Women's Health

Learning Outcomes

By the end of this unit the learner will be able to:

- ✓ Discuss main female hormones and explain how imbalance in these hormones can cause problems like premenstrual syndrome (PMS), menopause, depression or migraine associated with a woman cycle and infertility.
- ✓ understand nutritional requirements for women in order to avoid these problems.

Women's Health

The main female hormones are oestrogen and progesterone (though, men have these hormones, as well, but they have it in lesser amounts). A woman's hormones levels are individual to her and there are many fluctuations and differing levels from woman to women. Symptoms of an imbalance in these hormones include Premenstrual Syndrome (PMS), adverse symptoms associated with menopause, Polycystic Ovarian Syndrome (PCOS), depression, or migraines, all of which are associated with a woman's cycle and infertility.

Sometimes, the real reason behind an imbalance in females is not a problem with the hormones themselves, but rather, can be other issues, as well. Many of the conditions are seen as female hormone conditions and can be alleviated by the same dietary strategies used to balance blood sugar, employing better stress management if the patient is stressed due to the adrenal, paying attention to the fats in the diet and bringing in the good fats and avoiding the bad fats to reduce inflammation, and considering to try a dietary programme in detoxification since it is the job of the liver to break down old oestrogen and also, used to detoxify xenooestrogens.

How Female Hormones Work

From the end of a woman's period until she ovulates again, there is a rise in her level of oestrogen. Oestrogen encourages cell growth by building up the endometrium. It also nourishes the endometrium by increasing blood supply to it so that woman's womb is ready for one of her eggs to be implanted if that egg is fertilised. Ovulation occurs and this is two week from the end of her last menses. (this period can vary) for the next two weeks before a woman's next period begins, progesterone levels rise and become greater than oestrogen levels. Progesterone ripens the endometrium, in case fertilisation occurs and an egg needs to be implanted. If fertilisation does not occur, then oestrogen and progesterone levels fall and the endometrium is shed from the uterus, resulting in the next period.

However, women's cycles vary. If a cycle is too short or too long, or if oestrogen and progesterone do not rise and fall in the described pattern, the woman may be told that her hormones are out of balance.

What is Premenstrual Syndrome?

PMS or PMT?

The terms Premenstrual Syndrome (PMS) and Premenstrual Tension (PMT) are used interchangeably. Around 90 percent of menstruating women get advance warning of an approaching period because of physical and/or psychological changes in the days before their period begins. For most women the symptoms are mild, but a small proportion finds their symptoms so severe they dread this time of the month. The terms 'mild' and 'severe' in respect of PMS are arbitrary, but relate to the extent of disruption to the home and work life that's attributable to the monthly cycle. About a third of women say PMS significantly affects their life and about 5 – to - 10 percent of women classifytheir PMS as severe.

Symptoms of PMS

There are more than 100 recognised symptoms that may be due to PMS. Fortunately, most women experience only a handful of symptoms and some women experience little to no symptoms.

The most common symptoms are listed below -

Psychological

- Mood swings;
- Tiredness;
- Irritability;
- Losing your temper easily;
- Loss of confidence;
- Crying for no apparent reason;
- Aggression; and
- Poor concentration.

Physical

- Breast tenderness;
- Abdominal swelling or bloating;
- Weight gain;
- Swollen ankles; and
- Headaches and possibly, migraines.

None of these symptoms is exclusive only to PMS. They can be caused by other conditions such as depression, stress, thyroid gland problems (under - or over activity), and anaemia.

PMDD

Premenstrual Dysphoric Disorder (PMDD) is a mood disorder that occurs during the menstrual cycle. The symptoms are similar to PMS, but are severe enough to impair or prevent quality of life. PMDD is a depressive disorder. While blood tests and urine tests are helpful in making sure there isn't another cause for PMS symptoms, there is no test that can diagnose PMS. Instead, diagnosis is based upon the type of symptoms and when they occur. The symptoms of PMS have a fairly consistent relationship with the start and finish of a period, which is an essential clue to the diagnosis. However, it is possible to have more than one problem at the same time, so care needs to be taken by doctors not to 'blame the hormones' too quickly. Most women with PMS notice a gradual worsening of their symptoms during the week running up to their period, with a rapid or gradual disappearance of symptoms when their period starts. But sometimes symptoms can persist during the period or even for a couple of days after it has finished.
To help doctors diagnose PMS, it helps to keep a diary of your symptoms and their severity over a few consecutive months. A cyclical pattern should be apparent and a diagnosis of PMS is usually only made if there are 10 consecutive symptom-free days each month.

What Causes PMS?

Hormone Levels

Measuring hormone levels does not help a woman understand her PMS because there are no differences between women who get PMS and those who don't. It is not exactly known exactly what causes PMS. Common sense indicates that it must somehow be linked to the fluctuating levels of female hormones experienced after ovulation. But the subtleties of why some women are more affected than others are not understood. Normal fluctuations in hormone levels are responsible for some of the symptoms most commonly associated with the monthly cycle, such as, bloating, breast tenderness, and/or headaches.

Women who suffer from PMS may possibly have a lower than normal levels of a certain chemical in their brain (serotonin), which may explain some of the non-physical symptoms such as irritability, depression, and mood swings. PMS is not caused by any underlying abnormality with the pelvic organs.

Nutrition Tips

Lack of certain vitamins and minerals is said to affect the level of the hormones of the menstrual cycle. Some researchers claim that women with PMS have either an imbalanced diet or existing deficiencies in their body which are not being corrected by their diet. A typical British diet includes a great deal of sugar, processed foods, additives and salt, and is not a good source of vitamins and minerals. These researchers claim that a change in diet and the use of certain vitamins and minerals have been highly effective for many women.
Women with chronic deficiencies may need dietary supplements but there is no single vitamin or mineral which is appropriate for all women. The exact supplements and their quantities depend on each woman's individual symptoms.
According to the Women's Nutritional Advisory Service, it is necessary to find out the exact nutritional cause of PMS in each woman and then to work out a nutritional programme to overcome her symptoms.

Good Foods to Eat

- Fresh vegetables and fruit every day;
- Whole foods – which are not refined or processed - such as, wholemeal bread, whole grains, brown rice, nuts, and seeds
- Lean meat, fish, and chicken
- Unsaturated fats, such as, cold pressed unhydrogenated vegetable oils (sunflower or safflower seed oil); and
- Low fat dairy products in moderation: skimmed milk, low fat cheese, and yoghurt.

Good Drinks

- Lots of water ;
- Fruit juices;
- Herbal teas;
- Decaffeinated teas; and
- Decaffeinated coffee

Foods to Limit or Avoid

- Junk foods sweets, cakes, chocolates, honey, sugar in tea and coffee, and refined flour products;
- Caffeinated drinks: coffee, tea, coke, and soft drinks;
- Alcohol;
- Salt in cooking, at the table and in crisps, etc.; and
- Saturated fats: red meat, foods fried in saturated fats, and butter

Dietary Supplements

If a wholesome diet on its own is not helping, the dietary supplements may have an effect. These are not a substitute for a wholesome diet.

Vitamin B6 (Pyridoxine)

Vitamin B6 has a role in the functioning of nerves. When taken on its own in high doses (more than 200 mg a day) for a long period of time (more than six months), Vitamin B6 has caused numbness and tingling in the arms and legs, shooting pain, headaches, tiredness and depression in a small number of women. These effects disappeared when the vitamins were stopped. It seems safest, when experimenting with Vitamin B6, to stay in the lower dose range and to give it up if you notice no improvement after several months.

Evening Primrose Oil

It contains an essential fatty acid called Gamma Linolenic Acid that is needed for the synthesis of a hormone called prostaglandin. Evening Primrose Oil is very effective in relieving premenstrual breast pain. There are no major reported side effects, but occasionally, women experience nausea, headaches, and indigestion after using it.

Menopause

What is Menopause?

Menopause, also called the change of life, is defined as the end of the last menstrual period. In Western women, it occurs on an average at 51 years, but there is a wide range of normal extending from early 30s to mid-to-late 60s.

What is Menopause Like?

Menopause occurs when ovaries no longer respond to the controlling hormones released by the pituitary gland of the brain. As a result, ovaries fail to release eggs each month and they no longer produce the female sex hormones of oestrogen and progesterone. As these levels become less and less, menopause signs begin to show up.

Every woman experiences menopause differently. Many hardly even notice 'the change', except for the fact that their periods become irregular. Others suffer every symptom and find their lives are severely affected. The transition into menopause is usually gradual and is accompanied by a range of symptoms.

Research into menopause has only recently (relatively) begun. After all, one hundred years ago, when the life expectancy was shorter, most women did not live long after menopause and so little was known about it.

How does Menopause Start?

Many women experience symptoms of menopause and irregular periods for several years up to menopause itself. This is called the climacteric, or 'perimenopause', and represents the gradual decline in the normal function of the ovaries.
One of the common problems of the climacteric is that periods become erratic both in spacing and amount. Until periods peter out altogether, heavy bleeding can cause plenty of problems

Hot Flushes and Sweating

The most common symptoms are, by far, 'hot flushes' and hot and cold sweats. These episodes can happen at any time, as often as several times an hour. Each hot flush usually lasts for three – to - six minutes. Exactly why these sweats occur is not fully understood, but from what we do know, it is because of the automatic controls of the nervous system become erratic. This triggers blood vessels, in the skin, to open and signals sweat glands to become active. Usually, this only happens if you were too hot and needed to lose heat.

Sleep Disturbance

Sleeping difficulties can be due to having a hard time falling asleep, restlessness, or night-time sweats. Some women sweat heavily and have to get up to change their sheets several times a night.

Psychological Changes

Depression, mood swings, tiredness, or headaches are all possible symptoms of menopause. Although many of the symptoms are bothersome, forgetfulness or irritability can be the most distressing symptoms.

Physical Changes

- During menopause, the skin becomes thinner;
- A lack of oestrogen often means that the glands in the vagina don't produce as much lubrication as before and this may cause stinging around the vagina during sex;
- Some women don't feel like having sex because of the decline of their sex hormones, whereas others find their orgasms become less intense;
- The lack of oestrogen also affects the bladder and one may find the need to pass water more often;
- There is a gradual rise in the risk of heart disease and stroke after the menopause; and
- Falling oestrogen levels result in unfavourable changes in cholesterol and fat levels in the blood, causing a predisposition to these problems.

Nutrition

A woman should get enough calcium and vitamin D in her diet to reduce the risk of osteoporosis. As a general rule of thumb, the recommendation is at least 1,000mg of calcium a day from food or supplements.

Essential Fatty Acids (EFAs), such as those found in nuts, seeds and oily fish, can be very useful if the skin becomes dry or if you suffer from joint pains. The best EFAs are those from the omega-3 and omega-6 families, which are found in pumpkin seeds, oily fish, walnuts, linseeds, dark green vegetables, and oils such as, sesame, walnut, soya, and sunflower oils. EFAs can also help prevent vaginal dryness and bladder infections, as well as increasing the mental and physical energy. Natural plant oestrogens, in the form of soya beans, alfalfa sprouts, or linseeds are also a useful supplement. Evening primrose oil and vitamin E have been suggested as a preventive measure for hot flushes, but there is little evidence to show they work.

Avoiding hot flushes - Hot drinks, such as, tea, coffee, and some alcoholic drinks and eating spicy foods should be kept to a minimum. Avoiding tea and coffee is also a good idea because caffeine can cause insomnia and lead to calcium being lost from the body at a greater rate.

Stopping smoking - smoking increases the risk of heart disease and osteoporosis in menopausal women.
Sticking to a healthy diet and getting plenty of exercise - this will help to keep stress levels to a minimum, as well as, being of great physical benefit. It's never too late to start.
Drinking plenty of water - it's a great cleanser and purifier and can help with many of the symptoms, including hot flushes, headaches, and dry skin.

Osteoporosis

In recent years, there has been a lot of interest in osteoporosis (thinning of the bones) in connection with the menopause. Oestrogen normally stimulates the bone-building cells.
As a result of the drop in oestrogen, women tend to lose bone mass and strength for several years following the menopause. Ultimately, this can make the bones more likely to collapse or fracture.

Osteoporosis is where the amount of bone tissue in the body is below what is normal for a person, taking into account their sex and age. Put simply, osteoporosis causes weaker bones, increasing the likelihood of a fracture. Osteoporosis on its own does not cause symptoms. Unless it's caused a bone fracture, it’s not a painful condition, nor is it a type of arthritis.

Understanding Bone Structure

Bones have a complex structure that helps achieve the maximum amount of strength for the least amount of weight. It can increase its thickness in areas subjected to repeated heavy loads, repair the bones when they are broken, and it is the site of manufacture of most of the components of blood (the bone marrow).
If we take a typical bone, such as, the femur (upper leg bone) and cut it across, we see there is an outer shell of very hard bone. In the middle space it has a honeycomb structure, through which is mingled the bone marrow.
The bones are made up mostly of collagen fibres, upon which are laid down crystals made from calcium and phosphate that give bone its ability to withstand compression and bending forces.

Cells that Repair and Dissolves Bone

If you looked at a bone under a microscope, you'd see two types of specialised cells scattered throughout:

- cells that continually make new bone, called **osteoblasts**.

- cells that continuously dissolve bone into its component materials, called **osteoclasts**.

Bones are, therefore, not a static tissue, but are always on the go. The manufacturing and disassembly of bones are exactly balanced.

How Bones Repair Themselves

When increased loads are repeatedly put upon a bone, the osteoblasts become more active, laying down more bone and increasing the strength of the region.

When a bone fractures, osteoblasts go into overdrive around the fracture site, laying down more collagen fibres and minerals on top to strengthen them.

How does Osteoporosis Affect the Bones?

In osteoporosis, the osteoclasts - usually over years rather than days or weeks - dissolve a bit more bone than is replaced, which results in weaker bones. Fractures in bone affected by osteoporosis are most likely in areas where there is a greater percentage of the honeycomb type of bone, which is less able to take the shock of a fall:

- in the wrist;
- in the femur close to the hip joint (which is called the 'neck' of the femur); and
- in the vertebrae of the lower spine.

Hip and wrist fractures usually result from falls, whereas fractures of the spine tends to occur spontaneously, when a weakened vertebra crumples under the stress of supporting the body's weight.

Causes of Osteoporosis

Various factors are known to increase the rate at which bone loss occurs. These can be divided into three groups: factors we can do nothing about, things we can change and causes related to other medical conditions or drug therapy. The conditions, listed below, can lead to osteoporosis.

Unchangeable causes of increased bone loss:

- Increasing age;
- Family history of osteoporosis;
- Being female;
- Following menopause; and
- Being thin (see below).

Changeable causes of increased bone loss:

- Inactivity;
- Poor diet (low in calcium);
- Smoking; and
- Increased alcohol intake.

Medical related causes of increased bone loss:

- Steroid drug treatment, particularly if prolonged more than a few weeks;
- Early menopause or the removal of the ovaries at a young age (under 45 years);
- Hormone abnormalities such as over-activity of the thyroid gland or the glands that produce the body's natural steroids, or under-production of testosterone in men;
- Chronic liver or kidney disease; and
- Vitamin D deficiency.

Diagnosing Osteoporosis

The best test to diagnose osteoporosis is a scan to determine the density of the bones. Usually, the same reference point in the skeleton is chosen, which allows better comparison between different people. The hip, forearm, heel bone, and the spine are all used, but exactly which varies according to local procedure.

How can Osteoporosis be Prevented?

These general measures can be used by everyone to avoid osteoporosis:

- Excessive running may cause increased bone loss. Because some runners are very thin, they should take advice on the best way to avoid bone problems later in life;
- The majority of us, who are not in the elite athletic category, need not be so concerned;
- Healthy bones at least partially reflect healthy living: taking regular exercise is the single most important action anyone can take to improve the strength of their bones;
- Exercise also greatly reduces the risk of heart disease, high blood pressure, and diabetes and it also has positive effects on mental wellbeing, as well;
- The sort of exercise that's beneficial in preventing osteoporosis is weight-bearing, such as walking or aerobics;
- Stopping smoking should be a priority for anyone interested in enjoying a longer life and keeping away from orthopaedic wards; and
- Alcohol consumption should also be kept within safe limits.

Non-dairy food sources of calcium

- Nuts and pulses: almonds, Brazil nuts, hazelnuts, and sesame seeds;
- Green leafy vegetables: broccoli, spinach, watercress, and curly kale;
- Dried fruits: apricots, dates, and figs;
- Fish: mackerel, pilchards, salmon, and sardines; and
- Tofu and various calcium-fortified foods.

A good calcium intake is essential throughout life for healthy bones. There is good evidence that the adequacy of a child's diet at least partially determines their osteoporosis risk in adulthood. The recommended daily intake of calcium for an adult is around 800mg. On average, 250ml (half a pint) cows' milk or 150g (5oz) yoghurt contains 300mg of calcium. Low-fat dairy products contain the same amount of calcium as higher fat varieties.

What about Taking Supplements?

Calcium supplements can be recommended. There are several types available on prescription if someone's dietary intake is low or marginal. Frail elderly people, with poor mobility, may be helped by taking a calcium supplement along with vitamin D.

Further Reading:

- ✓ ***The Women's Health Big Book of Yoga: The Essential Guide to Complete Mind, (2012), By Kathryn Budig***
- ✓ ***Women's Health: Hormones, Emotions and Behavior, (1998), By Regina C. Casper***
- ✓ ***New Dimensions in Women's Health, (2014), By Linda Lewis Alexander, William Alexander***