

# Migraine in women: is it all in the hormones?

## A Headache UK Briefing Paper 2008

Migraine affects more than 1 in 7 of the UK population - over 6 million people - and is more prevalent than diabetes, epilepsy and asthma combined. Yet these figures mask the fact that migraine is a predominantly female disorder, affecting nearly 1 in 5 women in the UK, compared to 1 in 12 men. As well as this greater prevalence in migraine, migraine is markedly affected by hormonal events throughout a woman's life.

### **Childhood, puberty and adolescence**

Until the age of 11, boys and girls are equally affected by migraine. Around 15% of women with migraine say that they had their first migraine attack in the same year that their periods started. During adolescence, migraine becomes more prevalent in girls, often linked to painful periods.

### **Contraception**

Many young women starting the 'pill' find that their migraine improves as their periods are lighter and regular. Some women will get migraine during the hormone-free week. Other women develop aura for the first time when they start the 'pill'. These symptoms, which are typically visual, such as zig-zags or blind spots, are a warning for an imminent headache. They last for up to an hour and resolve as the headache starts. Although the 'pill' is a very safe and effective method of contraception, with added health benefits, it can increase the risk of stroke when taken by women who have migraine with aura. Fortunately, contraceptives containing only progestogen do not increase the risk of stroke but still provide effective contraception.

### **Pregnancy and breastfeeding**

Migraine improves in 60 - 70% of women during pregnancy, although attacks often worsen in the first few months. Due to lack of knowledge by healthcare professionals, many women with migraine are restricted to treatment with paracetamol, despite more effective treatment being safe in pregnancy. Women who have migraine without aura before becoming pregnant, particularly menstrual migraine, are most likely to notice that migraine improves during pregnancy. This respite continues during breastfeeding until periods return. If migraine starts for the first time during pregnancy, it is likely to be *with* aura. Of most importance is the fact that there is evidence that migraine does not affect the outcome of pregnancy or the baby's growth and development.

### **Menstrual migraine**

By mid 30s to 40s, migraine is three times more prevalent in women than in men. At the same time, more than 50% of women with migraine report an association between their migraine attacks and menstrual periods. Menstrual migraines are typically *without* aura, even in women who also have migraine *with* aura. Research has shown that these attacks are more severe and disabling, last longer, and are less responsive to treatment compared to attacks at other times of the cycle. It is thought that the natural fall in oestrogen just before menstruation can trigger migraine in susceptible women. Other hormones that have been implicated include prostaglandins and serotonin.

## **Menopause and hormone replacement therapy (HRT)**

In the years leading up to a woman's final period, the menopause, the ovaries produce fluctuating amounts of oestrogen. During this time of erratic periods, flushes and sweats, migraine is more frequent. Some women find that certain types of HRT, particularly patches or gel, can help menopause symptoms and migraine. For the majority of women migraine settles a few years after the menopause. This is possibly because the hormonal fluctuations cease and the body adapts to stable low levels of oestrogen. A few women continue to have attacks, which can sometimes follow a cyclical pattern years after the menopause. The reason for this is not clear.

## **Hysterectomy**

Although it may seem an obvious treatment option, there is no evidence to suggest that an hysterectomy is of any benefit in the routine treatment of hormonal headaches. If anything, evidence suggests that hysterectomy without hormone replacement makes migraine worse.

## **Treating migraine in women**

Effective treatment of attacks is the mainstay of managing migraine. A number of effective drugs are available both with and without prescription. Prevention of migraine includes lifestyle management, daily preventive drugs and hormonal treatments, which can be tailored to a woman's needs for contraception, fertility issues, or menopause status.

## **The burden of migraine in women**

The World Health Organization ranks migraine in the 20 most disabling disorders affecting women worldwide. One study noted that 85% of people with migraine reported substantial reductions in their ability to do household work and chores, 45% missed family social and leisure activities, and 32% avoided making plans for fear of cancellation due to headaches. Work-related disability is more often reported for menstrual migraines than for non-menstrual attacks. Similarly, time spent at less than 50% productivity is greater for menstrual than non-menstrual attacks. But disability does not only affect the individual; it extends to the family and work environment. In one study, living with or being related to someone with migraine decreased the non-sufferer's ability to participate in home and family life (moderate/great impact 49%) and social and leisure activities (moderate/great impact 47%).

## **Headache UK Recommendations**

None of the strategies for managing migraine in women can be made available unless healthcare professions are made aware of the need to diagnose and treat this condition. Under-treatment – as well as causing unnecessary disability and suffering – is not economically cost-effective in terms of time lost from work and burden placed on the families of sufferers. More effective health care would alleviate much of the suffering and therefore reduce both the personal and financial costs of migraine. In particular, ineffective management of migraine in women has significant implications and personal costs for women, their families and their employers. Such consequences would in turn result in greater healthcare costs as most of these patients are referred to tertiary care. The overall costs to society as a whole are estimated to be high, owing to the lost working days. Headache UK supports education of healthcare professionals, greater recognition of migraine, and support of research as important strategies for reducing the total costs associated with migraine in women.

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