms as physiological changes and have limited complaints related to menopause. This non-complaining attitude may be due to lack of awareness or more adaptability.

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### **What are the barriers in India in the treatment of menopause?**

There are cultural barriers along with fears, concerns, and myths about the side effects of hormones in general. Improper compliance of patients on advice of life style changes and medication is another problem.

The high cost and non-availability of full range of therapy through the country make tailoring of treatment for individual women difficult at times. Moreover, there is lack of availability of diagnostic facilities for screening and monitoring of menopausal women including those on therapy. Many times, Indian symptomatic menopausal women are subjected to hormone replacement therapy based on Western experiences. Discontinuation rate is very high among Indian women due to myths and misconceptions.

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### **Can diet influence menopause?**

Yes, dietary factors may play a role in estrogen production and metabolism and in symptom occurrence. Asian women who consume less fat with more soya and beans, report less vasomotor symptoms, as compared to Caucasian women whose diet is different.

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### **What are some basic dietary guidelines?**

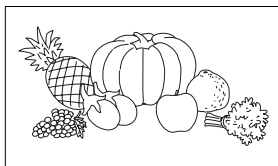
Eat a variety of foods to get all the nutrients you need. Since women's diets are often low in iron and calcium, follow these simple guidelines:

- **Get enough calcium.** Eat and drink 2 to 4 servings of dairy products and calcium-rich foods a day to ensure that you are getting enough calcium in your daily diet. Calcium is found in dairy products, curds, *paneer*, broccoli and legumes.

▪ **Pump up your iron intake.** Eat at least 3 servings of iron-rich foods a day to ensure that you are getting enough iron in your daily diet. Iron is found in lean red meat, poultry, fish, eggs, leafy green vegetables, nuts and enriched grain products.

▪ **Get enough fiber.** Help yourself to foods high in fiber such as whole-grain breads, cereals, pasta, rice, fresh fruits and vegetables.

▪ **Eat fruits and vegetables.** Include at least 2 to 4 servings of fruits and 3 to 5 servings of vegetables in your daily diet.



▪ **Read labels.** Use the package label information to help you to make the best selections for a healthy lifestyle.

▪ **Drink plenty of water.** Drink at least eight 8 to 10 glasses of water a day.

▪ **Maintain a healthy weight.**

Lose weight if you are overweight by cutting down on portion sizes and reducing foods high in fat, not by skipping meals. A registered dietician or your doctor can help you determine your ideal body weight.



- **Reduce foods high in fat.**

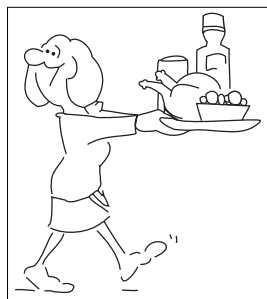
Fat should provide 30 percent or less of your total daily calories. Also, limit saturated fat to less than 10 percent of your total daily calories. Saturated fat raises cholesterol and increases your risk of heart disease.

Saturated fat is found in fatty meats, whole milk, ice cream and cheese. Limit cholesterol intake to 300 milligrams (mg) or less per day.

- **Use sugar and salt in moderation.** Too much sodium in the diet is linked to high blood pressure. Also, go easy on smoked, salt-cured and charbroiled foods – these foods contain high levels of nitrates, which have been linked to cancer.

- **Limit alcohol intake.**

Women should limit their consumption of alcohol to one or fewer drinks per day (3 to 5 drinks per week maximum).





### Can foods reduce menopausal symptoms?

Plant-based foods that contain isoflavones (plant estrogens) work in the body like a weak form of estrogen and may help relieve menopausal symptoms in some women. Some lower cholesterol levels and have been suggested to relieve hot flashes and night sweats. Currently, most research indicates that soy isoflavones are not particularly effective for treating several menopausal symptoms. Aside from soy products, isoflavones can also be found in foods such as **whole grains and beans**.

The phytoestrogens that have been isolated from a variety of plant food are phenolic (rather than steroidal) compounds; the major categories of phytoestrogens include isoflavones, lignans, and coumestans. **Soy**, other beans, clover, and **alfafa** contain isoflavone precursors, which are converted to genistein, daidzein, and equol by intestinal bacteria. **Flax seeds**, other seeds, legumes, whole grains, and some fruits and vegetables contain lignan precursors that can be converted to enterolactone and enteridiol by intestinal bacteria. Phytoestrogens can have estrogenic activity as potential dietary derived modulators with endocrine function.

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## Should I avoid certain foods while I am going through menopause?

If you are experiencing hot flashes, you may find that consuming certain “trigger” foods and beverages – spicy foods, caffeine, and alcohol – may increase the severity and frequency of hot flashes.

---

## Are there dietary supplements I can take to ease symptoms/prevent manifestations of menopause?

Because there is a direct relationship between the lack of estrogen after menopause and the development of osteoporosis, the following supplements, combined with a healthy diet, may help prevent the onset of this condition.

### ■ Calcium

If you think you need to take a supplement to get enough calcium, check with your doctor first.

Calcium carbonate and calcium citrate are good forms of calcium supplements. Be careful not to get more than 2,000 mg of calcium a day. That amount can increase your chance of developing kidney problems.



### ■ Vitamin D3 (cholecalciferol)

Your body uses vitamin D to absorb calcium. People aged 51 to 70 years should have 600 to 800 IU each day

and those over age 70 years should have 800 IU. More than 2,000 IU of vitamin D each day is not recommended because it may be too much for your body.



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### How can I cope with emotional changes?

Irritability and feelings of sadness are the most common emotional symptoms of menopause. Often, they can be managed through lifestyle changes, such as learning different ways to relax and reducing stress.

Here are some tips that may make it easier for you to handle your fluctuating emotions.

- Exercise and eat healthy.
- Find a self-calming skill to practice, such as yoga, meditation or rhythmic breathing.
- Avoid tranquilizers and alcohol.
- Engage in a creative outlet that fosters a sense of achievement.
- Stay connected with your family and community.
- Nurture your friendships.

Although depression is not caused by menopause, some women do exhibit the symptoms of depression during this time. If you are feeling increasingly unable to cope, see your doctor. He or she may be able to recommend medications, such as antidepressants, or hormone replacement therapy that can get you through this rough time.

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**I have a hard time concentrating and I'm forgetful.  
Is this a normal part of menopause?**

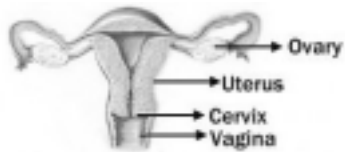
Unfortunately, difficulty with concentrating and minor memory problems are a normal part of menopause. Doctors don't understand why memory changes occur with menopause and there are currently no treatments available to relieve these symptoms. If you are having memory problems, talk to your doctor. He or she can at least provide some reassurance and exercises to improve memory.

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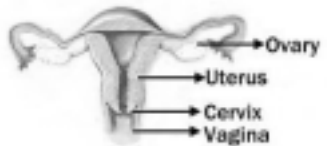
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# *Symptoms and Signs*



Younger Reproductive System



Older Reproductive System



## *Symptoms and Signs*

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### **How does menopause affect your life?**

Whether natural or iatrogenic, the menopause is associated with a symptom complex, arising because of hormonal deficiency. The socio-cultural and psychological factors contribute further in its manifestations.

Some of the symptoms are:

**Vasomotor symptoms:** hot flushes, night sweats, palpitations.

**Atrophic tissue symptoms:** thick skin, vaginal dryness, dyspareunia (painful sexual relationship), vaginal inflammation, postmenopausal bleeding, urinary dysfunction.

**Psychological symptoms:** depression, loss of concentration, irritability, poor libido, insomnia, lack of concentration, memory loss.

**Others:** Hypertension, Ischemic heart disease, Osteoporosis.

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### **What are the menstrual cycle changes that occur in perimenopausal period?**

Initially, menstrual cycle changes can be subtle with a wide variety of possibilities. Usually a woman's cycle gets shorter, with periods occurring more often than the usual 28 days. Bleeding may last fewer or more days, and blood flow may be heavier, lighter or just



spotting. Late in perimenopause, it is common to skip periods, and then resume a normal menstrual cycle again.

However, not all menstrual changes in midlife women are due to approaching menopause. That's why it's important to have an evaluation by a gynaecologist to rule out other conditions that could cause menstrual abnormalities or abnormal uterine bleeding.

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### **Which abnormal bleeding patterns require consultation with a gynaecologist?**

Women should consult a gynaecologist right away if any of the following signs of abnormal bleeding pattern occurs:

- Periods that are extremely heavy, especially if they have not been that way in the past;
  - Periods lasting more than 7 days, or 2 or more days longer than usual;
  - Frequent periods, with interval shorter than 21 days from the start of one period to the start of the next;
  - Spotting or bleeding between menstrual periods;
  - Bleeding from the vagina after intercourse.
- 

### **Are hot flushes common in menopause? Are they precipitated by any factors?**

Nearly 70 to 80 % of women experience hot flushes during the climacteric period. They can vary from the

mild and occasional to severe and frequent, occurring every 20 minutes day and night. Hot flushes may be precipitated by a variety of everyday activities such as sleeping, relaxation, anxiety, stress, housework, eating hot foods and drinking hot drinks, alcohol consumption or change in ambient temperature, although in many cases there is no identifiable trigger.

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### **Are vasomotor symptoms associated with any other complaints in the climacteric period?**

The pattern of menopausal symptoms experienced by Asian women appears to be different when compared to their western counterparts. Asian women predominantly complain of backache, muscle pain, shoulder pain or joint pain and suffer less frequently from vasomotor disturbances.

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### **What are the urinary symptoms associated with menopause?**

Urinary system gets commonly affected due to changes of menopause. Symptoms range from increased frequency, urgency, painful micturition - dysuria and stress incontinence.

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### **What is incontinence and what is its incidence in menopausal women?**

Stress incontinence is described as any involuntary leakage of urine. The prevalence of significant

incontinence increases with age. Among older women, prevalence estimates are 10% to 40% in those who live in the community.

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### **Why does urinary incontinence occur in women at menopause?**

Urinary incontinence in menopausal and perimenopausal women occurs due to usually a combination of stress incontinence and urge incontinence.

- **Stress incontinence** causes involuntary leakage associated with abdominal pressure (eg. coughing, sneezing, laughing, physical activity). This is caused due to excessive mobility of the bladder opening ie. The urethra or weakness of the sphincter of the bladder.
  - **Urge incontinence**, causes involuntary leakage associated with an urgency to pass urine. This occurs due to excessive activity of bladder muscle. Both types of incontinence are as a result of laxity of bladder tissue which occurs due to the hormonal deficiency of menopause.
- 

### **Why is there painful urination or dysuria, occurring at regular frequency in perimenopausal stage?**

Due to the decrease/loss of ovarian hormone-estrogen, the urinary tract surface becomes thinned out and atrophic. This leads to inflammation and the tissue

becomes susceptible to repeated infection. Further due to bladder muscle over activity and occasional involuntary urinary leakage, there is an increase of painful suprapubic sensation or burning feeling while passing urine.

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### **What are vulvovaginal symptoms?**

Vulvovaginal symptoms range from mildly annoying to debilitating symptoms occurring in the vulvovaginal area (external female genitalia and vagina).

These symptoms include vaginal discharge, irritation, burning, dryness, itchiness and pain which increase with sexual activity.

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### **What are the causes for vulvovaginal symptoms?**

There are many possible causes of vulvovaginal symptoms, such as – vaginal infections-bacterial or fungal, sexually transmitted infections, skin conditions-vulvar eczema), lichen sclerosis, pelvic radiation, allergic reaction to chemicals in soaps, bubble baths, spermicide, condoms.

In addition, menopause can also cause vulvovaginal symptoms. However, not all women develop symptoms, or the symptoms may not be troublesome until several years after menopause. Women around the time of

menopause should not assume that vulvovaginal problems are due to reduced estrogen levels. Symptoms should be investigated by a clinician to identify the cause.

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### **How does menopause affect sexual desire?**

Many women remain sexually active throughout their post menopausal years. In general, sexual desire (sex drive) decreases with age in both sexes, but each individual is different. Although some experience a significant decline in desire, a few have increased interest, and others notice no change at all.

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### **What are the reasons of menopause affecting sexual desire?**

Reduced ovarian production of estrogen at menopause can contribute to hot flashes and night sweats, robbing a woman of restful sleep and reducing her interest in having sex. Falling estrogen levels can also result in vaginal dryness, making intercourse uncomfortable. The desire may be adversely affected by falling levels of androgen hormone.

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### **Are there any factors which affect sexual function at menopause?**

Hormone changes are only part of a complex group of factors that influence sexual function at menopause and

beyond. Social changes, such as children leaving home or the need to care for aging or ill-parents, often takes place at this time of life. Fatigue and stress can dampen sexual desire.

Other factors which affect sexuality include changes in body image and self-esteem, as well as concern about aging and physical capacity.

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### **Do psychological problems occur due to hormonal changes of menopause?**

Few scientific studies support the belief that menopause contributes to true clinical depression, severe anxiety or erratic behavior.

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### **Why do some psychological problems become apparent with menopause?**

Some perimenopausal women report symptoms of fearfulness, mood swings and feeling low or discouraged.

Abrupt hormonal fluctuations, deprivation of sleep due to hot flushes, history of depressed mood (including PMS) earlier in life, a longer menopause transition and social- family related events like death, divorce, struggles with adolescents may play a more important role in the psychological affliction seen around menopause.

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## Is weight gain related to menopause?

Midlife weight gain appears to be mostly related to aging and lifestyle, but menopause also contributes to the problem.

Menopause is associated with increased fat in abdominal region. Behavioral factor, particularly decreased exercise and increased alcohol and food consumption, are more closely linked to weight gain than menopause. With aging, muscle mass often decreases, while fat often increases. Body shape typically changes from a “pear” (wide hips and thighs) to an “apple” (wide waist).

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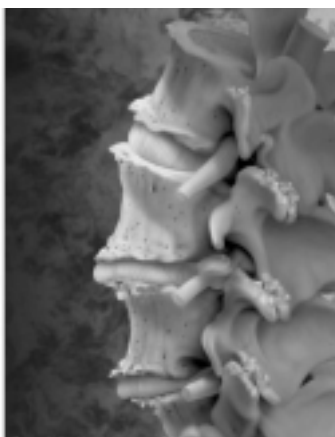
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# *Osteoporosis*



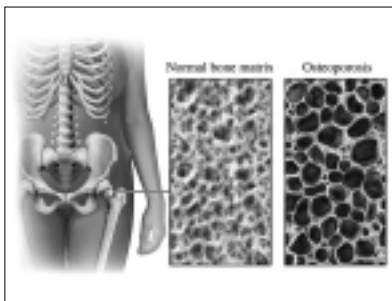


# ***Osteoporosis***

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## **What is osteoporosis?**

Osteoporosis, which means “porous bones,” is a condition that causes strong bones to become gradually thin and weaken, making them more likely to



break. Bones become so brittle that even mild stresses like bending over, lifting something heavy or coughing can cause a fracture. Although all bones can be affected by the disease, those of the spine, hip, and wrist are most likely to break.

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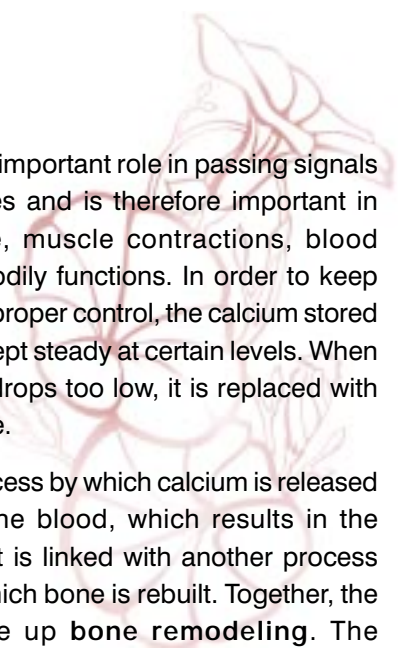
## **Why is osteoporosis called “the silent disease”?**

Osteoporosis is often called “the silent disease” because the bone loss occurs without symptoms. People may not know that they have osteoporosis until a sudden strain, bump, or fall causes a bone to break.

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## **How does osteoporosis develop?**

Bone is a living, growing tissue composed of a network of collagen fibers lined with calcium and phosphate. The minerals are mixed with water to form a hard cement-like substance called hydroxyapatite. Calcium is the principal ingredient of hydroxyapatite.



Calcium also plays an important role in passing signals to nerves and muscles and is therefore important in regulating heart rate, muscle contractions, blood pressure and other bodily functions. In order to keep these functions under proper control, the calcium stored in the blood must be kept steady at certain levels. When calcium in the blood drops too low, it is replaced with calcium from the bone.

**Resorption**, is the process by which calcium is released from the bone into the blood, which results in the breakdown of bone. It is linked with another process called **formation** in which bone is rebuilt. Together, the two processes make up **bone remodeling**. The continuous remodeling cycle helps to supply the body with needed calcium and to maintain the skeleton by replacing old bone with new. When formation is more than resorption, bone mass is gained. When resorption takes place faster than formation, bone mass loss occurs. If excessive bone loss continues over time, osteoporosis develops.

During the early years of life, formation is greater than resorption and bone mass increases. Maximum, or peak, bone mass is reached around age 30 years. After that, bone is removed faster than it can be replaced and bone mass decreases. While gradual bone loss is a normal part of aging, it is those individuals who fail to

achieve optimal peak bone mass by 30 years of age and those with accelerated bone loss who are at greatest risk for osteoporosis.

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### **How does osteoporosis affect people who have it?**

The biggest worry for people with osteoporosis is the risk of bone fractures. Once a bone has broken, a person's independence, quality of life and even survival can be greatly reduced.



Fractures of the spinal vertebrae (compression fractures), lead to a progressive change in the shape of the spine and back. A person may lose height or develop a pronounced curvature of the spine, known as a “dowager’s hump”. A person may not want to take part in daily activities, such as walking, housecleaning, shopping etc. for fear of fracturing a bone or because the pain is too great.

Probably the most serious problems arise from hip fractures. A hip fracture almost always leads to surgery and hospitalization, pain and physical disability, inability to perform daily living activities and loss of independence. 24% of hip fracture patients, above the age of 50 years die in the year following their fracture.

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## How do I know if I am at risk for getting osteoporosis?

There are two types of “risk factors” which increase the likelihood of developing osteoporosis. The first type of risk factor is called “internal” or uncontrollable, because these are factors that occur naturally, rather than through personal choice. These factors include:

- Thin or small-frame
- Postmenopausal women
- Premature menopause (before age 40)
- Gender. Women experience osteoporosis four times as frequently as men and at an earlier age due to decreased estrogen levels at menopause
- Ethnicity – Caucasian and Asian
- Family and personal history of osteoporosis
- Low testosterone levels in men

The second type of risk factor is “external”, or controllable, risk factors because making certain lifestyle choices can reduce or eliminate these factors as risks. These factors include:

- Inadequate calcium and Vitamin D intake.
- Sedentary lifestyle with no exercise.
- Cigarette smoking and tobacco use.
- Excessive alcohol intake.
- Excessive intake of caffeinated beverages such as coffee, tea and colas (more than 3-4 cups / day).

- Eating disorders such as anorexia nervosa and bulimia.
  - Prolonged use of certain medications. eg. glucocorticoids, anti-inflammatory medications, thyroid hormone, anticonvulsants.
- 

### **Why are women at greater risk for osteoporosis than men?**

Women have smaller and lighter bones, and they lose bone more rapidly than men because of the sudden decrease of estrogen which occurs after menopause. On the other hand men have a gradual decrease of testosterone level over a period of time.

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### **Does osteoporosis have any warning signs?**

Osteoporosis may not show any symptoms until a fracture occurs. Some people may be unaware that they have already experienced one or more spine fractures. Height loss of one inch or more may be the first sign of a spinal fracture due to osteoporosis. People who have experienced a fracture are at high risk of having another one. A fracture over the age of 50 years or several fractures before that age may be a warning sign that a person has already developed osteoporosis. Any fracture in an older person should be followed up for suspicion of osteoporosis.

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### **How do I know if I have osteoporosis?**

If your doctor suspects you have osteoporosis, he or she may measure you to check for a loss of height. The vertebrae are often the first bones affected, causing a loss in height of half an inch or more. Your doctor may also recommend that your bone density be measured. In addition to these bone measurement tests, you may be asked to undergo blood or urine samples investigations to rule out disease-related causes of bone loss.

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### **How is osteoporosis diagnosed?**

Osteoporosis was once diagnosed only after fractures had occurred because there was no test that could determine when bone had weakened. Since then, researchers have found that the most effective way to diagnose osteoporosis is through the use of bone mineral density (BMD) measurements that can identify mineral loss in an intact bone.

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### **Are there different types of bone density tests?**

The most reliable and practical method for measuring bone mass today is the dual-energy x-ray absorptiometry, or DEXA scan. DEXA can compute the density of bone with great speed and accuracy, and a small radiation dose. DEXA usually measures bone density at the hip and spine.

A modification of the DEXA, called peripheral dual-energy x-ray absorptiometry, or pDXA, measures bone density in the wrist.

A more recently developed radiation-free technique is quantitative ultrasound which measures bone density of the calcaneus (heel) bone.

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### **What happens during a bone density scan?**

The DEXA scan takes approximately 10-15 minutes, during which time the patient lies on a table while an imager passes over the body. A computer calculates the density of the patient's bones in grams per square centimeter and compares it to a standard for normal bone at peak bone mass and to the average bone density of individuals the patient's own age. Bone with normal mineralization will produce a higher reading in grams per centimeter than osteoporotic bone.

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### **How does the bone density test define osteoporosis?**

A diagnosis of osteoporosis is defined in terms of standard deviations from the average peak bone mass. The World Health Organization defines osteoporosis as bone mineral density 2.5 standard deviations below that of a normal healthy 30 year old. Those who are between 1 and 2.5 standard deviations below the norm



are defined as having osteopenia or having low bone mass. Individuals within one standard deviation of the 30-year-old norm are considered to be at low risk for osteoporotic fracture.

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### **Who should get a bone density test?**

Women aged 65 years and older should be screened for osteoporosis, as well as women aged 60 years and older who are at increased risk for an osteoporosis-related fracture. However, the decision whether to have a bone density test is best made between a patient and her doctor.

Recent guidelines issued by the National Osteoporosis Foundation recommend bone mineral density testing for the following individuals:

- Women 65 years and older, regardless of other risk factors
  - Postmenopausal women with one or more risk factor for osteoporosis (other than menopause)
  - All postmenopausal women with fractures.
- 

### **Are there any blood and urine tests to detect osteoporosis?**

The blood and urine tests (bone turnover markers) are useful for predicting bone loss and fracture risk in untreated patients. In patients on medications, markers

can be useful in checking the response to treatment. However, markers cannot be used for regular tests to know if there is osteoporosis or to assess the severity of the disease.

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### **Can osteoporosis be prevented?**

Yes, but prevention involves a lifelong effort, starting in early childhood. One of the most important factors in preventing osteoporosis is achieving optimal peak bone mass during childhood, adolescence and early adulthood. Much of the peak bone mass achieved is determined genetically. However, there are several controllable factors that can increase bone mass. These include a balanced diet adequate in Vitamin D and calcium and weight-bearing exercises.

It is also important to maintain the bone mass achieved as a child to help prevent osteoporosis. This requires adequate calcium intake, weight-bearing exercises, and avoiding tobacco and excessive alcohol intake.

At around 40-45 years of age, it becomes important to stop the age-related bone loss that occurs. This includes adequate calcium and vitamin D intake, weight-bearing exercises and if indicated, medications.

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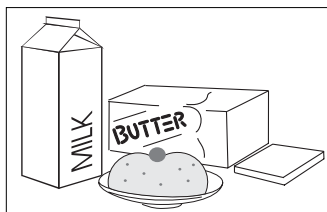
## How much calcium and vitamin D do I need each day?

Calcium and vitamin D are important nutrients for bone health. According to the National Institutes of Health, women who are still menstruating, or who are postmenopausal but taking menopausal hormone therapy, should consume 1,000 mg of calcium each day. Postmenopausal women not on hormone therapy should consume 1,500 mg/day. Because most women take in only half or a third as much calcium as they need through their diet, most doctors recommend calcium supplements to make up the difference. To help the body absorb calcium, doctors suggest taking vitamin D (400 to 800 IU daily) supplements. More than 800 IU per day may be harmful.

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## What are the good food sources of calcium?

- a. Milk products: milk, buttermilk, cheese, yogurt, ice cream
- b. Vegetables & grains: Green beans, cabbage, broccoli, cauliflower, soybeans and tofu
- c. Sea food: salmon, oyster, shrimp



One should also avoid phosphorus-rich food, which can promote bone loss. High-phosphorus foods include red meats, soft drinks, and those with phosphate food additives. Avoid antacids containing aluminum, as they can prevent calcium absorption by binding with phosphorus in the intestines.

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### **Are there any other dietary ways to maintain bone?**

To help keep estrogen levels from dropping sharply after menopause thus preventing osteoporosis, some practitioners advise postmenopausal women to consume more foods containing plant estrogens, especially tofu, soybean milk, and other soy products.

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### **Can I get all the vitamin D I need from sunshine?**

Your body makes vitamin D in the skin when it is exposed to sunlight and some people get all the vitamin D they need this way. However, many older people, especially those who are indoors most of the time and/or live in northern areas, do not get enough vitamin D.

Also, during the winter months, many people do not get enough vitamin D. Many older people will need a dietary supplement to reach recommended levels of vitamin D.

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## Why is Vitamin D important in preventing osteoporosis?

Vitamin D can be thought of as the “key” that unlocks the door to the body to let calcium in. Without Vitamin D, your body can’t use calcium very well, even if you get enough calcium in your diet.

There are two ways to get Vitamin D:

- Vitamin D is formed naturally in your body after exposure to sunlight. About 15 minutes in the sun each day will make all the Vitamin D your body needs.
  - You can also get Vitamin D from the foods you eat. Food sources include Vitamin D fortified dairy products, egg yolks, saltwater fish and liver.
- 

## Which exercise is best for bone health?

Exercise can make bones and muscles stronger and help slow the rate of bone loss. Any exercise that causes your body to work against gravity or exerts resistance against the body is effective. It is also a way to stay active and mobile. Weight-bearing exercises (those that put stress on bones) done three to four times a week for 30 to 45 minutes, are best for preventing osteoporosis. Walking, jogging, stair climbing, playing tennis, and dancing are examples of weight-bearing exercises. Strengthening and balance exercises may help you avoid falls and reduce your chances of breaking a bone. Swimming and bicycle riding,

although being good cardiovascular exercises do not appear to prevent osteoporosis because they do not put enough stress on bones. Always check with your doctor or health care provider before starting a new exercise program.

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### **Is there a cure for osteoporosis?**

Although there is no cure for osteoporosis, it can be treated. The goal of treatment is to prevent fractures. Along with making lifestyle changes, there are several medication options.

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### **What treatments are available for osteoporosis?**

There are drugs that can maintain or build bone that are often recommended for people, especially women, at high risk of developing osteoporosis. It is important to talk to your doctor about which medication is right for you. The treatment options are:

- a. **Bisphosphonates:** This group of drug slows bone loss and reduces fracture risk. eg. alendronate, risedronate, ibandronate, and zoledronic acid
- b. **Selective estrogen receptor modulators (SERMs):** also act by slowing bone loss and reducing the risk of fractures in the spine. eg. raloxifene
- c. **Calcitonin:** It is a hormone produced in the thyroid gland that slows bone loss and reduces the risk of spine fractures Generally used in women who are at least 5 years past menopause.

- d. **Estrogen:** Although estrogen therapy after menopause can help maintain bone, hormone therapy is no longer recommended only for osteoporosis as the risks outweigh the benefits.
  - e. **Teriparatide:** a form of human parathyroid hormone, is given daily as an injection, for up to 24 months. It increases bone density and reduces the risk of spine and other fractures.
- 

### **Is there anything else I could do if I have osteoporosis?**

With osteoporosis, you need to learn how to live safely to prevent falls and back strain. Make your home safe by getting rid of hazards.

**Home safety:** Have good lighting in every room, keep electrical and telephone cords out of walking paths, watch for small objects on the floor. Avoid putting loose rugs on the floor.

**Personal safety:** Wear footwear that grip well, use handrails when going up and down stairs.

**Safety in everyday tasks:** Use caution when lifting, bending or reaching.





# *Orthopaedic Issues*





### **I have pain in both my knees. Is it Arthritis?**

There are many causes of knee pain with advancing age. Arthritis means an inflammation of joints. (Artho-joint; -itis - inflammation). There are 100 different types of Arthritis. The common causes are:

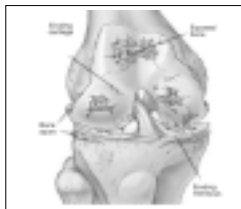
**Osteoarthritis (OA):** This is the commonest form where the joint cartilage gradually wears away and adjacent bony changes occur. It is typically seen after 50 years of age and can also in younger people, secondary to old injury or due to inherited diseases.

**Rheumatoid Arthritis (RA):** is an auto-immune disease; viz. immune system of patient attacking his own body, mainly the joint lining ie. Synovium. There is progressive destruction of cartilage and adjacent bones, tendons, muscles and ligaments and it generally affects younger age group.

**Other causes:** Gout (high uric acid), Psoriatic arthritis, infective arthritis.

### **What are the warning signs of Osteoarthritis?**

- Pain: aggravated by activity and relieved by rest.
- Swelling: one or more joints
- Stiffness: after getting out of bed or sitting for a long time.
- Grating : crunching feeling due to bones rubbing on movements



- In severe cases there are deformities of the knees (bow legs or knock knees)
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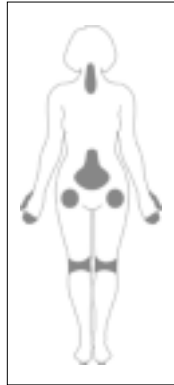
### **Which joints does OA affect?**

Hands (ends of fingers, base of thumb), spine (neck, lower back), knees and hips.

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### **What is 'Locking' of the knees in OA?**

It is the sudden and painful stiffness of the knee joint during normal activity caused by something obstructing the normal gliding of the joint surfaces. Usually a 'loose body' or 'torn knee meniscus' (pad of cartilage separating the bones).



### **What is the treatment for OA of the knees?**

Four goals of treatment:

- Control pain
- Improve joint function
- Maintain body weight
- Achieve healthy lifestyle

Treatment approaches:

- Exercises
- Weight control
- Rest and relief of stress to joints

- Medicines to control pain and inflammation
  - Non drug pain relief techniques
  - Surgery
- 

### **What is the role of exercise in treating OA?**

Studies show that exercise is one of the best treatments for osteoarthritis. Exercises improve mood and outlook, decrease pain, increase flexibility, strengthen the heart and improve blood flow; thereby maintaining weight, and promoting general physical fitness. Exercise is also inexpensive and, if done correctly, has few negative side effects. The amount and type of exercise prescribed will depend on which joints are involved, how stable the joints are, and whether a joint replacement has already been done. Walking, swimming, and water aerobics are a few popular types of exercise for people with osteoarthritis.

Specific types of exercise depending on your particular situation are:

- **Strengthening exercises:** They strengthen muscles that support joints affected by arthritis. They can be performed with weights or with exercise bands which are inexpensive devices that add resistance.
- **Aerobic activities:** such as walking or low-impact aerobics, that get your heart pumping and can keep your lungs and circulatory system in shape.

- **Range-of-motion activities:** These keep your joints limber and mobile.
- **Agility exercises:** These can help you maintain daily living skills.

Always ask your doctor or physiotherapist what exercises are best for you. Ask for guidelines on exercising when a joint is sore or if swelling is present. Also, check if you should use pain-relieving drugs, such as analgesics or NSAIDs (nonsteroidal anti-inflammatory drugs) to make exercise easier, or use ice afterwards.

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### **Does weight control help?**

Osteoarthritis patients who are overweight or obese should lose weight. This reduces stress on weight-bearing joints, limits further injury, and increases mobility. A dietician can help you develop healthy eating habits and with regular exercise help you to reduce weight.

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### **How much should you rest?**

You must learn to recognize the body's signals, and know when to stop or slow down. This will prevent the pain caused by overexertion. Pain can make it difficult to get sound sleep and getting proper sleep is important for managing arthritis pain. If you have trouble sleeping, you may find that relaxation techniques, stress

reduction, and biofeedback can help, as can time medications to provide maximum pain relief through the night.

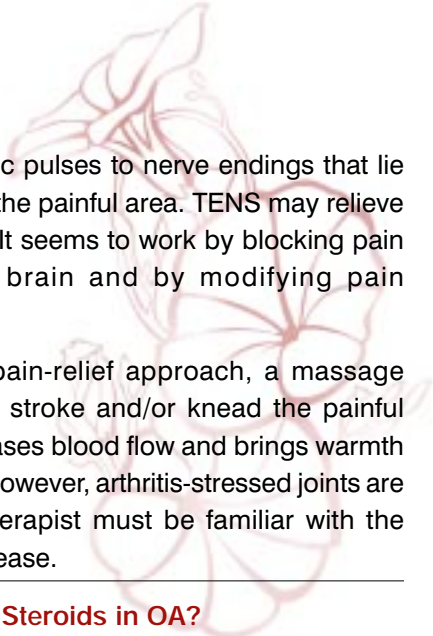
Some people use canes to take pressure off painful joints. Splints and braces provide extra support for joints and/or keep them in proper position during sleep or activity. Splints should be used only for limited periods of time because joints and muscles need to be exercised to prevent stiffness and weakness. If you need a splint, an occupational therapist or a doctor can help you get a properly fitted one. If joint pain interferes with your ability to sleep or rest, consult your doctor.

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### **What are the Non-drug methods of pain relief?**

**Heat and cold:** Heat, cold or a combination of the two can be useful for joint pain. Heat can be applied in a number of different ways - with warm towels, hot packs, or a warm bath or shower. Heat increases blood flow and eases pain and stiffness. In some cases, cold packs (bags of ice or frozen vegetables wrapped in a towel), which reduce inflammation, can relieve pain or numb the sore area. (Check with a doctor or physiotherapist to find out if heat or cold which is a more suitable treatment.)

**Transcutaneous electrical nerve stimulation (TENS):** TENS is a technique that uses a small electronic device



to direct mild electric pulses to nerve endings that lie beneath the skin in the painful area. TENS may relieve some arthritis pain. It seems to work by blocking pain messages to the brain and by modifying pain perception.

**Massage:** In this pain-relief approach, a massage therapist will lightly stroke and/or knead the painful muscles. This increases blood flow and brings warmth to a stressed area. However, arthritis-stressed joints are sensitive, so the therapist must be familiar with the problems of the disease.

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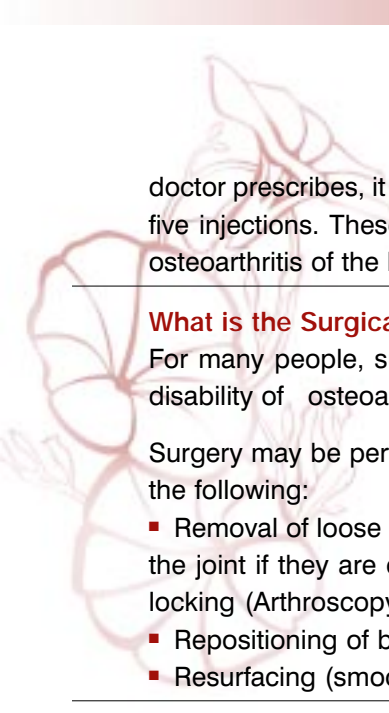
### **What is the role of Steroids in OA?**

Corticosteroids are powerful antiinflammatory hormones made naturally in the body or man-made for use as medicine. They may be injected into the affected joints to temporarily relieve pain. This is a short-term measure, generally not recommended for more than two to four treatments per year. Oral corticosteroids are not routinely used to treat osteoarthritis. They are occasionally used for acute inflammatory flares.

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### **Role of 'Artificial joint fluid' injections?**

Hyaluronic acid substitutes sometimes called visco supplements, are designed to replace a normal component of the joint involved in joint lubrication and nutrition. Depending on the particular product your



doctor prescribes, it will be given in a series of three to five injections. These products are approved only for osteoarthritis of the knee.

---

### **What is the Surgical treatment of OA knee?**

For many people, surgery helps relieve the pain and disability of osteoarthritis.

Surgery may be performed to achieve one or more of the following:

- Removal of loose pieces of bone and cartilage from the joint if they are causing symptoms of buckling or locking (Arthroscopy)
  - Repositioning of bones (Osteotomy)
  - Resurfacing (smoothing out) of bones.
- 

### **What is Joint Replacement?**

Surgeons may replace affected joints with artificial joints called prostheses. These joints can be made from metal alloys, high-density plastic, and ceramic material. Some prostheses are joined to bone surfaces with special cements. Others have porous surfaces and rely on the growth of bone into that surface (a process called biologic fixation) to hold them in place. Artificial joints can last 10 to 15 years or longer. Surgeons choose the design and components of prostheses according to their patient's weight, sex, age, activity level, and other medical conditions. After surgery and rehabilitation, the



patient usually feels less pain and swelling, and can move more easily.

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### **Total Knee Replacement (TKR) Is it true that one should delay TKR for as long as possible?**

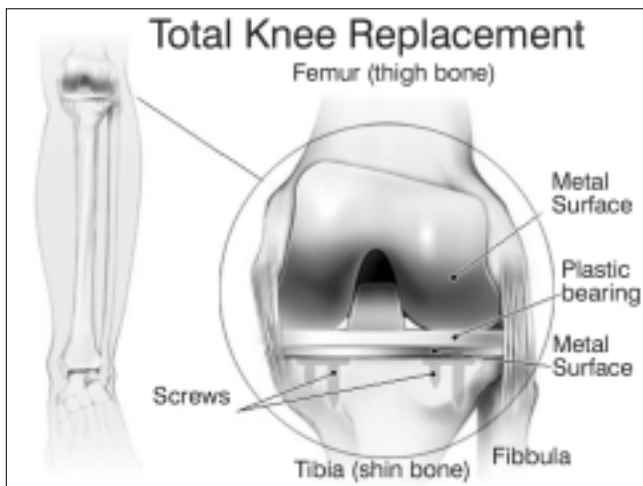
Early TKR is linked with better outcomes. Delaying surgery lowers quality of life. OA is essentially a progressive degenerative disease which has no cure. If your doctor has recommended TKR then do not delay.

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### **How long will a TKR last?**

According to Arthritis Foundation Study, TKR has an implant lifespan of >95% at 10 to 15 yrs in some designs. Success of surgery depends on your satisfaction with pain relief and improved mobility.

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### **Am I too old for a TKR?**

TKR is often the answer for you when Xrays and other tests show joint damage, complaint of moderate to severe persistent pain; not improving with non-surgical treatment and decreased range of motion diminish quality of life. In the past, patients between 60 and 75 yrs were considered best candidates for TKR. Over the last 2 decades this age group has been extended to include younger and older candidates.

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### **Can a TKR fail?**

The desired outcome of TKR may not be achieved in the presence of certain risk factors which have been identified as poor prognostic indicators for TKR such as:

- < 55 years of age
  - Males
  - Obese
  - OA patients (unlike RA where TKR last longer)
- 

### **What is new in Knee Research?**

- Development of **newer drugs** to slow the damage to joint cartilage. The cartilage supplement combination of Glucosamine+Chondroitin has been shown to have a significant pain-relieving effect in moderate to severe OA
- **Artificially growing cartilage cells** for grafting onto damaged areas

- Investigating the role of **different exercises** in protecting the knee joint
  - **Less invasive surgery** and better, long lasting prostheses for joint replacement.
- 

### **What is Spondylosis?**

Degeneration and deformity of the joints of the spine occurring with age.

There is formation of bony spurs (osteophytes) and disc bulges

When the space between two adjacent vertebrae narrows there is compression of the nerve root giving rise to arm or leg pain (radiculopathy).

The commonest are Cervical(neck) and Lumbar(low back) Spondylosis

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### **What is the treatment of Spondylosis?**

#### **Non-surgical**

- Collar or lumbar belt for support ( to be used only for short term or else muscles weaken)
- Physiotherapy and manipulative (osteopathic and chiropractic) therapies improve pain relief and mobility
- Injection of painful spinal joints and nerve roots for relief of radicular pain.

## **Surgical**

- Removal of the disc (Discectomy)
  - Fusion of the painful and deformed vertebral joints, with or without implants(plates and screws)
- 

### **What is an 'Insufficiency fracture'?**

It is an incomplete or compression fracture caused by unusual or repetitive stress in a bone weakened by osteoporosis. Usually affects weight bearing bones viz. Spine, hip, neck of femur, tibia and metatarsals of foot.

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### **What are the signs of an Insufficiency fracture?**

- Pain in a bone increased by activity and relieved by rest
  - Pain increasing over time
  - Persistent pain at rest
  - Localized swelling or a tender bony spot.
- 

### **What is the line of treatment?**

- Rest
- Ice
- Pain relieving medications

Usually takes 4 to 12 weeks to heal.

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### **What are the signs and symptoms of Lumbar Compression fractures?**

- Usually midline pain in the back, severe, non-radiating(unlike disc pain)

- Common in patients suffering from malignancy (breast, lung, kidney and prostate)
  - Females > males
  - Osteoporosis (Oestrogen deficiency) predisposes
  - No definite history of trauma
- 

### **What is the treatment of Vertebral compression fractures?**

**Non-surgical** treatment involves pain relief, bracing, rehabilitation (back extension exercises, posture)

**Vertebroplasty** involves injecting thin bone cement polymer into the fractured vertebra making it stronger and reducing the pain

- Under local or general anaesthesia
- Percutaneous (thru the skin) needle used
- Under continuous xray (fluoroscopy) guidance
- Usually done 2 weeks after onset

**Kyphoplasty** is a newer procedure, inflatable balloon used to restore vertebral height and then thick cement injected. Corrects the deformity as well as relieves pain.

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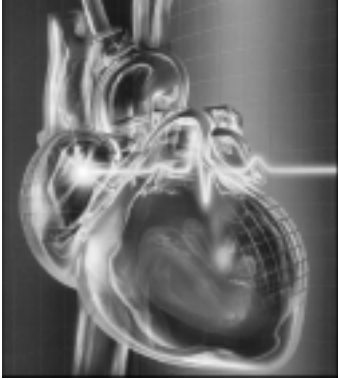
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Campbell's Textbook of Orthopaedics



# *Heart Disease*



## ***Heart Disease***

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### **Does menopause increase the risk of heart disease?**

Yes, the incidence of coronary heart disease and stroke increase after menopause due to loss of protection to the Cardio Vascular System by natural estrogen in the body.

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### **What is the risk of heart disease in women?**

As women age, their risk of heart disease and stroke rises by 2-3 times that of menstruating women. Compared to men, many women before the age of menopause seem to be partly protected from heart attack and stroke.

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### **How do natural female hormones (estrogen and progesterone) help protect from heart disease?**

Normally estrogen has good effects on heart, lipids and glucose levels. It has antioxidant properties on endothelial vascular function (i.e. our blood vessel lining) Normally estrogen reduces LDL (bad cholesterol) & increases HDL (good cholesterol).

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### **Does menopause have any effect on blood pressure?**

Yes, blood pressure increases after menopause. There is an increase in systolic pressure by about 5mm of Hg.



This may be attributed to increased salt sensitivity and weight gain that are in turn associated with hormonal changes during menopause.

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### **What steps can I have to take to control rise in blood pressure after menopause?**

Lifestyle changes can help to delay or reduce the need for medications. These include:

- Reducing sodium in your diet
  - Increasing physical activity
  - Achieving and maintaining a healthy weight
  - Limiting or avoiding alcohol and tobacco use
  - Regular use of medications if required.
- 

### **Does menopause alter my lipid levels?**

Yes, Natural estrogen increases good cholesterol (HDL) and decreases bad cholesterol (LDL). This change reverses after menopause, hence leading to dyslipidemia.

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### **Why does menopause increase all these cardiovascular risks?**

These all are attributed to hormonal changes occurring in the body. Naturally occurring estrogen and progestin levels decrease during menopause and hence all good effects of these female hormones decrease, thus increasing the cardiovascular risk.

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### **Do all women at menopause have increased cardiovascular risks?**

Yes, all women after menopause have increased cardiovascular risk.

Especially women with prior history of high blood pressure, heart attack or diabetes, are at increased risk of heart disease after menopause.

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### **Do hereditary cardiovascular diseases have any correlation with menopause?**

Yes, If strong hereditary history of cardiovascular illness is present, then the woman is at risk of heart disease even before menopause starts. Due to factors discussed above, after menopause, definitely such women have to take extra precautions.

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### **Does Postmenopausal hormone therapy (PHT) have any protective effect on heart after menopause?**

No, PHT has no place in prevention of heart disease in women at present, due to its side effects. Previously called hormone replacement therapy (HRT), this is named as Postmenopause Hormone Therapy (PHT) by American Heart Association(AHA).

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### **So, to prevent menopause-associated all complications, can I take PHT?**

No. The results of many conclusive research projects(e.g. WHI- Women's health initiative study, MWS- Million Women's study) show that PHT is not safe for prevention. The use of synthetic estrogen & progestin is linked to increased risks of heart disease, breast cancer, uterine and ovarian cancer, strokes and blood clots in some women. Thus only for prevention, hormones are not recommended.

Women should thoroughly investigate these risks and discuss all concerns with her physician before deciding to use a synthetic HRT.

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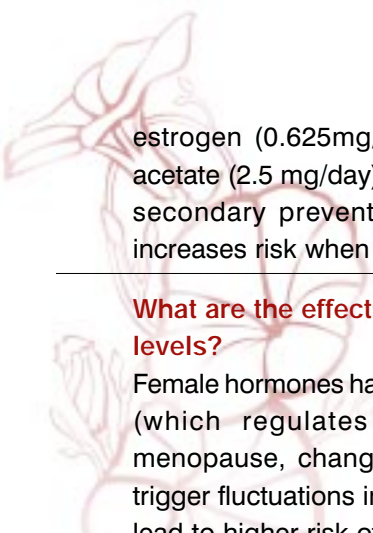
### **What are the results of the Women's health initiative study(WHI) study?**

According to these results, estrogen used in combination with progestin, increases

- The risk of breast cancer by 26%
- The risk of heart disease by 29%

Hence this study was halted and the trial studying estrogen alone continued.

Data from the WHI and HERS (Heart Estrogen/ Progestin Replacement Study) trials suggest that continuous combined therapy with conjugated



estrogen (0.625mg/ day) and medroxyprogesterone acetate (2.5 mg/day) is ineffective for either primary or secondary prevention of CHD, and in fact slightly increases risk when used for primary prevention.

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### **What are the effects of menopause on blood sugar levels?**

Female hormones have good effect on insulin sensitivity (which regulates blood sugar level). During menopause, changes in these hormones level can trigger fluctuations in blood sugar level. This itself can lead to higher risk of diabetes and complications.

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### **What precautions can be taken up at the time of menopause by diabetics?**

If you are already a diabetic patient, you need to be very careful about your blood sugar levels.

Frequent monitoring of blood sugar levels and HBA1C (glycosylated hemoglobin, an indicator of long-term control) is necessary.

With diabetes you are at increased risk of heart disease even before your menopause.

Hence, seek the help of your doctor for diabetes, lowering your cholesterol, adjustment of dosages and life style modifications.

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### **Is there any relation of weight gain and menopause?**

Yes, however it has more to do with change of activity levels than hormones.

Some women gain weight during the menopause transition. During menopause, why exactly weight gain occurs, is not very clear may be due to increased salt sensitivity.

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### **What is the association of weight gain and heart disease especially after menopause?**

Weight gain itself increases the risk of developing high blood pressure, diabetes, abnormal lipid profile and subsequently the risk of heart disease.

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### **Are women using PHT at risk for other health conditions?**

Women who use estrogen combined with progestin are at increased risk for blood clots, gall bladder disease and inflammation of veins. Other studies show a link between certain types of PHT and endometrial cancer.

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### **What natural alternatives to PHT are available?**

Botanical products acting like estrogen may provide some of the benefits in relieving menopausal symptoms. Dietary supplements also have been useful. Other options are soy products, whole grain cereal,

seeds, certain fruits and vegetables. Black cohosh and dong quai are favourite over the counter products among women in the Western World.

**Healthy lifestyle** – Cessation of smoking, regular exercise and good nutrition – is also important for menopausal women to reduce the risk of heart disease, osteoporosis and certain types of cancer.

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### **Menopause: Heart Disease: What's Your Risk?**

Are you at risk for Coronary Heart Disease (CHD)? Take this quick quiz to assess your risk.

**Answer yes or no to the following questions.**

**Do you have high blood pressure?** Yes or No

High blood pressure can strain the heart and increase wear and tear on the blood vessels, making blockage more likely.

**Do your parents or other family members have heart disease?** Yes or No

The genetic make-up of some individuals increases their chances of developing coronary heart disease.

**Are you over the age of 40?** Yes or No

The older you get, the more likely you are to develop CHD.

**Do you have high cholesterol?** Yes or No

High cholesterol can contribute to the build-up of

plaques that can clog the blood vessels leading to the heart, narrowing them and potentially blocking blood flow to the heart.

### **Are you physically inactive, overweight or obese?**

Yes or No

An inactive lifestyle is a risk factor for CHD. Regular physical activity helps prevent heart and blood vessel disease. And people who have excess body fat - especially around the waist - are more likely to develop heart disease even if they have no other risk factors. Exercise can help control cholesterol levels, diabetes and obesity, as well as help lower blood pressure in many people.

**(Reviewed by the doctors in the Department of Preventive Cardiology and Rehabilitation at The Cleveland Clinic Heart Center)**

#### **References Source:**

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# *Skin & body changes*

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## ***Skin & body changes***

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### **What are the skin changes commonly seen in this period?**

A number of skin changes and their problems can develop during the perimenopausal and post menopausal period, due to the various hormonal changes.

Many women may develop hot flushes, which present as sudden feelings of intense heat over the face, neck and chest, along with discomfort and sweating. There may actually be red blotches in these areas.

The changes occur in texture and quality of the skin, and women may develop dryness, itching, dark patches, allergies, etc. Our natural internal processes of aging and effects of long term sun exposure begin to contribute to the skin changes as well.

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### **What changes in skin texture should I look for?**

The skin becomes dry, on the face and the rest of the body. There is overall thinning of the skin, loss of elasticity, tautness and texture. The appearance of sagging and wrinkling can often begin at this age, and will be initially subtle and mild. Itching is a common complaint, and is related to the dryness. The palms and soles may appear dry, thickened and hard, especially the heels.



### **How can I prevent or treat the dryness?**

It is not possible to completely prevent all skin changes occurring in this period. However, regular daily moisturizing will definitely help in relieving the discomfort and itching caused due to dryness, and will help give the skin a smoother texture. Palms and soles can be soothed with warm water soaks followed by application of moisturizing ointments.

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### **What are the other changes that I may develop?**

Along with the skin, there are changes in the vulval and vaginal tissues, due to decrease in the estrogen levels. The normal soft moist feel is lost, which may lead to itching and discomfort. The vaginal passage tends to become thinned and narrow, and is drier with reduced elasticity, which may lead to discomfort during sexual intercourse. Women also find themselves predisposed to vulval or vaginal infections, and also urinary tract infections.

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### **I feel my breasts have changed in appearance. What is that due to?**

Changes in the breasts are because of reduction in the connective tissue and the glands; there is reduction in the firmness, and perhaps also the size. The skin may show signs of sagging and loss of texture.

Apart from this, some women may experience pain, soreness or tenderness in one or both breasts. You need to consult your doctor if this is persistent or accompanied by a lump or discharge.

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**I have noticed dark patches on the sides of my face. What are these?**

During the menopausal period, women may also develop dark brownish coloured patches on the face. These are most commonly seen on both cheeks, but may also occur on the forehead and chin. This condition is called melasma or chloasma, and again is a result of hormonal changes, combined with effects of the sun and perhaps also chemicals in facial cosmetics.

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**How do I manage these patches?**

Consult a dermatologist to confirm the diagnosis. Use of a sunscreen is a must on a daily basis to prevent worsening of patches and prevent recurrences. It is preferable to use a sunscreen with SPF (sun protection factor) greater than 15, for adequate protection. The choice of whether to use a lotion or cream depends on personal choices, the season and whether the skin is dry or greasy.

There are many topical creams to treat these dark patches, and a number of aesthetic procedures as well.

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### **Can hair fall be related to menopause?**

Yes, thinning of hair on the scalp can be seen in perimenopausal or post-menopausal women. Along with actual hair fall, the individual hair also becomes thinner due to the influence of hormones. This is called female pattern alopecia in medical terms.

The first sign may just be a widening of the hair parting. Later the hair thins all over the scalp so that more of the skin becomes visible. Hair is also more easily breakable. Other associated conditions may also contribute to hair fall, such as anaemia (low haemoglobin), thyroid problems, etc.

Apart from scalp hair, hair on other parts of the body such as the pubic area may also become thinner.

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### **I feel that the hair on my face and body has increased. Is this related to menopause?**

The same hormonal changes that lead to hair loss on the scalp, can increase hair growth on the face and other areas of the body in women. This is called hirsutism. We notice that the hair in these areas has become thicker, darker, more prominent and coarser.

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### **How do I manage the hair problems?**

It is advisable to undergo a detailed check up to look for associated conditions such as anaemia and thyroid problems. These also need to be treated if present, for best results.

Hair fall can be managed with different types of lotions and medications under specialized medical supervision. A good healthy diet, with adequate vitamins and minerals, will help.

Excess hair growth on the face and body can be managed with depilation (hair removal techniques), and procedures such as electrolysis and laser.

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### **I am developing itchy red rashes all of a sudden for the first time. Is there any relation to menopause?**

Yes, this is an age when allergies can present in women for the first time. The development of red itchy wheals all over the body, which spontaneously subside and reappear, is called urticaria. Episodes of urticaria can be short lived, or occasionally continue for long periods. It is often difficult to pinpoint the cause of these rashes. In some women they may be related to food items or food additives, cosmetics or other chemicals, drugs taken for treatment of other conditions, etc.

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### **Are there any other allergies I should be aware of ?**

Apart from urticaria, allergies may present in the form of eczemas resulting from contact with skin care products, jewellery, footwear, etc. These are itchy, red oozing, sometimes weeping lesions on various parts of the body. The location may give a clue to the contact factor responsible. Perfumes and fragrances are a common cause of allergic reactions, including pigmentary changes seen as dark itchy patches.

Oral drugs taken for treatment can also give rise to reactions on the skin. Some types of drugs, including hormonal medications, may set off a sun allergy (photoallergy) which is seen on exposed areas of the face, arms and legs.

Treatment is given in the forms of tablets for the itching, and creams (including steroids) for the skin rashes.

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### **Are there any other skin problems that I may encounter during this period?**

There is a tendency in this period for some amount of weight gain. Skin tags, which are skin coloured small raised lesions around the neck and armpits, may develop because of fluctuating weight. Darkening of skin around the neck and armpits may be seen.

Some women also do develop small brownish mole-like lesions on the face and neck in this age group, called 'dermatosis papulosa nigra' or 'seborrhoeic keratoses'. This is more frequent if there is a familial tendency. All these above eruptions are harmless and more of cosmetic significance. They can be easily treated with simple procedures.

You may also notice that the fingernails and toenails become thinner, softer or more brittle.

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### **What are the effects of hormonal therapy on the skin?**

Hormone replacement therapy can commonly lead to mild dark facial patches called melasma, darkening of moles, darkening of skin on the neck and flexures, urticaria and eczema. In case of any persistent skin complaints appearing after starting such treatment, do consult your doctor.

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### **How should I take care of my skin and hair on a daily basis?**

Sunscreening, moisturizing, using a mild cleanser can be incorporated into the daily routine for keeping the skin looking smooth and young. Avoid use of products which are highly fragranced or contain many chemical



additives. For hair care, use a mild shampoo and a good conditioner.

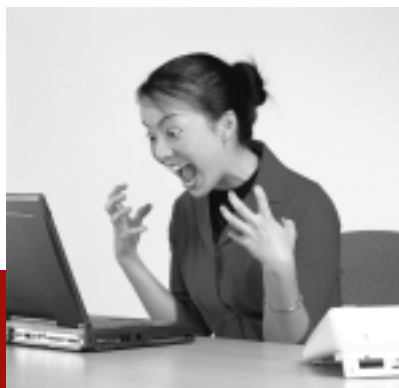
A good healthy diet, with plenty of fluids, fresh vegetables and fruits will help, as will optimal exercise, and good sleep. Most importantly, de-stress, be positive, feel healthy and happy from within, and watch your skin glow.



# *Mood Changes*

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## ***Mood Changes***

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**I am 46 year old women, a mother of two teenagers, and a hard working professional. Since six months my periods are irregular. I also find myself as irritable, sleepless and weepy. My mood is low and so is my enthusiasm, Is this a part of menopause?**

It could be. During this period of menopause and perimenopause there is a possibility of irritability, sleep, affect and cognition disturbances

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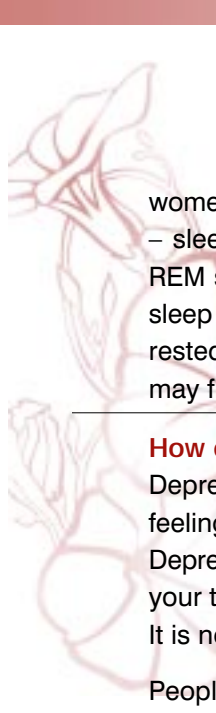
**My sister has not reached menopause and yet is emotional. What is this due to?**

The constant change of hormone levels during perimenopause can effect a woman's emotions. Some women have mood swings, memory lapses, and poor concentration. Some may feel irritable or are depressed. These problems do not affect every woman. However, for those affected, it may be hard to cope because they may still be having monthly periods and may think menopause is far in the future.

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**I find that my sleep is disturbed. Why is this so?**

Hot flushes can cause lack of sleep by often waking a woman from deep sleep. Lack of sleep may be one of the biggest problems you face as you approach menopause. Too little sleep can affect your mood, health, and ability to cope with daily activities. Some



women have less rapid eye movement – known as REM – sleep. This is the stage of sleep when you dream. REM sleep makes up about 20% of an adult's normal sleep cycle. Without it, you may wake up without feeling rested. Some women approaching menopause also may find it takes longer to get to sleep.

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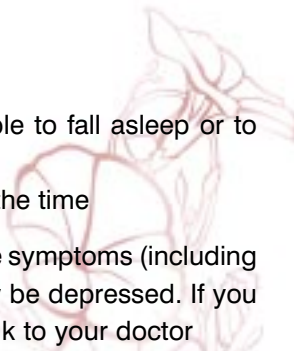
### **How do I know this is depression?**

Depression is a medical disorder. It is more than just feeling sad for a short time or feeling grief after a loss. Depression disrupts your everyday functioning. It affects your thoughts, feelings, behavior, and physical health. It is not a defect in your personality or your fault.

People who are depressed have several symptoms of the illness nearly every day, all day, for at least 2 weeks.

They are:

- Lack interest in things they used to enjoy
- Feel sad, blue, or “down in the dumps”
- Slow down or act restless and not able to sit still
- Feel worthless or guilty
- Have a change in appetite or lose or gain weight
- Have thoughts of death or suicide or try to commit suicide
- Have problems concentrating, thinking, remembering, or making decisions

- 
- Sleep too much or are not able to fall asleep or to stay asleep
  - Lack energy and feel tired all the time

If you have had at least 5 of these symptoms (including at least 1 of the first 2), you may be depressed. If you have any of these symptoms, talk to your doctor

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### **Does menopause always cause depression?**

No, this is not the case. However, the change in hormone levels may make you feel nervous, irritable, or very tired. These feelings may be linked to other symptoms of menopause, such as lack of sleep. Thus there may be increase levels of mood symptoms in perimenopausal women,

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### **Why do all women consider menopause have such a dreaded event?**

Prior to 1900, due to a shorter lifespan, menopause coincided with death and so had negative connotations. Today women lead a healthy life for many years even after menopause

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### **I have seen many friends having a difficult time. Why is this so?**

This is a time of great changes. There may stress related to finance or work. Some women may be watching children leave home and are experiencing the “empty

nest syndrome.” Not being able to have children may sadden a few. More often, women find themselves part of the “sandwich generation,” becoming caregivers for their children, grandchildren, and their aging parents. Burdened with stress, the changes of menopause may be harder to manage.

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### **What are the common psychological symptoms?**

There are several psychological issues that are manifested at menopause that can cause mood swings and irritability. Some of the most common feelings menopausal women go through are depression, memory loss and fatigue. The fatigue may be partly caused by lack of sleep, which can also play a part in the irritable feeling often experienced.

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### **What causes these psychological symptoms?**

It has a varied etiology. Hormonal, social and psychological factors play a role in their presentation.

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### **What happens to the hormones?**

These are many related hormonal changes. There is a decrease in estradiol production by ovaries, increase in proportion on estrone compared to estradiol and decrease in production of ovarian androgens. The brain also experiences changes due to the changing hormones

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### **Does estrogen have an impact on functions of the mind?**

Yes. Estrogen influences language skills, mood, attention, and a number of other functions in addition to memory.

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### **How does estrogen affect the mind?**

Estrogen docking sites are present in several regions of the brain, including those involved in memory (such as the hippocampus). These sites, in turn, activate processes that are beneficial to the brain. Estrogen may, in effect, raise levels of certain brain chemicals (neurotransmitters). These include the neurotransmitters acetylcholine (implicated in memory), serotonin (implicated in mood), nor adrenaline (implicated in mood and other autonomic functions), and dopamine (implicated in motor coordination). Thus, estrogen facilitates networking between nerve cells and has a wide effect.

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### **Are socio cultural factors also related to distress during menopause?**

Role changes in parenting, marriage, sex and work attitudes to aging and female roles vary with culture. These determine the experience of distress. It is seen that women from lower educational and socioeconomic class have more symptoms.

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### **What makes one more vulnerable to depression?**

Having a prior history of depression, high levels of vasomotor symptoms such as flushes and psychological stress are the best predictors of depression.

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### **How do you treat depression?**

Different modalities such as medications and therapy have been useful. Antidepressant drugs such as fluoxetine, venlafaxine and paroxetine improve the range of depressive features and are also known to have a salutary effect on hot flushes. Therapy such as cognitive behavior and interpersonal therapy are also effective. Support groups help in sharing and understanding the issues involved. They also help in forming an emotional support system.

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### **How do I help myself?**

To help in coping with depression, there are things you can do to make your daily life easier:

- Do not demand too much of yourself.
- Set a realistic and practical routine for yourself
- Avoid making any major life decisions in this frame of mind.
- Avoid drinking alcohol or using drugs that your doctor has not prescribed.

- Seek out people you trust and family for help. Emotional support is the key to help you get better.
  - Follow your doctor's advice. Take medication correctly.
  - Follow a regular schedule for going to bed and waking up.
  - Eat well and have healthy foods and drink plenty of water.
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### **How can I prevent it?**

Being informed and having a positive attitude is the best defense. Negative connotations about menopause need to be challenged. Learning to cope with stress in a problem solving attitude rather than reacting only emotionally is beneficial. This will help in leading an enjoyable and fulfilling life.

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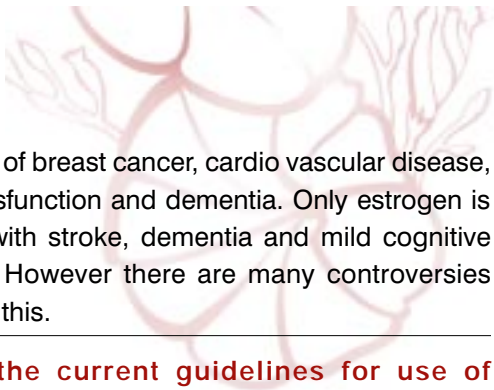
### **Can hormone replacement therapy help?**

The largest trial found that estrogen improved quality of life and wellbeing compared with placebo. Estrogen seems to have a salutatory effect on depression in some perimenopausal women. It may have a role in use as augmentation of anti depressant medication such as fluoxetine.

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### **What is the harm involved in use of hormones?**

Results of Women's Health initiative studies indicate that estrogen-progesterone therapy is associated with



increase risk of breast cancer, cardio vascular disease, cognitive dysfunction and dementia. Only estrogen is associated with stroke, dementia and mild cognitive impairment. However there are many controversies surrounding this.

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### **What are the current guidelines for use of hormones?**

Smallest dose for shortest period for severe vasomotor and vaginal dryness is recommended.

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### **Does menopause affect women already having other psychiatric disorders?**

Schizophrenia and other psychoses also worsen and may respond to anti psychotic drugs and estrogen

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### **What is the role of estrogen in dementia?**

Study suggests that the increased incidence of Alzheimer's disease in older women may be due to estrogen deficiency and that estrogen replacement therapy may be useful for preventing or delaying the onset of this dementia.

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### **I have heard that estrogen prevents Alzheimer's disease. Is this true?**

Several naturalistic studies suggested that estrogen may reduce risk for Alzheimer's by up to 50% although other studies did not find this benefit. However, the definitive Women's Health Initiative Memory Study

(WHIMS), which followed several thousand woman for several years found that treatment with horse-derived estrogen was associated with an increase in the risk for developing Alzheimer's. However, there is controversy surrounding this study.

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**I've been depressed in the past. Will this affect when I start going through perimenopause?**

It could. Researchers are studying how depression in a woman's life affects the time she starts perimenopause. However it is not clear whether an early menopause follows this or the perimenopause is of longer duration.

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**What psychological issues are important for women with premature menopause?**

Premature menopause is emotionally distressing. It heralds infertility and is unexpected, unwelcome and interrupts planning of life's goals. Some changes in mood are closely linked to menopause. Besides fall in hormones, most of the emotional distress is related to infertility, and the grief at the loss of what is supposed to be one of the normal stages of a women's life. For many it signifies "loss of femininity" or "loss of youth". Although premature menopause is a devastating diagnosis, it does not have to be a totally negative change.

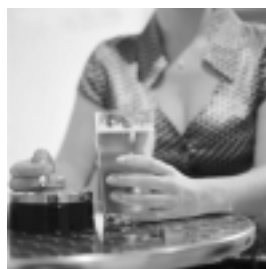
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### **Should one worry? Are these not natural events?**

Perimenopause and menopause are natural events. Although the same basic changes take place inside all women's bodies, each woman thinks, feels, behaves and copes differently. The symptoms of menopause may first arise in perimenopause as early signals. It's best to approach menopause fully informed and with a positive mind-set. By knowing what to expect, you can take steps to ease symptoms and prevent health problems later in life. Life after menopause is free of fears of pregnancy and bothers of dealing with young children. Thus life can be stimulating and enjoyable in all respects.

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# *Treatment Issues*

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## ***Treatment Issues***

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### **As menopause is a natural event, why should I take treatment?**

Though menopause is a natural event, in order to reduce distressing symptoms associated with it and to prevent osteoporosis and other chronic diseases, treatment is necessary. There are many other conditions like pregnancy which are natural...we still treat them – thus why not treat menopause?

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### **Will the treatment help me to maintain my youth?**

Treatment relieves distressing symptoms of menopause and improves sense of wellbeing and restores sexual life. However medical therapy alone is not an “elixir of youth” and lifestyle changes are beneficial to maintain your health.

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### **What medical treatment is available for symptoms of menopause?**

- Hormone replacement therapy HRT ( estrogen with/ without progesterone)
- Clonidine, Fluoxetine, Venlafaxine for hot flashes
- Other over the counter products for hot flashes
- Bisphosphonates, SERMS (selective estrogen receptor modulators), salmon calcitonin for bone health
- Local estrogen containing creams for urogenital symptoms



Depending on the indication there are many options. Your doctor can help you decide which is most suitable for you.

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### **Who should not take hormones?**

- women having undiagnosed vaginal bleeding
  - cancer of breast and endometrium
  - history of venous thromboembolism
  - active liver disease
  - women who are unwilling/ unable to follow-up
- 

### **What are the risks of cancer with hormones?**

There is always a fear that hormones may cause cancer. In well selected cases, use of hormones for different indications is very safe...in fact that is why the oral contraceptive pill is so popular! Use of hormones in women has been studied and the following general findings are

- No increase risk of- squamous cell carcinoma, adenocarcinoma of endometrium, colorectal cancers
  - Probably no increase risk of -ovarian cancer, adenocarcinoma of cervix , cancer of breast, after 2 years of stopping hormones
  - Increased risk of- endometrial cancer and breast cancer after 5 years of use.
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### **Are there any benefits of taking hormones?**

Estrogen, with or without progesterone is a natural hormone which “replaces” what the ovary was producing before menopause occurred. These hormones prevent osteoporosis, urogenital atrophy, skin changes and may reduce atherosclerosis and cardiovascular diseases if started in the early postmenopausal period.

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### **What tests should be done and when to assess my health?**

All women will benefit from regular health check-ups, but more so in the later years of life, around menopause when certain tests are recommended. These include

- Annual screening for gynecological problems
- Mammogram
- Pelvic examination
- Cervical cytology ( Pap smear)
- Six monthly breast examination

You can learn how to do a regular breast self-examination on yourself.

- Screening tests for osteoporosis may be required (see Section 4 on Osteoporosis) such as ultrasound screening, DEXA scan or computerized tomography which can suggest if your bones are weak and you are at risk of fractures.
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### **Who should start HRT? Do all women need to take hormones?**

Various studies and world authorities have said that women who have moderate/ severe symptoms of menopause, or documented osteoporosis/ fragility fractures will benefit from hormones. All women however need not take hormones.

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### **When should HRT be started if required?**

Reassessment of studies like the WHI (Women's Health Initiative) have suggested that for maximum benefits HRT should be started as early as possible, within 1 year of menopause in suitable cases.

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### **What lifestyle changes are advised for menopausal women?**

Being healthy and feeling young and fit is not something which cannot happen overnight, nor will it happen by swallowing medications only! You need to adopt healthy habits from your youth...if not, it is never too late to start!! Few suggestions include

- Some form of aerobic exercises, like brisk walking
- To maintain bone health include weight bearing exercise, resistance or weight training under suitable guidance
- optimal calcium intake in diet by a balanced diet with calcium rich foods ( see Sections 1 and 4 )

- Avoid/ give up smoking and alcohol as both of these are usually implicated in many chronic disease, cancer and osteoporosis.
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### **What are the alternatives available for HRT?**

There are many described in studies and literature, such as

- Life style measures
  - Local therapy
  - Pharmacological alternative
  - Complementary therapy
    - Phyto-Estrogens
    - Herbalism
  - Complementary intervention
    - Acupuncture
    - Reflexology
  - Diet supplement
  - Homeopathy
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### **What are short term treatments available for hot flushes?**

Many treatments are described, like Black cohosh, clonidine, SSRI (Selective Serotonin re-uptake inhibitors) like fluoxetine, SNRI (Selective Noradrenaline re-uptake inhibitors) like venlafaxine, soya & other isoflavones, and other alternative therapies like acupressure, reflexology and alternative medicines (homeopathy and ayurvedic medicines).

However the effectiveness of each method is different and results vary depending on dose and patient characteristics. It is seen that the most effective treatment for hot flashes is estrogen replacement therapy.

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**What medications are available for treatment of osteoporosis?** (See Section on Osteoporosis for details)

Bisphosphonates have been recommended as first line of treatment for osteoporosis. However if there are other symptoms of menopause like hot flashes, you may benefit from HRT which takes care of both the problems.

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**How does osteoporosis present?** (See Section on Osteoporosis for details)

Often symptom less or silent. It may present with any or all of the following

- Back pain
  - Loss of height due to vertebral compression
  - Spinal deformity- kyphosis
  - Multiple fractures spontaneously after some everyday activity
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**How I should take Bisphosphonates?**

The tablet should be taken on an empty stomach with a full glass of water and you should remain in upright position for >30 mins.

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### **Is there any alternative for oral Bisphosphonates?**

Yes. Pamidronate or Zoledronic Acid can be given as IV infusion; however these are usually reserved for special situations.

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### **What are other effective treatments available for osteoporosis ?**

Yes, there are other methods too, though not used as first choice. These include

- Salmon calcitonin injections
  - Parathyroid hormone injections or spray
  - Raloxifene and other SERMS.
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### **Is there any medication available that can be taken less frequently?**

Ibandronic acid 150 mg tablet is a bisphosphonate can be taken once a month only, by mouth, and is as effective as other bisphosphonates with the advantage of less dosing.

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### **Can Bisphosphonates cause any harm to me?**

It may cause esophageal irritation, ulceration, bone/joint pain, rarely jaw necrosis.

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### **Who should not take Bisphosphonates?**

Patients having esophageal disease/ ulceration, gastritis, duodenal ulceration or inability to stay upright for some time may not be suitable for these drugs.

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## **By what are different routes can hormones (HRT) can be given?**

Oral (by mouth)

Transdermal (as a skin patch or gel to be applied)

Intravaginal rings (to be inserted into the vagina)

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## **When do I need natural estrogen?**

You need natural estrogen supplementation when you get hot flushes, night sweats and vaginal dryness.

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## **Which drugs used for treatment of menopause need prescription?**

There are many drugs which may be useful, for which your doctor needs to assess your suitability and need for the drug. These include

- Estrogen
  - Combined estrogen and progesterone
  - Clonidine
  - SSRI like Fluoxetine, Prozac
  - SNRI like Venlafaxine (Effexor)
  - Gabapentin
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## **Which medications are available over the counter?**

Certain medications used for menopause management are available without a prescription; however it is advisable to start them in consultation with a doctor. These medications may be having some placebo effect

also. These include

- Soya Isoflavones
  - Black Cohosh
  - Elemental calcium
  - Vit D
  - Vit E
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### **How long should I continue HRT?**

HRT can be continued safely, with monitoring, upto 5 yrs. Afterwards benefits are weighed against risks. If you are benefited then it can be continued life long.

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### **What about “bioidentical” hormone therapy?**

It is really hormones that are just the same as the hormones the body makes. This is a newer concept, but basically says that when you need to take hormones, it may be better to take it in the form that your body would naturally produce it. For example, it has been suggested that the results of the WHI (Womens Health Initiative) study might have been different if natural hormones like estradiol had been used instead of conjugated equine estrogens. What you need to know is that the correct hormone for your situation should be chosen in conjunction with your doctor.

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