Lifting The Burden

The Global Campaign to Reduce the Burden of Headache Worldwide

A partnership in action between the World Health Organization,
World Headache Alliance, International Headache Society and European Headache Federation

Information on female hormones for women with headache

Headache disorders are real – they are not just in the mind. If headache bothers you, it needs medical attention.

The changing pattern of hormones throughout a woman's life, from puberty to the menopause, has an important effect on migraine and other headaches. Knowing what to expect can help women understand why headaches occur and, importantly, when to seek help.

Headache and women's hormones

Given the strong influence of hormones on headache in women, you may wonder why doctors do not do any hormone tests. The simple answer is that no tests are able to show doctors the cause of the problem.

The relationships between female hormones and the processes that cause headaches, or make them better or worse, are very complex. Even when hormones are clearly a factor in headache problems, all the standard hormone tests are usually normal. Studies measuring hormone levels show no differences between women with headaches triggered by hormonal changes and women without a hormonal trigger.

Headache, migraine and puberty

Puberty is the time when a girl begins to produce hormones in a monthly cycle that leads to the start of menstruation. This is therefore the time when hormones may first influence headaches. Although migraine can start at any age, in the one in every six women who will have this disorder, puberty commonly brings about its onset.

Headache and the menstrual cycle

Many women notice a link between headaches and their menstrual cycle. Headaches are typically more frequent and more severe in the days around the menstrual period. At the same time, there may be mood changes, water retention and other premenstrual symptoms, which improve as the period starts.

Migraine is also affected by the menstrual cycle, and in some women is triggered by the natural drop in levels of the hormone estrogen that happens just around the time of the menstrual period. Other hormones that change with the menstrual cycle, such as prostaglandins, which are released just before and during a period, may also be an important trigger. This is particularly likely in women who get migraine only on the first or second day of bleeding.

So-called "menstrual migraine" can be more severe than headaches at other times of the month, so take your migraine treatments early. Your doctor can give you prescription-only drugs to control the symptoms of migraine but, if necessary, consider options to prevent

menstrual attacks. No drugs are sold specifically for prevention of menstrual migraine, but there are some that often work well. The choice of drug depends on any other period problems that may benefit from treatment, so this is something to discuss with your doctor or nurse.

Headaches and contraception

Hormonal contraception, such as combined hormonal contraceptives (pills, patches, rings and injectable preparations), is very safe for the majority of women who use it. This is equally true for most women with migraine. Many women find that combined hormonal contraceptives have no effect upon their headaches – or even help them. Even so, headaches are a commonly reported side-effect of these medications. In most cases, headaches of this sort improve after a few months, and they are rarely a reason to stop contraception.

Women who have *migraine without aura* before they start the contraceptive pill often notice that they get their attacks during the pill-free interval. During the pill-free week, estrogen levels drop – just as they do for menstrual migraine, and with the same effect.

Combined hormonal contraceptives should not be given to women with *migraine with aura*. This is because the estrogen in the contraceptives can increase the risk of a stroke. If 100,000 women under the age of 35 who have migraine aura started using combined hormonal contraception, we would expect around 28 to have a stroke within the next year. If the same group did not have migraine and did not use combined hormonal contraception, only one woman would be expected to have a stroke within the next year.

Although the risk of a stroke is very low in women younger than 50, it is sensible not to increase it since there are many choices of other methods of contraception. Several of these are even more effective contraceptives than the combined hormonal methods, so the increased risk is entirely avoidable.

If a woman with *migraine without aura* starts to have *migraine with aura* after beginning combined hormonal contraceptives, she should stop taking it immediately. Furthermore, she should seek medical advice - particularly since she may also need emergency contraception.

There is a separate leaflet explaining what migraine without aura and migraine with aura are. Ask your doctor or nurse if you would like to have this.

Progestogen-only methods (pills, implants, injectable preparations and intrauterine methods) do not increase the risk of a stroke but have varying effects on headaches. Most evidence suggests that, if the method “switches off” normal periods, headaches usually improve.

Headaches, pregnancy and breastfeeding

Fortunately, most women find that headaches improve during the latter part of pregnancy. This is especially likely for *migraine without aura*. The benefit may continue through breastfeeding.

In the first few months of pregnancy, however, headaches may be worse. One reason is that sickness, particularly when it is severe, can reduce food and fluid intake and result in low blood sugar and dehydration. If this happens to you, try to eat small, frequent carbohydrate snacks and drink plenty of fluids. Adequate rest is important to avoid over-tiredness. Other preventative measures that can safely be tried include acupuncture, biofeedback, massage and relaxation techniques.

Women who have *migraine with aura* before they become pregnant are more likely to continue to have attacks during pregnancy. If migraine happens for the first time during pregnancy, it is likely to be *migraine with aura*.

There is no evidence that headaches or migraine, either with or without aura, have any effect on the outcome of pregnancy or on the baby's growth and development. It is, of course, important to make sure that any treatments taken for headaches are safe. Few drugs have been tested for safety in pregnancy and during breastfeeding. In fact, paracetamol (when used correctly) is the only medication shown to be safe throughout pregnancy and breastfeeding. Unfortunately this is not the most effective treatment, especially for migraine, and even paracetamol should not be taken too often. However, there are other medications that can be

taken under medical supervision. If you feel you need to take any other drugs for headaches, check with your doctor first.

Headaches, the menopause and hormone replacement therapy (HRT)

In the years leading up to the menopause, the ovaries produce less and less estrogen. During this time of hormonal imbalance, migraine and other headaches often become more frequent or severe. For most women, they settle again after the menopause, possibly because the hormonal fluctuations stop and the concentration of estrogen stabilises at a lower level.

Few studies have looked at the effect of HRT on headaches, but the decision to take HRT or not can be made regardless of headaches. Unlike the synthetic estrogens in contraceptives, the natural estrogens in HRT do not appear to increase the risk of a stroke in women with *migraine with aura*. It is reported that migraine is more likely to worsen with oral HRT and improve with non-oral HRT such as patches or gels. Too high an estrogen dose can trigger migraine aura, which calls for a reduction in dose. Whichever type of HRT you start with, it is important to give it an adequate trial; the first three months are a time of imbalance as the body becomes used to the change of hormones.

Many women use non-prescription remedies to treat hot flushes. There is some evidence that dietary estrogens (isoflavones such as in soya products) help menopausal symptoms as well as migraine, so it is worth increasing intake of foods rich in soya.

Headaches and hysterectomy

Hysterectomy is of no benefit in the treatment of hormonal headaches. The normal menstrual cycle is the result of the interaction of several different organs in the body. These include organs in the brain in addition to the ovaries and the womb. Removing the womb alone has little effect on the hormonal fluctuations of the menstrual cycle even though the periods stop.

What can I do to help myself?

If you think that your headaches are worse with hormonal changes, the first thing to do is to keep a record of the dates of the first day of each period and the dates of each day of headache. After a few months, look back over the records and see if you can establish any patterns. This will tell you if hormones are having an important effect.

Remember to look at the other causes of headaches. Think about other possible trigger factors. These may still be part of the problem even if hormones are too – and you may be able to avoid them.

When you do start a headache, particularly migraine, do not delay taking treatment; if you leave it too late, it may be less helpful. If your treatments are not effective enough to allow you to continue your usual daily activities, take your diary to your doctor and discuss further options.

For more information, visit www.w-h-a.org