For a long time premenstrual syndrome (PMS) has not been taken seriously, dismissed by partners as women being 'emotional' and even ridiculed by doctors. But the fact is, PMS is a real, oppressive problem for those who suffer from it – and often for their loved ones too. This leaflet explains the symptoms of PMS and their effects on the lives of those suffering with it, as well as the causes of these symptoms and what can be done to treat them.

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1. What is meant by Premenstrual Syndrome (PMS)?

Premenstrual syndrome could also be referred to as the “period before the period” because it encapsulates a number of physical and psychological symptoms which occur during the monthly cycle before the period and completely disappear by themselves with the onset of menstruation. More specifically, these symptoms only appear between ovulation and menstruation – so within the two weeks before your period. The duration and intensity of the symptoms vary from woman to woman – some women suffer constantly from ovulation to menstruation, while others may only experience symptoms concentrated in the last two days before the period. What all PMS sufferers have in common is that the intensity of the symptoms increase as they come closer to menstruation and they feel a sudden relief with the onset of bleeding. One third to a half of all women of child-bearing age are affected by PMS and it is more prevalent in women over the age of 30. The severity of the symptoms ranges from mild to unbearable: Some women may feel a bit unpleasant in the days before the period whereas others suffer such intense symptoms that they do not even recognise themselves – their bodies and minds are affected in such a way that it can interfere with both work and social life. In around 3 to 8% of women the symptoms are so severe that they place significant restrictions on daily life and the women affected struggle to carry out normal daily activities. This condition is called Premenstrual Dysphoric Disorder (PMDD) after its symptoms of strong psychological discomfort – “dysphoria” can refer to an emotional state characterised by depression, general dissatisfaction with life, and lethargy. PMDD is recognised as a medical condition and those suffering from it should seek medical attention.

2. Symptoms of PMS

There are literally hundreds of symptoms of PMS that can be specified from the literature on the topic. Which of these symptoms occur and with what intensity is different in each woman – PMS is as individual as the women who suffer from it. This makes a general treatment impossible but we can try to treat the symptoms individually. It is, therefore, important to understand the causes and contexts of the various complaints so that personalised treatment options can be discussed with specialists.

The most common physical symptoms are headaches/migraines, abdominal cramps, and water retention which can cause weight gain in the second half of the cycle (from ovulation to menstruation). Depending on the severity of the water retention, some women can put on several kilograms in weight during this time. The increased water retention can also be the cause of painful, swollen breasts. The most common psychological symptoms are depressive moods, irritability, and lethargy – often accompanied by extreme fatigue, anxiety, mood swings, self-dissatisfaction, and food cravings.

Symptoms of PMS can include:
Physical

- Fatigue/exhaustion
- Insomnia
- Cramps
- Headaches/migraines
- Water retention
  - Weight fluctuations
  - Swelling of the breast: pain, tenderness
  - Swelling of the face, hands, feet, legs
- Digestive problems: diarrhoea, constipation, bloating
- Back pain
- Circulatory problems
- Nausea
- Increased stimulus sensitivity: for example, to light, noise, smells, stress
- Pain during sexual intercourse
- Weakened immune system
  - Flu-like symptoms
  - Out-break of latent infections

Psychological

- Depression, inexplicable sadness, depressive moods
- Anxiety
- Irritability, aggressiveness
- Self-dissatisfaction
  - Low self-esteem
- Stress, mental tension

- Mood swings
  - Sudden, unprovoked happiness or crying
- Lethargy
- Change in appetite
  - Food cravings, especially for sweet, sugary foods
  - Loss of appetite

There are many more symptoms that could be added to this list. It is clear just looking at these symptoms that PMS is not just in the imagination of those who are affected: it is a real condition, one which can cause serious physical and psychological changes in a woman’s body. Often, women who are prone to irritability and aggression during the second half of their cycle do not recognise themselves. Many describe themselves as being plagued by guilt for being short with their husband or children, sometimes yelling at them for little reason. In fact, statistics show that there is even a link between PMS and crime: more crimes are committed by women in the second half of their cycle than those in their first. Not all women suffer from increased irritability, however, for some it is depression that takes centre-stage. Others suffer more from physical complaints and some women will feel the need to eat twice as much food with the onset of ovulation. Whichever the symptom and suffering, it is always during the second half of the cycle – why?

3. Causes of PMS

PMS can be caused by a number of things. Its symptoms are limited to the second half of the cycle - the time between ovulation and
menstruation (menstruation initiates the start of a new cycle). A woman’s hormonal balance is altered during the second half of the cycle and this is often discussed as a cause.

**4. What exactly are hormones?**

Hormones are chemical messengers that travel around our bodies every day in billions of small units to enable communication between the cells of the body. Hormones affect every cell in our body – and we have about 50 trillion cells. Each hormone has its own task within the body: for example, regulate the heartbeat and blood pressure; cause the body to produce energy and heat; and bone formation. Hormones also significantly affect the menstrual cycle of women. They help to protect the female body during this time from too much stress, fatigue, anxiety and depression – provided that the hormones involved in this process are in the correct ratio. Furthermore, hormones stimulate key areas of the body, such as the brain and the immune system. In short, hormones are the control element of the body.

Hormones cannot be considered independently of each other, rather, they are interdependent and interact with each other. This is why hormonal balance – i.e. the presence of the correct amount of each hormone at the right time of day – is a prerequisite for our health and well-being. An imbalance between hormones, or the absence of a hormone altogether, can considerably reduce our quality of life.

**5. PMS and the Menstrual Cycle**

During the fertile years, there are two types of hormone involved in the menstrual cycle: oestrogen and progesterone. The correct concentration of these hormones is essential for a symptom-free menstrual cycle. There is a delicate balance between oestrogens and progesterone: they act oppositely to one another in order to complement each other and keep the body in balance. Some women have an unnaturally high or low level of oestrogen and/or progesterone. This hormonal imbalance is one of the most common causes of PMS (see Figure 1).

![Figure 1: Cycle-dependent fluctuations of oestradiol and progesterone. From R. J. Huskey, Virginia University.](image)
Oestrogen/Oestradiol

As can be seen in Figure 1, oestradiol, an oestrogen from the oestrogen family, is dominant in the first half of the cycle. Oestradiol is the fertility hormone and is responsible, among other things, for the female figure – for example, breast growth and the maturation of the body from girl to woman; the elasticity of blood vessels; and especially for the maturation of egg cells and the monthly development and protection of the endometrium in the first half of the cycle which it prepares, along with progesterone, for the plantation of a fertilised egg. In addition, oestrogens provide for the growth of healthy skin and hair; make the skin glow; keep the eyes and mucous membranes moist; promote clear thinking; and have a stabilising effect on the female mood. In a typical 28-day cycle the lowest level of oestradiol is measured during menstruation. Its value increases until ovulation, when it reaches its peak, and then decreases again slowly until rising briefly to reach a second, small peak at day 21 of the cycle. If no fertilisation takes place, the oestradiol decreases continuously until the onset of the period.

Progesterone

In the second half of the cycle, progesterone levels rise above those of the oestradiol (see Figure1). Progesterone, also called the corpus luteum hormone, is produced shortly after ovulation by the corpus luteum, or yellow body (a temporary structure which develops in the ovary each cycle), to protect the uterine lining and prepare the uterus for a possible pregnancy. If no fertilisation takes place, the progesterone levels drop after reaching a peak around day 21 of the cycle. The uterine lining breaks down and menstruation is initiated. A new cycle begins again.

6. Progesterone Deficiency / Oestrogen Dominance

Studies show that progesterone is a natural antidepressant, it has a calming effect and can counteract fears. In addition to this, progesterone positively effects the release of the neurotransmitters (chemical messengers) serotonin and dopamine which both play a part in keeping us happy. For this reason, low progesterone levels can often be accompanied by depressive moods, anxiety and fatigue.

The level of oestrogen in our body dictates how much progesterone we need. If the ratio of oestrogens and progesterone is shifted so that, compared to the ‘normal’ ratio (dependant on the respective phase of the cycle), there is a higher percentage of oestrogen, then this is called an oestrogen dominance (see Figure 1). Although it may seem contradictory, this can also be the case with an oestrogen deficiency when, although the level of oestrogen is reduced, there is still not enough progesterone produced relative to the level of oestrogen. An oestrogen dominance can be the result of increased oestrogen levels as well as decreased progesterone levels. An oestrogen dominance can trigger a series of unpleasant symptoms, the severity of which varies in each individual from mild to unbearable. These symptoms can include: water retention, tenderness of the breast (swelling and pain), weight gain, painful
periods, nausea, fatigue, insomnia and restlessness, lack of concentration, depression, anxiety, and lethargy.

7. Options for Action

Since the combination of symptoms that occur, the time of their onset, and their intensity are as individual as the women concerned it is almost impossible to create a single treatment that is effective for every woman. Doctors can prescribe painkillers for headaches and migraines, antidepressants for depression and insomnia, diuretics for water retention, and so on – but you can end up taking a veritable cocktail of medicines to treat your symptoms. Instead of taking multiple medicines to counteract a variety of symptoms, it could be much simpler and more natural for many women to determine the exact cause of their own symptoms and therefore aid a number of symptoms with just one treatment which is suited to them. For the vast majority of women suffering with PMS, hormonal imbalance is the root of all evil. If progesterone and oestrogen levels fall into the wrong ratio – which can occur if the values of either of the hormones is increased or decreased beyond its usual value – a variety of symptoms can ensue.

There are several treatment options that can help to restore the body’s hormone balance. Three of them have been proven to be effective:

- The contraceptive pill is often prescribed to alleviate symptoms of PMS. In some women this can be very effective, but in others it does not help because there is no progesterone being produced. The pill itself contains progestin which is synthetically produced progesterone. Synthetic hormones have a slightly different molecular structure to natural or bio-identical hormones and, for this reason, do not necessarily behave identically to natural hormones within the body. Therefore, the pill can also be the cause of PMS-like symptoms as it can lead to an oestrogen dominance, despite containing progestin.

- If an oestrogen or progesterone deficiency is diagnosed, the body’s hormonal balance can be restored under medical supervision with bio-identical hormones. Bio-identical oestrogen or progesterone can come in the form of creams or capsules and are available in almost any pharmacy.

- Plant-based Chasteberry has also been shown to be helpful. The Chaste tree is a medicinal plant that promotes the natural production of progesterone. The active ingredient is available in tablet or capsule form from pharmacies and health stores.

In order to bring the hormones into balance using the treatments mentioned above, the cause of your symptoms must first be determined – i.e. the values of your hormones and their ratio to one another. A hormone test is a useful way of achieving this. Tests can show exactly which hormones are deficient or in excess and to what extent. Verisana can measure your current hormone status with a simple saliva test, the samples for which can be easily taken in the comfort of your home. The Premenstrual Syndrome test kit measures the oestradiol and progesterone levels in your body. A
detailed evaluation report also explains the causal relationships of the tested hormones.

8. Self-test

The following questionnaire is intended to help you decide whether a hormone saliva test would be useful for you. If you have answered 50% or more of the questions with “Sometimes” or “Often” then a saliva test is highly recommended to clarify your current hormone status.

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
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<tbody>
<tr>
<td>My breasts are swollen and painful</td>
<td></td>
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<tr>
<td>My periods are heavy</td>
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<tr>
<td>My periods are continuously painful</td>
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<tr>
<td>My abdomen is swollen</td>
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<tr>
<td>I suffer water retention, for example in my legs and feet</td>
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<tr>
<td>I have difficulty falling asleep</td>
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<tr>
<td>I have trouble staying asleep</td>
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<tr>
<td>I feel sad and depressed</td>
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<tr>
<td>I am anxious and restless</td>
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<tr>
<td>I am nervous and irritable</td>
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<td>I am aggressive</td>
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<td>I crave sweet foods</td>
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<td>I have mood swings</td>
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<tr>
<td>I find it difficult to concentrate</td>
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<td>My skin is dry and itchy</td>
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<tr>
<td>I have migraines before my period</td>
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<td>I just want to lie down and sleep</td>
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<tr>
<td>I have back pain</td>
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9. Premenstrual Syndrome Test-Kit
£80 (Includes all services, VAT, shipping)

With the Premenstrual Syndrome kit Verisana measures the hormones oestradiol and progesterone levels using a saliva test.

This type of test is recommended by the World Health Organisation (WHO) for the determination of hormones.

This is how it works:

1. You order a test kit in our online shop.
2. We will send the ordered test kit to you. The test kit contains the collection tubes required for saliva collection, a questionnaire, as well as detailed instructions for saliva collection.
3. You collect your saliva sample in the supplied collection tubes and send your samples included in the questionnaire to our laboratory.
4. Your sample is released for measurement in the laboratory after receipt of the invoice.
5. You will receive the results of your hormone analysis, an explanation of the levels of hormones and tips to enhance well-being.

For more information, see www.verisana.co.uk/premenstrual-syndrome
Do you have questions? Visit our FAQ section, www.verisana.co.uk/info/faq
Or send us an e-mail to contact@verisana.co.uk
Literature Sources


