Infections. Heart problems. Even the menopause...

What your nightmares reveal about your health

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By ANNA MAGEE

BAD dreams may cause us to wake in a cold sweat in the night, but it's not something you would bother mentioning to your doctor. Or should you?

Scientists believe that recurring nightmares could provide vital clues about health and even warning signs about impending illness — sometimes years before symptoms appear.

Last month, researchers found regular nightmares in childhood could be an early warning sign of psychotic disorders later in life. The study, published in the journal Sleep, tracked 6,800 children and found those having frequent nightmares (two to three times a week) between the ages of two and seven were three-and-a-half times more likely to have a psychotic experience, such as hallucinations or hearing voices, as a teenager.

The researchers said frequent nightmares could indicate children are facing emotional trauma, such as abuse or bullying, in waking life. They said use of violent video games and computers near bedtime may also play a part.

It's thought we may experience terrifying threats in our nightmares to practise handling them in waking life, explains Patrick McNamara, associate professor of neurology at Harvard Medical School.

But nightmares may also indicate an underlying physical problem that is disrupting our sleep as we dream. We only dream during the stage known as rapid eye movement (REM) sleep. We experience REM, a very light sleep, on average four to five times a night.

Lots of medical problems cause disruption to sleep, which means you're more likely to wake during the REM phase and remember that you had a nightmare, says Dr Nicholas Oscroft, a sleep researcher and cardiologist at Papworth Hospital in Cambridge.

Regular nightmares, could, for example, be a sign of sleep apnoea — this causes breathing to stop temporarily as the airways become obstructed. Patients with sleep apnoea often report frequent nightmares.

A study by Swansea University, in the Journal of Clinical Sleep Medicine in 2011, assessed the dream content of 47 males with sleep apnoea. Those with the most severe symptoms reported the most 'emotionally negative and unpleasant' nightmares.

A STUDY in 2012 in the journal Sleep Medicine found that, when patients were treated for sleep apnoea by wearing a mask that gently forced air into their airways, 91 per cent stopped having nightmares.

Choking attacks and the drop of oxygen to the brain which occur during sleep apnoea can give rise to nightmares, said lead researcher Professor Ahmed S. BaHammam, a sleep medicine expert at King Saud University, Saudi Arabia.

Regular bad dreams can be linked to heart problems, says Dr Oscroft. People who have regular nightmares were three times more likely to suffer irregular heartbeat, according to a study of more than 6,000 adults, published in the Netherlands Journal of Medicine in 2003. Chest pain was seven times higher in those who reported having nightmares often.

One theory, Dr Oscroft explains, is that people with heart conditions, in particular heart failure (when the heart can't adequately pump blood to the lungs and other organs), suffer breathing problems at night.

Heart failure leads to a build-up of water in the lungs, which makes breathing more difficult, particularly at night in REM sleep. This is because most of the muscles become paralysed during this stage, to stop us acting out our dreams; but this can affect the breathing muscles. This can wake people during REM sleep, making them more likely to remember bad dreams.

Any kind of infection, from severe flu to a kidney infection, can make nightmares more likely, explains Professor McNamara.

There are two stages of sleep — REM and non-REM sleep. During the latter, we experience slow wave sleep, when our immune system is repaired and strengthened. 'When we get an infection, with or without a fever, the body needs more slow wave sleep,' says Professor McNamara. This is so the immune system can fight the bug.

However, it has a knock-on effect on REM sleep, he says, 'delaying the point at which we enter dreaming sleep, which can lead to nightmares or bizarre, vivid dreams'. As REM sleep is when we process emotions, this can cause a build-up of unpleasant emotions which may manifest as nightmares.

Frequent violent nightmares can be an early indicator of Parkinson's disease, predating the emergence of symptoms by up to a decade, says Dr Robert Brenner, consultant neurologist at Spire Bushey Hospital in Watford.

Parkinson's is a neurological disorder that causes muscle tremor, stiffness and weakness. The content of some patients' dreams is almost always the same, says Dr Brenner. 'They're being chased or attacked and often act out nightmares, reacting by kicking and punching, so they tend to hurt themselves or their sleeping partners.'

This is because 15 per cent of patients who go on to develop Parkinson's have REM sleep behaviour disorder, meaning they are not paralysed during this sleep phase, and can move about during nightmares.

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The minimum number of hours we typically dream each night

One study, published in the journal Neurology in 1996, found that 38 per cent of patients with frequent nightmares from REM sleep behaviour disorder developed Parkinson's on average 12.7 years after they began to experience them.

Migraines, too, are often preceded by unpleasant dreams, involving themes of anger, aggression and misfortune, according to a study in Psychotherapy and Psychosomatics in 1996. Around one in four migraine sufferers experiences an aura before an attack: they see flashing lights or zigzags, and hallucinations.

'Sometimes, an aura occurs during REM sleep as a nightmare or very intense, vivid dream, where the aura is experienced as a blinding light or spinning wheel during the dream,' says Professor McNamara.

Many women report more bizarre dreams around the menopause, adds Dr Tony Boret, a consultant gynaecologist at Spire Bushey Hospital. Up to ten years preceding the menopause, levels of female hormone oestrogen significantly drop.

This affects levels of serotonin, a brain chemical associated with hot flushes, mood swings and night sweats, and can lead to sleep disruption in around 15 per cent of women, he says. This can cause excessive tiredness and more broken sleep.

Some experts also believe premenstrual syndrome can lead to more nightmares. A 2008 study found women reported significantly more nightmares than men (30 per cent of women's most recent dreams were nightmares compared with 19 per cent of men).

Study author Dr Jennie Parker, a psychologist at the University of the West of England, said the nightmares were linked to temperature changes that occurred at certain times in a woman's cycle.

The increase in the hormone progesterone, which women experience before a period, causes their body temperature to rise and has been linked to PMS-related insomnia.

This can cause night sweats and hot flushes, as well as vivid dreams and nightmares. 'Premenstrual women tend to dream more aggressively and are more likely to remember dreams,' adds Dr Parker.

Not getting enough shut-eye in the week could explain nightmares during your weekend lie-in. 'People who don't sleep enough tend to miss out on REM sleep,' says Dr Oscroft. REM sleep occurs around 90 minutes after we fall asleep, at the end of each sleep cycle; we experience on average four cycles of sleep.

As each period of REM sleep gets longer through the night, we get more in the latter part. If you're sleep deprived, even by one or two hours a night for a week, when you finally do sleep, you experience REM rebound, getting more dreaming sleep.

THIS is because your brain, which has been missing out on the REM sleep required to process memories, learning and emotions each day, constantly wants to go back into it. 'The build-up of unprocessed emotion can lead to more reported nightmares,' says Professor McNamara.

Sometimes our nightmares can reflect waking health concerns, such as breathing problems. A study published in the journal Dreaming in 2006 found those with breathing problems during wakefulness often reported dreaming about being choked or suffocated; those who perspired excessively while awake often dreamed about sweating.

'Our dreaming brains deal in metaphors and symbols,' says Professor McNamara. 'During REM sleep, the brain tries to capture and process overwhelming sensations, things that are troubling us, or that we can't put into words. It does this through the pictures we see in our dreams.'