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Why do I wake up early?

Why do I wake up earlier than I want to?

If you suffer from broken sleep, you are not alone. Over 1/3rd of us wake up during the night on at least 3 occasions per week.

When broken sleep occurs over an extended period it is referred to as Sleep Maintenance Insomnia. Sleep Maintenance Insomnia can be set up by a variety of factors, including shift work, napping in the day, inconsistent bedtimes, alcohol, drugs, smoking, using technology in bed, caffeine, pregnancy, a bright or noisy bedroom (or being too hot or cold), physical pain, an uncomfortable bed or pillow, frequent use of the toilet at night, and a lack of exercise.

All of these factors can hopefully, be tracked and then resolved.

Why would 3am to 4am tend to be the time that sleep tends to be interrupted?

Notwithstanding lifestyle and environmental interruptions to sleep, there are two key physiological factors which can contribute to interrupted sleep at around 3am to 4am.

The first is our 'depth of sleep' which tends to be lighter in the second ½ of the night. Here, we have the majority of our Deep Sleep in the first half of the night. Deep Sleep, also known as short wave sleep, is a stage of sleep when our heartrate, breathing and brain waves all slow down. It is, as its name suggests the deepest part of our sleep, and this stage is naturally the hardest to be woken from. Then from roughly 3am we get more of the lighter stages of sleep including Rapid Eye Movement (REM) Sleep which is when we dream. Lighter sleep is easier to wake from for whatever the reason.

The second key factor is that at around 3am, our cortisol levels start to rise. Amongst other roles (as our 'stress hormone' in our fight or flight system) Cortisol is helps us to wake up. Thus, when our sleep is interrupted at this time, it can often be difficult to get back to sleep.

So where should we start looking if we are waking to early and then cannot get back to sleep?

Review your overall sleep hygiene

It always makes sense to review your sleep hygiene including the factors which are known to produce sleep fragmentation.

Having a regular bedtime is the first sleep hygiene step with regards to solving any sleep problems. It maximises both sleep quantity and sleep quality in general as it strengthens our body clock. Having a relaxing wind-down routine, and no use of tech in the hour before bed, and especially in bed itself is a key component of good sleep hygiene too.

Then check your bedroom for any light leakage, possible sound interruptions, and incorrect temperature which could wake you up in the middle of the night. Your bedroom should be cool, dark, and quiet like a cave. Is it the morning light which is waking you up? Black out blinds or an eye mask would help here. Or it could be the birds waking you up at the dawn chorus, or the early morning traffic or a neighbour, or even your partners snoring? If so, try earplugs or a white noise generator help mask out the sounds. Then check your bedroom

temperature. Is set at the right level, somewhere between 65-68 degrees Fahrenheit? If your bedroom is too warm or too cold, you could have trouble both falling asleep and staying asleep.

Apart from making sure you have a relaxing sleep routine, check other aspects of your lifestyle in the evening which could cause sleep disruption. Avoid alcohol consumption within three hours of sleep. Whilst alcohol is a sedative it leads to interruptions in sleep typically later in the night during REM sleep. Smoking/Nicotine as a stimulant is also associated with reduced sleep quality too. Both the volume and timing of caffeine is also something to review. Caffeine is known to interfere with getting to sleep. If this then shifts your body clock out of its natural sleep timing or Circadian Rhythm, it can produce something called Circadian Misalignment which leads to a reduced quality and quantity of sleep.

Circadian misalignment

Circadian Misalignment is basically when we are sleeping outside of our biological body clock rhythm which then throws all our hormones and internal systems out of sync. It also interferes with our sleep, both in terms of getting to and staying asleep.

For the 'average sleeper' our optimum bedtime or sleep window is between 10pm- and midnight. However, not all of us have this 'average body clock' and we each have individual sleep preferences, called Chronotypes, which are largely set by our genes.

Here some of us (around 20%) are Morning Larks who like to go to be early, and another 20% of us preferring a later bed and wake time, called Night Owls. When we sleep in line with our sleep preferences will optimise both our quality and quantity of sleep. If you don't know what your sleep preference is there are lots of online tests such as the 'Morning Eveningness Questionnaire' available online. There's a great online test by Dr Michael Breus too.

It's recommended that we sleep in line with these preferences.

Not only is the preferred timing of our sleep based on our genetics, but our sleep need will also vary too. The recommendation for adults is that we need 7-9 hours of sleep, but some will need longer, and some shorter hours of sleep.

Let's consider someone going to bed at 10pm and only needing 7 hours sleep. This would naturally set them up to awake at 5am having had a full night's sleep and ready to start the day. If this is you and you are waking up refreshed and such an early wake time doesn't suit you, you could try to go to bed later by about 10 minutes each night. By nudging your circadian rhythm later, you'd then wake up later too.

Finally, it just might be that your sleep preference is one of a morning lark, which is early to bed and early to rise. If this is the case, and you are waking up refreshed it might be best to accept this sleep preference even though it might not be ideal for your chosen lifestyle.

Sleeping in older age

As we get older, we both get less sleep, and our chronotype starts to shift to earlier in evening, 'advancing our sleep phase'. Here It's quite possible that with even with a 9pm bedtime, as an older adult you would only get 6 hours sleep and equally wake up at 3am.

Another key problem we face regarding sleep quality as we age is that we get less deep sleep. So, we are more vulnerable to be woken up in the night. Equally we tend to get more night-time awakenings to use the toilet. Having your last drink earlier in the evening will help here.

Sleep maintenance insomnia caused by stress

The most common cause of insomnia is stress which affects both quality and quantity of sleep. With poor sleep we then reduce our ability to cope with stress. From here we create a viscous circle of this increased stress creating lost hours sleep, which then increases our stress, and so on.

One of the signs you are waking early due to stress is that you wake suddenly, feeling wide awake, rather than groggy and sleep deprived. Instead, you are instantly on alert with your mind shifting into a higher gear straight away. Anxiety, acute and chronic stress can all induce this type of fight or flight response and interfere with your ability to get a full night's sleep. This is partly due changes our Cortisol production as a result of stress.

When we sleep, we usually have natural decrease in Cortisol our stress hormone. One of the roles of Cortisol is to increase our alertness and typically our cortisol levels at night are about ½ the levels they are in the day. Under normal conditions, without any stressors cortisol's lowest secretion is around midnight to 2am. From here, its secretion, from our adrenal glands, starts to significantly rise from 3am-4am and continues to increase towards the end of sleep. Its levels peak at around 30-45 minutes after we wake (on average between 7am-8.30am), and then gradually returns to its baseline level an hour or so later.

Cortisol secretion is controlled by our circadian clock and helps regulate all of the body's systems. Its concentration variation is therefore carefully synchronised and stable under normal levels of stress. We get small increases in cortisol after meals and during exercise. However, when a person is under stress or pressure, as a fight or flight hormone its levels rise significantly. This then causes sleep fragmentation, whilst as previously discussed the sleep fragmentation increased cortisol levels. With chronic insomnia there is still a debate as to which comes first. Does loss of sleep activate the HPA axis and lead to Cortisol production or does cortisol production initiate sleep loss in the first place.

Whichever the case the key is reduce cortisol levels by winding down before you go to bed. Having a relaxing bedtime routine is a great start including reading a book, a warm bath, doing a hobby, and writing a to-do list will help. Meditation techniques to destress the mind, deep breathing, mindfulness exercises and relaxation techniques such as Post Muscle Relaxation can help by increasing activity in your parasympathetic nervous system and reduce your sympathetic, fight or flight drive. This then reduces cortisol levels. Another route would be to exercise regularly. Exercise both improves sleep quality and reduces stress, lowering cortisol levels over time. Socialising and maintaining healthy relationships with friends and family and even laughter which releases endorphins (which suppress cortisol) can all help too. Another proven solution for Insomnia caused by stress is to use Cognitive Behavioural Therapy for Insomnia (CBTI).

Check your medications

Medications which can interfere with sleep include those to reduce blood pressure and hypertension such as betablockers (which reduce Melatonin secretion), and diuretics which can increase night-time urination. Antidepressants can also cause sleep problems.

Menopause and perimenopause

There can be huge changes in sleep quality during both menopause and perimenopause both due to hot flashes (caused by decreased oestrogen) and getting to and depth of sleep (caused by low progesterone). Progesterone is responsible for helping release a neurotransmitter called GABA. GABA helps us sleep and relax.

Reduced blood sugar levels

For a small group of Sleep Maintenance Insomnia sufferers, it is possible that low blood sugar levels could lead to sleep disturbances. This would be true for someone who needs frequent smaller meals and snacks throughout the day. Eating a snack close to bedtime could help. Typically having a small snack protein (or healthy fat) which takes longer to digest would be the best food as it releases blood sugar more evenly too. Whilst it's recommended that you stop eating 2 to 3 hours before bed you could have this small snack about an hour before bedtime. Poultry and cheese, chia or pumpkin seeds would be great as they also release tryptophan, an essential amino acid, which is a building block of Melatonin (our sleep hormone)

Vitamin and mineral deficiency

Of all the vitamins which have been linked to broken sleep, Vitamin D stands out as the main contender. Vitamin D deficiency is associated with both shorter sleep duration and nocturnal awakenings. One piece of research even showed that low levels of Vitamin D can double the risk of sleeping less than 4 hours. Apart from getting more sunlight and eating more fatty fish, egg yolks, meat and fortified cereals can boost Vitamin D levels. Also, it is recommended that that we should be supplementing Vitamin D in the darker winter month. Adults should be taking 10 micrograms or 400 IU per day.

With regards to mineral deficiency and poor sleep, one mineral to consider above all others is Magnesium. It is thought that around 25% of us could have too little Magnesium as it's involved in so many of the processes in the body. With regards to sleep Magnesium is a key mineral as it's involved in muscle relaxation and Melatonin production. Top sources of Magnesium include nuts, bananas, green leafy vegetables, fish. If you are thinking of using a Magnesium supplement the Glycinate or Threonate forms are best. Take them 45 minutes before your sleep time for maximum effect on sleep.

Sleep apnoea

Sleep Apnoea is something to consider especially if you have frequent night-time awakenings. Sleep apnoea is a serious medical condition which involves your breathing stopping and starting whilst your sleep. The most common type of Sleep Apnoea is called Obstructive Sleep Apnoea (OSA). Here. during sleep your throat and tongue muscles become more relax and cause the airway to become blocked. Risk factors include obesity (which

narrows the airways) and older age. Symptoms include making gasping or choking noises whilst you sleep and feeling very tired during the day. Sleep Apnoea is often accompanied by (loud) snoring, which is regarded as a risk factor. Sleep Apnoea tends to be worst during Rapid Eye Movement (REM) sleep which is the Stage of sleep in which we dream most. This is because during REM sleep our major muscle groups are immobilized to keep us from thrashing around and hurting ourselves as we dream) and our muscle tone is weakest. This means there is more chance for our airflow to decrease. As REM sleep is concentrated in the second half of the night, Sleep Apnoea can therefore wake us in the early morning (around 3am/4am). In fact, sufferers only get Sleep Apnoea symptoms during REM sleep. If you think you could have Sleep Apnoea it's important to talk to your health care provider and have a screening for the condition. Sleep Apnoea is treatable though, and if diagnosed can include a CPAP machine.

Stressful dreams and nightmares

When we dream at night, we are processing our emotions form the day. With stressful dreams or nightmares, it is possible that we could wake up earlier than we would like to and then not get back to sleep. Here it is best to check in with yourself with regards to your overall stress levels and focus on creating a relaxing bedtime routine as discussed earlier. If you have lots of work on your mind writing down a to do list early in the evening is a useful tool too. Or you could even keep a notebook by your bedside if you wake up in the night with thoughts you are afraid, you'd forget. Then quickly jot them down (in dim light) and go back to sleep.

Depression

Sleep problems and depression often go together. Around 75% of depressed patients report significant levels of sleep disturbance, which include waking early with short sleep duration. Also, those with insomnia have a higher risk of developing depression and anxiety than those who get a healthy amount of sleep. It's worth checking this too if you are constantly waking in the night.

Contact your GP

If you have made all the lifestyle and environmental changes you can and you are still waking up earlier than usual, you should contact your GP. They can then determine whether what the problem is such as an underlying health issue, mental health problem or an underlying sleep disorder. Talk through any issues of stress or anxiety you.