**Menopause**

* menopause means end of monthly cycles.
* It is the transitional period from reproductive to non-reproductive which is normally not sudden or abrupt, it tends to occur over a period of years.
* It is the permanent cessation of menstrual period for at least 12 months.
* The age range of 42–58, mean is 51 years.
* Measuring the amount of FSH in a woman's blood and may help determine whether she has gone through menopause.
* The normal level of FSH is between 5 and 25mIU/ml. If the level is higher than 25, then the woman is in the peri or premenopausal stage, while she is fully menopausal, if the level is around 50.
* The FSH level can be determined both with the help of urine and saliva test.
* Prior to actual ovarian failure, there is a decline in ovulatory function with fewer follicles present. Thus, there is a decline in ovarian estrogen and inhibin production. With falls in ovarian hormones, thee is less negative feedback on the pituitary and hypothalamus, and there is a detectable rise in follicle stimulating hormone and lutenizing hormone.

What causes menopause?

Age is the leading cause of menopause. It's the end of a woman's potential childbearing years, brought on by the ovaries gradually slowing down their function.

Certain surgeries and medical treatment can induce menopause those include:

surgical removal of the ovaries (bilateral oopharectomy).

Chemotherapy , and pelvic radiation therapy.

Having a hysterectomy (surgical removal of the uterus) without removing the ovaries does not lead to menopause, although you will not have periods anymore.

* Menopause isn't a one-size-fits-all event. It affects each woman differently. Some women reach natural menopause with little to no trouble; others experience severe symptoms that drastically hamper their lives. And when menopause starts suddenly as a result of surgery, chemotherapy, or radiation, the adjustment can be tough.

What are the symptoms of menopause?

1-Hot flashes and night sweats : triggered by heavy blankets , caffeine, alcohol, hot water. Last between 30 seconds and 10 minutes. 85% of women experience hot flashes. Hot flashes occur in more than two-thirds of North American women. African American women experienced more hot flashes than white women.

2-Insomnia: characterized by fatigue, irritability, waking up during the night.

3-Depression and mood swings : characterized by a decreased interest in life , fatigue , loss of appetite, thoughts of suicide and talk of death .

4- Anxiety: symptoms of anxiety include feeling out of control, increased heart rate and difficulty breathing.

5-Vaginal dryness: menopause decreases vaginal elasticity, leading to vaginal dryness.

- 6Urogenital atrophy: involving vagina , urethra and bladder.

7-Dry hair and skin: menopause often leads to dry, itchy skin and weak, thin hair

8-Bone density loss: menopause can lead to osteoporosis, back pain.

9-Weight gain: menopause and weight gain tend to go together, with weight gain generally occurring in the perimenopause stage. However, studies show that this is due more to lifestyle changes than to the hormonal changes that occur during menopause.

10-Decreased libido.

11-Memory loss.

Management:

* Menopause is a natural part of life that requires no medical treatment. Instead, treatments focus on relieving the signs and symptoms and on preventing or lessening chronic conditions that may occur with aging.

hormone replacement therapy (HRT)

* for women having severe symptoms such as hot flushes, or vaginal dryness and it still the most effective way to treat these symptoms.

*studies of women taking estrogen therapy alone showed that*: Estrogen therapy alone is associated with an increased risk of developing endometrial cancer in postmenopausal women ,So they must also take progesterone to prevent endometrial cancer.

**Advantages of HRT**

* Great reduction in hot flushes
* Reduction in night sweats
* Reduction in insomnia
* Reduction in vaginal dryness

**Side effects of HRT**
 **Initial side effects:**
Breast tenderness or pain
Headaches
Increase in appetite
Muscle cramps, especially in the calves
**More serious**  **infrequent side effects:**
Heart palpitations
Higher blood pressure
Increase in size of pre-existing uterine fibroid
Gastrointestinal problems(nausea,vomiting,Diarrhoea)

Ways to alleviate side effects of HRT

* by treating the symptoms that occur :
* **Breast tenderness / pain** - this requires more water intake and taking painkillers. An alternative to medication is evening primrose oil
* **Headaches** and **Muscle cramps** - taking the mineral magnesium

 **Gastrointestinal problems** - the peppermint

Disadvantages of HRT

disadvantages of using HRT greater than the advantages which include:

* coronary heart disease.
* Stroke.
* Deep venous thrombosis (DVT).
* breast cancer, ovarian cancer.

The amount of women that developed these conditions was quite a lot higher than the control group of women that were not taking HRT.

* **Vaginal estrogen:** estrogen can be administered directly to the vagina using a vaginal tablet, cream or ring that releases just a small amount of estrogen, which is absorbed by the vaginal tissue. It can help to relieve vaginal dryness , and some urinary symptoms.
* **Low-dose antidepressants,**(SSRIs): Venlafaxine (Effexor), has been shown to be effective in controlling the symptoms of hot flushes in up to 60% of women

 Other SSRIs can be helpful, including fluoxetine (Prozac), paroxetine (Paxil),citalopram (Celexa) and sertraline (Zoloft).

* **Gabapentin (Neurontin):** Antiseizures drug, which also has been shown to significantly reduce hot flushes.
* **Clonidine (Catapres):** which used to treat high blood pressure, may significantly reduce the frequency of hot flushes.

**Lifestyle and Home Remedies**

* **Practice relaxation techniques:** such as deep breathing,

 and progressive muscle relaxation.

* **Eat well:** Eat a balanced diet that includes a variety of fruits, vegetables and whole grains and that limits saturated fats, oils and sugars.
* Get adequate **calcium and vitamin D** in food or supplements.
* **Avoid smoking: w**hich increases risk of heart disease, stroke, osteoporosis, cancer and a range of other health problems. It may also increase hot flushes and bring on earlier menopause.
* **Decrease vaginal discomfort:** byUsing lubricants or moisturizers.
* **Cool hot flushes:** By doing regular exercise, and avoiding triggering factors
* **Optimize the sleep:** Avoid caffeine and plan to exercise during the day, although not right before bedtime.
* **Exercise regularly:** Get at least 30 minutes 5times a day of moderate-intensity physical activity to protect against cardiovascular disease, diabetes, osteoporosis and other conditions associated with aging.
* **Strengthen the pelvic floor muscle :**by doing Kegel exercises, can improve some forms of urinary incontinence.

**Alternative medicine**

* Plant estrogens (phytoestrogens , isoflavones **):**

Isoflavones are chemical compounds found in soy. They have a chemical structure that is similar to the estrogen .

* Some studies shows that it is associated with 40% reduction of the vasomotor symptoms after 6 months of treatment . Also , reduction in the degree of insomnia and depressive symptoms..

Long-term safety studies suggest that women who consume a diet high in isoflavones may have a lower risk of endometrial and ovarian cancer

* **Vitamin E** :Some women report that vitamin E supplements can provide relief from mild hot flushes, but scientific studies haven't proved its overall benefit in relieving hot flashes. Taking a dosage greater than 400 international units (IU) of vitamin E may not be safe, since some studies have suggested that greater dosages may be associated with cardiovascular disease risk.
* **Black Cohosh:** is an herbal preparation for the relief of hot flushes. Society does support the short-term use of black cohosh for treating menopausal symptoms, for a period of up to six months.

*A large study known as the Herbal Alternatives for Menopause Trial (HALT)* tested the effectiveness of different herbal or alternative ingredients versus estrogen therapy or placebo for the relief of menopausal symptoms. After one year of therapy, there was no significant reduction in the frequency or severity of hot flushes in women receiving any of the herbal preparations when compared to placebo at any of the follow-up times (3, 6, and 12m).

**Yoga:** Some studies show that yoga — a combination of controlled breathing, posing and meditation — may be effective in decreasing the number of hot flushes in perimenopausal women.

**Prevention**
Menopause is a natural and expected part of a woman's development and there is no way to prevent it from occurring, It will happen.
 However, there is some measures designed to reduce risk of diseases associated with estrogen loss, including osteoporosis and heart disease.
 Including the following steps:
Control blood pressure, cholesterol, and other risk factors for heart disease.
Do NOT smoke. Cigarette use can cause early menopause.
Eat a balanced healthy low-fat diet.
 Take calcium and vitamin D.
Get regular exercise. Resistance exercises help strengthen bones and improve balance.

MCQ

* **The normal level of FSH is between :**
1. **50 and 100mIU/ml.**
2. **25 and 50mIU/ml.**
3. **10 and 15mIU/ml.**
4. **5 and 25mIU/ml.**
* **The highest mortality rate of any psychiatric condition is with:**
1. **Depression.**
2. **Anxiety.**
3. **Bipolar disorder .**
4. **Anorexia nervosa .**
* **all of the followings are disadvantages of hormone replacement therapy except:**
1. **increase risk of stroke.**
2. **increase risk of breast cancer.**
3. **increase risk of deep venous thrombosis.**
4. **increase risk of hot flushes.**
* **choose the wrong statement:**

1. **(SSRIs) is not indicated for nursing mothers.**
2. **cognitive-behavioral therapy (CBT) is effective as treatment with fluoxetine.**
3. **women who receive IPT Interpersonal therapy show significant improvements in the quality of their interpersonal relationships.**
4. **No increased benefit to using one screening tool over another has been shown.**
* **The menopause symptoms include the following EXCEPT:**
1. **hot flushes.**
2. **sever cough .**
3. **dry skin .**
4. **vaginal dryness.**
* **.**
* **What percentage of new mothers is believed to develop postpartum depression?**
1. **<1%.**
2. **5 to 25%.**
3. **25 to 30%.**
4. **35 to 40%.**
5. **.>50%.**
* **First-line treatment for bulimia nervosa is:**
1. **combination of nutritional counseling and psychotherapy .**
2. **Medications alone .**
3. **nutrition therapy and Medications.**
4. **supportive or adjunct interventions**