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WOMEN'S HEALTH

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- Menopause : What, When & How?
- Types, Symptoms & Factors of Menopause
- Treatment of Menopause
- Andropause : Definition, Different Hormones and Effects
- Signs & Symptoms of Andropause
- How to treat Andropause?

Editorial note

Dear Doctor, it's our immense pleasure to inform you that we have published the 2nd issue of "Women's Health". In this issue we have focused on Menopause and Andropause which are important part of women and men's health. Your comments and suggestions will enrich our upcoming issues. Please participate in quiz competition and win prize.

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Menopause

What is Menopause?

Menopause is defined as the point in a woman's life when her periods stop for good. It usually happens between the ages of 45 and 55. At this time, there are very few eggs left in the ovaries, levels of the female hormones estrogen and progesterone decrease which, in turn, leads to the gradual disappearance of periods.

For many women the absence of periods and not having to worry about falling pregnant are point in their lives. However, most women will also experience menopausal symptoms as a result of falling hormone levels.

Menopause - *what happens?*

Menopause occurs in all women. It can occur when the ovaries spontaneously fail to produce the hormones estrogen and progesterone, when the ovaries fail due to specific treatment such as chemotherapy or radiotherapy, or when the ovaries are removed, often at the time of a hysterectomy. Ovaries naturally fail to produce estrogen and progesterone when they have few remaining egg cells. At that stage, the ovaries become less able to respond to the pituitary hormones: follicle stimulating hormone (FSH) and luteinising hormone (LH) and less estrogen is produced. Levels of FSH and LH subsequently rise and a measurement of FSH is sometimes used to diagnose menopause. The resulting low, and changing levels of ovarian hormones, particularly estrogen, are thought to be the cause of menopausal symptoms in many women.

Menopause - *overview:*

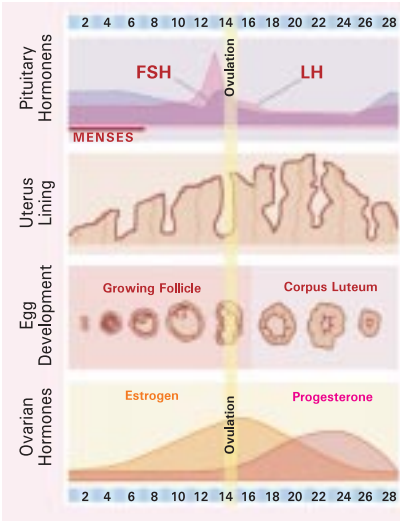
- Ovaries become less responsive to FSH and LH
- Patterns of GnRH release from the hypothalamus become altered
- Pituitary gland becomes less responsive to GnRH

Menopause - *when?*

The average age of the natural menopause is 51 years, but can occur much earlier or later. Menopause occurring before the age of 45 is called early menopause and before the age of 40 is premature menopause.

Perimenopause is the stage from the beginning of menopausal symptoms to the post menopause.

- Average age at onset in the late 40's
- Irregular menstrual cycles
- Somatic and psychological symptoms emerge



Postmenopause is the time following the last period, and is usually defined as more than 12 months with no periods in someone with intact ovaries, or immediately following surgery if the ovaries have been removed. After the menopause the ovaries cease to produce the main female hormone, oestrogen, and its absence can produce a wide range of symptoms.

Symptoms of Menopause

- Hot flashes
- Mood swings
- Vaginal dryness
- Vaginal atrophy
- Fatigue, weight gain, sleeps disorders, headache, and cognitive changes.

Of course, the picture is complicated and some symptoms may occur as a result of other symptoms. For example, night sweats and disturbed sleep will naturally lead to feeling tired and lethargic during the day. Vaginal dryness and discomfort during sex would understandably tend to reduce libido.

Psychological symptoms

There are numerous psychological symptoms which can occur around the time of the menopause:

- Depression and mood swings
- Irritability
- Anxiety
- Memory/concentration problems
- Reduced sex drive
- Lethargy

Sexual changes at Menopause

- Decreased sexual desire
- Lower levels of vaginal lubrication
- More painful sexual intercourse

Cause of early Menopause

- Surgical menopause
  - Removal of the ovaries, usually accompanied by hysterectomy
- Menopause induced by treatment for cancer
- Radiation therapy
- Chemotherapy
- Early natural menopause

Table I : Factors associated with early onset menopause

Genetic factors	- e.g. micro deletions X-choromosome, mosaic 45X0/46XX - e.g. mutation FSH receptor gene
Viral factors	- e.g. mumps
Tatrogenic factors	- surgery (e.g. oophorectomy, hysterectomy) - chemotherapy (e.g. for breast cancer, lymphoma) - radiotherapy (e.g. for cervix cancer, morbus Hodgkin)
Life style factors	- e.g. cigerette smoking, vegetarian diet
Other factors	- e.g. autoimmune diseases (myasthenia gravis) - e.g. low body weight

The climacteric

The term climacteric refers to the period of menopausal transition. During this period, many profound changes take place in a woman's life (Table 1). Many, but not all, are directly related to the aging process of the ovaries. Body changes and mood swings are intermingled with changes in family and social environment. All these factors together can have a profound influence on the psycho-social functioning and general well-being of the climacteric woman.

There is great variability in climacteric complaints and symptoms, both between cultures as well as between individuals within a culture. In our Western society, for many women the menopausal experience with transient climacteric effects is minimal, for others the impact is severe. Climacteric and perimenopausal women should not be regarded as a homogeneous group.

Table II : The climacteric : the period of transition from fertility to sterility

	transition from	via	to
reproductive capacity	fertility	subfertility	sterility
ovarian folliculogenesis	regular recruitment and maturation	accelerated loss of follicles after 38 yrs of age	total depletion of follicles
ovarian cycles	ovulatory	increasingly anovulatory with luteal phase defects	anovulatory
menstrual periods	regular periods	initial shortening of the cycle, thereafter longer irregular cycles	amenorrhea
hormonal profile	ovulatory cycle profile	increase in early follicular FSH; often low progesterone levels in second half; decreasing inhibin; LH, E2 and androgen levels stay long stable	hypogonado-tropic, hypo-oestrogenic status with low androgen levels and undetectable inhibin
needs complaints and risks	contraception needs	contraception needs and climacteric complaints	increased risk of osteoporosis and cardiovascular disease
family life	active family life; professional career	"empty nest" situation; midlife crisis	re-orientation; re-integration

How can Menopause be treated?

Each woman will be affected differently by the menopause and management must be defined via a joint approach between a woman and her healthcare team.
Possible treatments include counselling, dietary and exercise regime, anti-depressants and Hormone Replacement Therapy (HRT) for relief of menopausal symptoms.

Treatment and options.

- HRT
- Alternatives to HRT

HRT

Hormone Replacement Therapy (HRT) is a treatment prescribed by a doctor to women going through the menopause. Around the time of the menopause the ovaries gradually stop producing the hormones oestrogen and progesterone. HRT replaces these hormones. It is a proven treatment for hot flushes and vaginal discomfort. HRT is usually a combination of two types of hormone, oestrogen and progestogen.

The role of oestrogen in HRT is to replace the oestrogen lost as a woman goes through the menopause. Loss of oestrogen is the cause of menopausal symptoms, both short and long-term There are two types of oestrogen most commonly used in HRT preparations; estradiol, and conjugated equine oestrogens.

The main types of HRT

Hormone replacement therapy regimens use different types of oestrogens and progestogens. Not all types of HRT will suit all women and it is important for the women to discuss her options with her GP or nurse to find the most suitable form of treatment. For women starting HRT, experts recommend that the starting dose is low, e.g. 1mg estradiol, which will provide relief from symptoms while minimising side effects.

Cyclical or sequential

This form of HRT mimics a menstrual pattern. Oestrogen is taken every day and progestogen is taken as well for 10-14 days every month. A bleed usually occurs at the end of the progestogen course. This form of HRT is recommended for women who have had a natural menopause within the last year, or who are approaching the menopause but still having periods and menopausal symptoms.

Oestrogen – only HRT

This type of HRT is used by those women who have had either their ovaries and womb, or just their womb, removed by a hysterectomy, and therefore have no need for progestogen to protect the womb lining.
Continuous Combined HRT or period-free HRT
This is a 'period – free' form of HRT. Breakthrough bleeding and spotting may occur during the first months of treatment. Combinations of oestrogen and progestogen are taken every day. This type of HRT is recommended for those women who have not had a period for at least one year and are therefore truly postmenopausal.

Local HRT

This form is used to treat local urogenital problems such as vaginal dryness. Local therapies raise the local hormone levels but do not affect the whole body. This includes tablets, creams, pessaries and rings which are inserted into the vagina, where the oestrogen helps reduce vaginal dryness.

Tibolone

A synthetic form of period-free HRT, which may have similar benefits to oestrogen. It is taken continuously in tablet form.

Delivery options
HRT can be delivered in tablets (orally, or inserted into the vagina), transdermally (through the skin) by skin patch or gel, or

directly into the blood stream (parenterally). Parenteral delivery systems include nasal sprays, vaginal rings and implants.

When to start HRT?

There is no need to wait until periods stop before starting HRT. Symptoms may start months or even years before periods stop.

Potential side effects of HRT

There may be mild side effects when taking HRT, but these usually resolve within a few months. The common side effects are breast tenderness, irregular bleeding and feeling bloated. Some side effects can be reduced by using a lower dose of hormones. Women should discuss any concerns with their doctors.

Benefits of HRT

The replacement of oestrogen through HRT addresses the complications of the menopause caused by the drop in oestrogen levels and, therefore, reduces menopausal symptoms. Symptoms can respond rapidly to HRT treatment. Relieving hot flushes, particularly those occurring at night, can help to improve a woman's sleep pattern and hence reduce irritability, insomnia and tiredness. Hot flushes and night sweats usually improve dramatically within a short time of starting HRT.

Conclusion

All women go through the menopause at some time in their life. Individual experiences of the menopause differ and the decision on how women manage this will depend on a number of factors including age of menopause, the presence of any symptoms and how these affect quality of life, and osteoporosis risk.

Some women prefer to take a more "natural" approach to menopause management whilst some women will choose to go on to hormone replacement therapy (HRT)

Andropause

Definition

A syndrome in which the changes accompanying ageing are associated with the signs and symptoms of androgen deficiency in the older male (traditionally age >50). Signs and symptoms are accompanied by a low serum testosterone level.

- This is not the same as the mid-life crisis
- Other terms: Male Menopause, Male Climacteric, Androclise, Androgen Decline in the Ageing, Male (ADAM), Ageing Male Syndrome (AMS), Late Onset Hypogonadism
- Progressive decline of androgens over time
- Symptoms: erectile dysfunction, cognitive impairment, fatigue, vague somatic symptoms
- 40% of men have ED by age 40
  – Over two-thirds of men by age 70

Table III. Influence of age on hormone levels in men

Age	Total Testosterone (nM)	SHBG (nM)	Free Testosterone (nM)
25-34	21.4 +/- 5.9	35.5 +/- 8.8	0.43 +/- 0.1
35-44	23.1 +/- 7.4	40.1 +/- 7.9	0.36 +/- 0.04
45-54	21.0 +/- 7.4	44.6 +/- 8.1	0.31 +/- 0.08
55-64	19.5 +/- 6.8	45.5 +/- 8.8	0.29 +/- 0.07
65-74	18.2 +/- 6.8	48.7 +/- 14.2	0.24 +/- 0.08
75-84	16.3 +/- 5.8	51.0 +/- 22.7	0.21 +/- 0.08
85-100	13.0 +/- 4.6	65.9 +/- 22.8	0.19 +/- 0.08

Prevalence of Hypogonadism when measuring total Testosterone

- <5% for men in 20s & 30s
- 12% for men in 50s
- 19% for men in their 60s
- 28% for men in their 70s
- 49% for men >80

Testosterone effects

- Maintenance of male secondary sexual characteristics & fertility
- Bone & muscle mass
- Muscle strength
- Erythropoiesis
- Cognition
- Sexual function
- Sense of well-being

Signs and symptoms of Andropause

- **Endocrine Symptoms:**
  - Erectile dysfunction
  - Reduced erectile quality
  - Diminished nocturnal erections
  - Increased abdominal fat/increased waist size
- **Physical symptoms:**
  - Decreased vigor
  - Easily fatigued
  - Poor exercise tolerance
  - Diminished strength and muscle mass
  - Decrease in bone mineral density
  - Decreased body hair

- **Sexual symptoms:**
  - Decreased libido
  - Decreased sexual activity
  - Limited quality of orgasm
  - Reduced ejaculate strength
  - Reduced ejaculate volume
- **Psychological symptoms:**
  - Mood changes
  - Poor concentration
  - Loss of motivation
  - Reduced initiative
  - Memory impairment
  - Anxiety
  - Depression
  - Irritability
  - Insomnia
  - General reduction in intellectual activity
  - Poor work performance

Why should andropause be taken seriously?

Apart from the impact that andropause may have on your quality of life, there are other longer-term and silent effects of andropause that are harder to track: increased cardiovascular risk and osteoporosis.

Andropause & Osteoporosis

In a healthy individual, bone tissue is constantly being broken down and rebuilt. In an individual with osteoporosis, more bone tissue is lost than is regenerated. We've all heard of women suffering from weaker bones, or osteoporosis, after menopause. In men, testosterone is thought to play a role in helping to maintain this balance. Between the ages of 40 and 70 years, male bone density falls by up to 15 percent.

Unfortunately, with advancing age and declining testosterone levels, men, like women, seem to demonstrate a similar pattern of risk for osteoporosis. What's more, approximately one in eight men over age 50 actually have osteoporosis.

The incidence of hip fractures rises exponentially in ageing men, as it does in women, starting about 5 to 10 years later. In Canada, 20-30 percent of osteoporotic fractures occur in men.

Cardiovascular risk

It is now well accepted that women's risk of atherosclerosis (hardening of the arteries) increases after menopause. Estrogen replacement therapy seems to reverse this trend.

New evidence suggests that a similar phenomenon occurs in men as their testosterone levels diminish with age. While research is not as complete as for women, the clinical findings point to an association between low-testosterone levels and an increase in cardiovascular risk factors in men.

Andropause is often underdiagnosed because symptoms can be vague and can vary a lot among individuals. Some men find it difficult to admit that there's even a problem. And often physicians didn't always think of low-testosterone levels as a possible culprit.

Treatment of Andropause

To treat andropause, the doctor may advise the patient to undergo hormone replacement therapy. Replacing testosterone can have a significant benefit particularly in older men with an improvement in well-being, improved sex drive, improved sexual function, improved muscle mass and strength and an increase in bone density. There are now several alternatives available for testosterone replacement therapy in the form of skin patches and creams that can deliver testosterone into the blood in a non-invasive way.

Men who are carefully selected for hormone replacement therapy must be monitored for signs of prostate disease, dyslipidemia, hepatotoxicity, erythrocytosis, and other side effects.

Diet

People that live in the Mediterranean region have one of the lowest heart attack rates in the world. Their diet consists of 50 percent complex carbohydrates (fruits and vegetables), 25 percent protein (from plant source like tofu and fish like salmon), and 25 percent fat (from fish and olive oil). Their saturated fats, refined carbohydrates and sugar intake are very low. The Mediterranean diet is an excellent model for anti-aging diet. Fruits and vegetables contain abundant antioxidants and phytonutrients. Fish contains essential fatty acids that are critical building blocks of neurotransmitters and hormones. Moderate amount of plant-based protein such as soybean is easy on the digestive system compared to red or white meat.

Proper exercise

Exercise, in addition to its cardiovascular benefits, also increases the level of hormones in the body, which include growth hormone, testosterone, DHEA and pregnenolone. Performing strength-training exercise is a key component to an anti-aging exercise program because of the above-mentioned effects. Without a doubt, exercise is the closest thing to the anti-aging magic bullet as one can get. Those who exercise regularly live longer. It's that simple.

Self-care tips

Patients diagnosed with andropause and being treated with hormone replacement therapy should be monitored to check testosterone, lipid and hematocrit levels. That way, treatment can be adjusted according to the patient's needs and side affects closely monitored.

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