A Mediaplanet campaign focused on

Sleep Health

Finding the right mattress for you is so important. In the world of mattresses, what might be suitable for someone else might not be suitable for you.

Jessica Ennis-Hill
Brand Ambassador, Sleepeezee

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Artificial intelligence in sleep medicine

Artificial intelligence (AI) consists of computer programs that perform decision-making and pattern-recognition tasks previously done by humans. It is changing the field of sleep medicine.

WRITTEN BY
Dr Matteo Cesari
Sleep Disorders Unit, Department of Neurology, Medical University of Innsbruck in Austria, Contributing partner to World Sleep Society

Currently, sleep data recorded in sleep labs with polysomnography sleep studies (the gold standard sleep examination consisting of the simultaneous monitoring of brain waves, eye movement, muscular activity and cardiorespiratory functions) are visually inspected and sleep stages and events are manually scored by experts.

This is a time-consuming process which is also prone to inter-rater variability (when two human scorers do not agree on the identification of a sleep stage or event). Many studies have shown that AI algorithms can perform these tasks faster than humans and sometimes more precisely.

As an example, an AI algorithm has been shown to identify with very high precision sleep stages, sleep apnoeas and periodic limb movement during sleep on over 15,000 polysomnography recordings.

Other AI algorithms have been developed to automatically identify sleep disorders. In a study, it has been shown that patients suffering from REM sleep behavior disorder (abnormal muscle activity and dream enactment during REM sleep, which is the early stage of neurodegenerative diseases like Parkinson's) could be automatically identified from polysomnography data with an AI algorithm.

Common types of AI

Recent years have shown an increasing number of sensors and technologies to monitor sleep in home environments, in addition to the AI currently being developed for evaluating data and verifying sleep disorders from polysomnography.

Such technologies generally give information on sleep patterns and sleep quality. Several inform on the amount of time spent sleeping and the percentages of deep and light sleep.

However, many of these wearables have not been verified for clinical use. Therefore, attention should be paid in interpreting the outcomes of these AI technologies. A consultation with a sleep expert is always necessary in case of sleep issues.

> *A consultation with a sleep expert is always necessary in case of sleep issues.*

Implementation of AI in clinical practice

Despite the current advancement of AI, AI algorithms are seldom employed in clinical practice. This is because the field is still growing and there is lack of regulatory frameworks on how to implement and use these algorithms. In the coming years, there is the need to have standard procedures in order to validate AI algorithms for clinical use. AI algorithms for clinical practice should also be transparent on how the data is processed and how the outputs are created.

The goal for the future is to have the best synergy between machines and human. Collaboration between clinicians, researchers and manufacturers is the basis to construct the future of AI in sleep medicine.

Citations available on **healthiersleepmag.com**

Matteo Cesari, PhD has been working in the field of sleep research since 2016. Dr Cesari is currently at the Sleep Disorders Unit, Department of Neurology, Medical University of Innsbruck in Austria, where he is part of the sleep research team led by Professor Birgit Högl.

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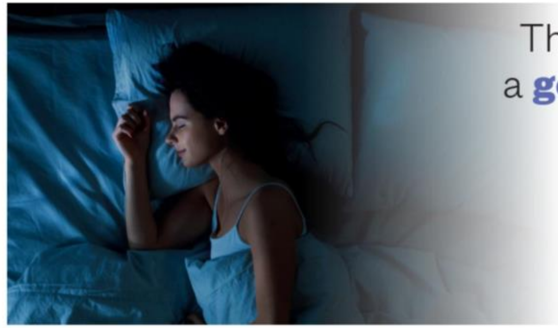

The intrinsic link between a good night's sleep and mental wellbeing

Paid for by **Nytol**

Sleep has a positive impact on our lives in all sorts of ways. Spring is a great time to make simple changes to improve our sleeping patterns and increase our sense of wellbeing.

INTERVIEW WITH
Anant Naik
Spokesperson, Mental Health UK

WRITTEN BY
Tony Greenway

Want to feel more alert, refreshed and ready to take on the challenges of the day? Then get a good night's sleep. That's because getting the right amount of shut-eye for your needs can boost your daytime performance, mental wellbeing and emotional regulation.[1] Quality sleep has a range of physical health benefits too, including the promotion of weight regulation, heart health, immune functioning and even vaccine response.[2]

Link between sleep and wellbeing

So, if you're looking to increase your mental and physical wellbeing, then improving your sleep is a great place to start. "Nearly two years on from the first COVID lockdown, and coming out of a long winter, it's understandable that some people are considering ways to improve their lives," says a spokesperson from sleep brand, Nytol. "Sleep is so fundamental to our wellbeing that focusing on the amount of sleep we obtain, our sleep quality and timing makes good sense."[3]

Changing sleep habits and setting a routine

Small changes can make a big difference to the quality of your sleep. "Improving our sleep is often seen as something that's hard to achieve," says Anant Naik, a spokesperson at the charity Mental Health UK, which is partnering with Nytol to campaign for more awareness of the interdependent connection between sleep and mental wellbeing. "But the good news is that there are lots of simple habits you can start building to improve your sleeping patterns and sense of wellbeing," adds Naik. Some sleep habits to change include the time you go to bed, your sleeping environment[12] and your lifestyle choices, such as reducing screen time before bed[13], avoiding caffeine drinks late at night, or writing down worries and problems before you get into bed.[12]

Plus, set yourself a routine and stick to it. Ensuring a consistent sleep-wake pattern can help our bodies prepare to be asleep — and awake — making it easier to nod off at night.[6] While you might want to increase the amount of sleep, don't try to get more than you need, because the quality of your sleep is likely to suffer.[7] Guidelines indicate that most adults should aim for between seven and nine hours of sleep a night.[8]

That said, if you're having trouble sleeping and are concerned about it, see your GP to rule out chronic sleep conditions.[5]

A season for new beginnings

With Spring being the season that is traditionally associated with new beginnings but also with longer days and shorter nights upon us, what better time to implement some new habits to help you drift off to dreamland.[4]

Another big benefit of spring is that it makes outdoor exercise more appealing. That's great because regular exercise can help maintain a consistent circadian rhythm which supports a good night's sleep — although make sure you avoid vigorous exercise late at night which can make falling sleep difficult.[9] Finally, while the ambient temperature increases during spring, remember that we typically sleep best in cool environments (16-19 °C is sometimes recommended as the ideal temperature for adults).[10]

"Given the importance of sleep for so many aspects of our health, wellbeing and functioning during the day, it is essential that this third of our lives is not neglected," says the Nytol spokesperson.[11]

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Nytol One-A-Night Tablets contain diphenhydramine. An aid to the relief of temporary sleep disturbances in adults. Nytol Herbal Simply Sleep One-A-Night Tablets contain valerian root extract. Traditional herbal medicinal product for use in the temporary relief of sleep disturbances exclusively based on long-standing use as traditional remedies. Always read the leaflet. UK/2022-103

Find out more at **nytol.co.uk/nytol-range**

Healthy **sleep habits** to last a lifetime

Do you suffer with sleepless nights? Do you toss and turn, or find yourself waking early? You are not alone; around 40% of the adult population in the UK struggle to sleep.

WRITTEN BY
Lisa Artis
Deputy CEO,
The Sleep Charity

Sleep fulfils a vital role in keeping us healthy and happy. However, lack of sleep is a global problem and people turn to lots of different products or therapies to help them get that elusive good night's kip.

There are some key sleep hygiene principles that people should follow for getting to sleep – and staying asleep.

Good, healthy habits pay off

Take small, manageable steps to implement lifestyle changes, which should positively impact your sleep. First, make sure your bedroom is conducive for sleep. A restful bedroom environment should ideally be cool, quiet, dark and free from distractions – that means removing computers, tablets, mobile phones and even TVs. Comfort – whether that's the bed or the bedding – also plays a large part in optimising sleep.

Next, factor in a proper bedtime routine – aiming to wind down at least an hour before bed. Do something that you find enjoyable, i.e. listening to soothing music or sounds, reading or meditating.

Don't try to sleep – it needs to find you. Keep your eyes open and gently resist sleep or try to adopt a carefree, accepting attitude to wakefulness. Avoid clock watching, if you can't get to sleep within 30 minutes from switching the light off then get up and go to another room and do something relaxing.

> ***A restful bedroom environment should ideally be cool, quiet, dark and free from distractions.***

Understanding the significance of sleep

How we sleep affects how we feel about areas of our life – whether that's our mood, our relationships and even our work. Start by having a good morning routine. Try to wake up at a similar time and avoid lengthy lie-ins to strengthen the body clock. Where possible, expose yourself to natural light in the morning to suppress melatonin and boost alertness.

Consider what you do during the day that may impact your sleep. For instance, if you are sensitive to caffeine avoid it eight hours before bed so it doesn't interfere with getting off to sleep. Exercise is great for sleep and mental health but try to do it earlier in the day rather than before bedtime.

For anyone who has been suffering with long-term insomnia, sleep strategies will not be effective without further intervention like cognitive behavioural therapy (CBT) for insomnia.

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> *Sleep is all about resting and rejuvenating the mind and body. Whether you are training for a big race or taking care of your family, sleep is crucial to restore calm and rest.*
> ***~Jessica Ennis-Hill,*** *Brand Ambassador, Sleepeezee*

The **importance of sleep** and why your mattress matters

Getting a good night's sleep has never been more important. With the continuing disruption of the pandemic, this year calls for an extension of self-care and most importantly, getting enough sleep.

WRITTEN BY
Steve Warren
Managing Director,
Sleepeezee

On average, most people need around eight hours of good quality sleep to function properly. Getting a good night's sleep can benefit us in a plethora of ways, improving both our mental and physical wellbeing.

Prioritising sleep health

The right amount of sleep allows the mind and body to wake up feeling revitalised, calm and focused. Our brand ambassador and Olympic champion, Dame Jessica Ennis-Hill says: "For me, sleep is all about resting and rejuvenating the mind and body. Whether you are training for a big race or taking care of your family, sleep is crucial to restore calm and rest. Getting enough sleep has always been important for me to maintain good physical and mental health."

We understand that prioritising sleep is important to everyone. Getting the right amount of sleep can make or break your day and that above all this, it is your mattress that really matters.

> ***Finding the right mattress for you is so important. In the world of mattresses, what might be suitable for someone else might not be suitable for you.***

Improving quality of sleep

Alongside efforts to increase the number of hours we sleep for or reduce caffeinated drinks in a bid to sleep better, something just as important to consider is checking your mattress. They need all the love they can get and are crucial to enjoying a satisfying sleep. Signs such as restless sleep, back and neck pain and allergies could indicate it's time to check your mattress.

Finding the right mattress can improve the quality of sleep, influencing everything from energy levels and health to your overall mood. At Sleepeezee, we offer a wide range of mattresses with a variety of fillings and technologies to suit all needs. From pocket sprung or graphite memory foam to cooling gel technology or natural fillings.

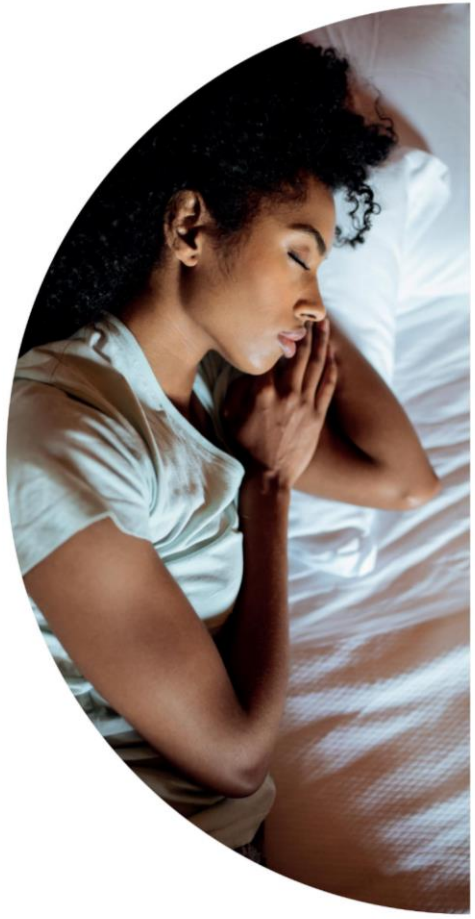
Finding the right mattress

Investing in a new mattress could help solve sleep issues. Jessica Ennis-Hill says: "Finding the right mattress for you is so important. In the world of mattresses, what might be suitable for someone else might not be suitable for you. With Sleepeezee, their broad range of mattresses and products allows you to tailor to your needs and get the best sleep possible."

We have been making and manufacturing high-quality mattresses and bedding products in the UK since 1924. Recognised by our Royal Warrant, we are dedicated to combining innovative practices with market-leading mattress designs. Alongside our products comes industry-leading sustainable practices. From reducing our carbon footprint to responsibly sourcing materials and investing in their regeneration, we are committed to making a difference to our global impact whilst providing our customers with sleep solutions in line with their needs.

Postural advice may help to **improve snoring**

In densely populated urban areas loud snoring may easily cause social tension, often being one of the reasons why couples sleep in different bedrooms.



Snoring is a very common condition and can signal other sleep disorders such as sleep apnoea, but frequently it is harmless to the snorer.

WRITTEN BY
Professor Joerg Steier FRCP, PhD
Professor of Respiratory and Sleep Medicine Guy's & St Thomas' NHS Foundation Trust, King's College London, British Sleep Society

Everyone has heard about snoring, either by being told that they are a snorer or by having witnessed snoring within the family, amongst friends or even from the neighbour's flat. Snoring is extremely common, almost half of the middle-aged male subjects in the UK snore to some extent. In women, snoring is slightly less frequent, but can still be highly prevalent (e.g., during pregnancy or in the elderly).

Causes of snoring

When we fall asleep the muscles that keep our upper airway in shape while we are awake start to relax and the airway starts to narrow. Furthermore, posture is relevant in that lying flat on the back in bed makes gravity pull out the tongue backwards leading to a further narrowing of the airway. In this state the walls of the upper airway begin to flutter when we breathe. This flutter causes the sound that we recognise as snoring. Factors that make it more likely that we snore include:

- Posture - sleeping on the back is worse than sleeping on the side or on the front.
- A large neck circumference - weight loss can significantly improve snoring.
- Lifestyle with alcohol or smoking, which can cause more relaxed muscles while asleep and airway inflammation.
- Age - soft tissue elasticity deteriorates with age.
- A blocked nose causes us to breathe through the open mouth.
- Other anatomical factors, such as enlarged tonsils, adenoids, polyps or general narrowing of the airway.

Impacts of snoring

Snoring can be relatively harmless in that it may not cause direct physical harm to the snorer. However, in densely populated urban areas loud snoring may easily cause social tension, often being one of the reasons why couples sleep in different bedrooms. Substantial snoring can also cause microtrauma of the upper airway walls, causing injury, inflammation and leading to some scarring and soft tissue thickening in the long term.

It is important to recognise that snoring may be cardinal sign for other conditions, such as obstructive sleep apnoea (OSA).

Furthermore, it is important to recognise that snoring may be cardinal sign for other conditions, such as obstructive sleep apnoea (OSA). OSA may be associated with daytime symptoms (like excessive sleepiness due to fragmented sleep) and with long-term cardiovascular risks. If snorers experience daytime symptoms or family members have observed laboured breathing or breath-holding at night then sleep apnoea should be ruled out by visiting your GP.

It is important to ask the question: Is it simply snoring or not? Both cases can be helped substantially.

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Why embracing a bedtime routine can **aid a restful sleep**

Sleep is an essential function that allows our body and mind to recharge, yet one in three of us suffer from sleeplessness. How can we relax and get a better night's sleep?

INTERVIEW WITH
Dr Nerina Ramlakhan
Neurophysiologist, Sleep Expert, Author of Finding Inner Safety

WRITTEN BY
Tony Greenway

Human beings are programmed to sleep well. After all, sleep is ingrained in our DNA and we spend a third of our lives doing it, so we should be good at it.

Yet approximately 23 million adults in the UK are struggling to sleep because our world has become more fast-paced, says neurophysiologist, sleep expert and author, Dr Nerina Ramlakhan. "The level of demand created by technology means that everything is moving too quickly," she explains. That's a big issue when sleep is so important for our physical and mental health.

Dedicating time to wind down

What we have to do is settle (or "de-excite") our nervous systems, so that when we go to bed our bodies are ready to sleep. "Having a good routine before we go to bed is particularly important," says Dr Ramlakhan. "That could involve tucking the children in, going through a skincare routine, spritzing your pillow with pillow mist... all of these things send a message to the subconscious that it's time to prepare for rest."

Fragrance promotes wellbeing, especially lavender and chamomile which are known for being soothing.

Establishing a night-time routine

Clare Robertson is Brand Manager at Feather & Down, creating award-winning products to help aid sleep. She believes that calming fragrances can be a powerful tool for people who have trouble sleeping. "Fragrance promotes wellbeing, especially lavender and chamomile which are known for being soothing," she says. "When you spritz your pillow every night as part of your bedtime routine, you associate that smell with going to sleep."

Dr Ramlakhan agrees, "We respond to sight, sound and smell so if our bedroom looks soothing, smells soothing and sounds soothing, it feels soothing. That sends a 'wind down' message to our nervous system and our body starts to relax." This is called 'neuroception' - the way our subconscious senses that our environment is safe.

"Sleep restores us physically, mentally, and emotionally," she says. "If we wind down properly before bed, we are more likely to have a good, deep sleep and wake up feeling mentally sharp."

INTERVIEW WITH
Clare Robertson,
Brand Manager of award-winning sleep dedicated well-being brand, Feather & Down

Shop Feather & Down at Superdrug, Boots, Waitrose, Morrisons, Tesco, Sainsbury's, Feelunique, Amazon and **Featheranddown.com**

Sleep is not a nice to have, it is **a need to have**

When we strip things down and explore the foundations of our needs as human beings, what do we find? We discover that sleep is one of the most important ingredients that give us the capability to live our lives.

WRITTEN BY
Colin A. Espie PhD DSc
Professor of Sleep Medicine, Sir Jules Thorn Sleep and Circadian Neuroscience Institute, University of Oxford

WRITTEN BY
Russell G. Foster CBE, FRS
Professor of Circadian Neuroscience, University of Oxford

Sleep plays a central role in so many things. These include the renewal and repair of our body tissues, the workings of our metabolism, our physical growth and development, our ability to fight infection, our learning skills and memory and our ability to regulate our emotions. Sleep touches absolutely everything.

The quality of our daytime alertness, energy, productivity and mood are all heavily dependent upon sleep. Good quality sleep is essential for mental health and wellbeing at every age and stage in life. Research shows that when insomnia is effectively treated people are more likely to see their depression lift.

> ***Our circadian rhythms help time our sleep and keep the rest of our biology in synchrony with the complex demands imposed by the Earth's 24-hour rotation and the light/dark cycle.***

Sleep patterns are different for everyone

Getting the right amount of sleep is important. Although the average adult requires 7-8 hours, there is variation from person to person. Some people need less, but others need more. These are just normal individual differences and we need to experiment to find the right fit for us. Likewise, when we get our best sleep varies from person to person.

Some people are morning people and others are evening people. You have probably heard about 'larks' and 'owls'. These differences depend upon the genetics of our body clock or 'circadian rhythms', our age and when we see light.

Importance of circadian rhythms

Our circadian rhythms help time our sleep and keep the rest of our biology in synchrony with the complex demands imposed by the Earth's 24-hour rotation and the light/dark cycle. Circadian rhythms allow our bodies to deliver the right materials, in the correct concentration, to the right parts of the body at the correct time of day.

All the processes underpinning life must be synchronised to the rotation of the Earth and to each other. Light regulation of the clock allows this to happen. Without this daily re-setting, circadian and sleep systems fail. Then we simply don't function well on a day-to-day basis and, as a result, we become more vulnerable to develop mental and physical health disorders.

How lack of sleep can become a **serious problem**

Researchers are developing innovative new ways to tackle sleep disorders.

INTERVIEW WITH
Professor Jason Ellis
Professor of Sleep Science, Northumbria University

PAGE WRITTEN BY
Mark Nicholls

Lack of sleep can have a major impact on everyday life, potentially leading to depression and anxiety. Insomnia, the most prevalent sleep disorder, affects up to 15% of the population, though as the COVID pandemic struck there were suggestions that some 30% of the population were having sleep-related issues with worries about the virus, jobs and finance.

It also affects people in different ways. Sleep expert Professor Jason Ellis explains: "Two people can have the same experiences but one will develop a sleep disorder, the other will not."

Sleep disorders

His research as a Professor of Sleep Science at Northumbria University in Newcastle looks at insomnia, sleep duration and quality, and developing preventative sleep medicine, where "genetic, biological, behavioural and psychological factors" are taken into account.

In addition to the general population, the centre studies sleeplessness in chronically ill and prison populations, and other circumstances where people have limited control over their environment. Insomnia, which covers difficulty getting to sleep, staying asleep, or awaking too early, becomes more serious when it goes on beyond two weeks.

> ***We are not just trying to prevent insomnia, we are trying to prevent the added complications that come from having insomnia such as depressive disorders and physical health conditions.***

Early intervention

Professor Ellis, who is Director of the Northumbria Centre for Sleep Research, says: "A disruptive few nights for about two weeks is perfectly normal, that is a stress response like an exam coming up, but longer than two weeks is a critical vulnerability period for developing a sleep disorder and that is when we intervene.

"We are not just trying to prevent insomnia, we are trying to prevent the added complications that come from having insomnia such as depressive disorders and physical health conditions."

Interventions that avoid using medication to manage sleep include talking therapies to discuss behaviours, such as stress, bereavement and psychological worries that sustain the insomnia, while other approaches look at how nutritional intake can influence sleep patterns. A new alternative therapy is lucid dreaming, which teaches people to be aware that they are dreaming and how to manage the dream.

Sufficient, comfortable and safe sleep **is a human right**

Human sleep patterns vary between different communities across the globe. Temperature, safety fears, industrialisation and electric light can influence the quality and duration of sleep, which in turns influences our physical and mental health.

INTERVIEW WITH
Professor Malcolm von Schantz
Professor of Chronobiology, Northumbria University

As a biologist, physiologist and Professor of Chronobiology, Malcolm von Schantz from Northumbria University in Newcastle, has focussed his research on sleep quality, timing and duration in various environments for the past decade.

Sleep is a human need

To have somewhere "safe, secure and comfortable to sleep," he says, is a physiological human need, in the same way that no-one should go hungry or thirsty.

"There are parts of the world where people have to sleep in crowded conditions, in uncomfortable temperatures and may not have a bed. They may not feel safe at night and are aware of violence happening around them."

> ***We are not going to stop functioning, but sleep deprivation comes at a price.***

Clear health link

There is a clear link between sleep and health, with most people on average needing seven to eight hours a night. Many people get less than that because of a variety of factors.

"As a species, we have the flexibility to function on less than optimum sleep," says Professor von Schantz. "We are not going to stop functioning, but sleep deprivation comes at a price." It affects cognitive function, the ability to work, function emotionally and can be associated with accidents.

Sleep deprivation also has health risks, particularly for conditions such as diabetes, cardiovascular problems and there are consequences for mental health too, he adds.

Natural habitats

His research looking at the sleep patterns in different locations has included studies in Africa and Brazil. His group has observed how sleep habits are affected by the availability of artificial light but also by social and cultural factors. This includes a study in Mozambique comparing sleep in two villages, one of which had recently acquired electricity.

"Sleep duration did not decrease, but the timings of sleep changed in the village with electricity and artificial light," says Professor von Schantz, who will address the World Sleep Symposium in mid-March in Rome on wellbeing and sleep in a session related to the UN Sustainable Development Goals.

Find out more at **northumbria.ac.uk/sleep**

Treating **sleep apnoea and snoring** can improve your **mental health**

Sleep apnoea is a serious medical condition and, if left untreated, can lead to not only physical health issues, but also raises the risk of developing mental health disorders.

WRITTEN BY
Kath Hope
Founder & CEO,
Hope2Sleep Charity

The issue at hand today is that most people who suffer from sleep deprivation are not aware that they are suffering from sleep apnoea at all. In fact, of the 8 million sleep apnoea sufferers in the UK, it is said that 85% go undiagnosed and, therefore, untreated.

Awareness of the signs of sleep apnoea

Kath Hope, Founder & CEO of the Hope2Sleep charity discusses her own experience: "When my own severe sleep apnoea diagnosis showed I stopped breathing 30+ times per hour, my consultant informed me I was only getting the equivalent of four hours sleep out of the eight I thought I was having.

"I suffered for years with anxiety and panic attacks, which vastly improved once my continuous positive airway pressure (CPAP) therapy started. Each time I collapsed with 'nervous exhaustion', my GP always asked if I was sleeping well and I assured him I was, although little did I know what was really happening."

Link between mental health and sleep apnoea

Awareness of the link between mental health and sleep apnoea is improving. There have been several studies released showing that sleep apnoea raises the risk of anxiety, depression, PTSD and even conditions like schizophrenia and psychosis.

> ***There have been several studies released showing that sleep apnoea raises the risk of anxiety, depression, PTSD .***

Furthermore, some medications required to treat these mental conditions can even make sleep apnoea worse, which is why it's crucial to be checked for sleep apnoea, especially in snorers. Medication should not be changed without discussion with a doctor.

Diagnosis and treatment

In most cases, once sleep apnoea is diagnosed and treated, patients can find the symptoms of mental and/or emotional problems improve and in some they even go away entirely.

If you snore or are aware of stoppages in breathing during sleep, please investigate the possibility of undiagnosed sleep apnoea. Even snoring without sleep apnoea can cause interrupted and unrefreshed sleep. It could be the missing piece of the jigsaw puzzle leading to improved mental, emotional and physical health.

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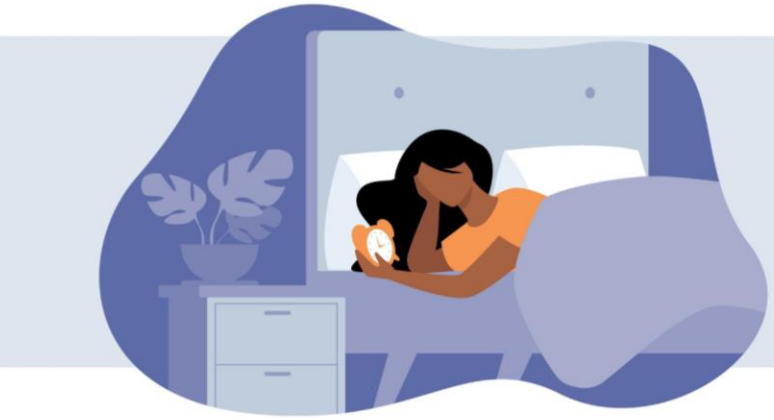

> *This treatment can be offered quickly, easily and also helps shorten waiting times and pressure on the NHS, leaving ENT specialists to focus on the more severe cases.*

Helping patients sleep better at night with **daytime therapy**

New technologies are helping patients tackle a sleep disorder and avoid daytime tiredness.

INTERVIEW WITH
Dr Pavol Surda
Consultant ENT Surgeon,
Signifier Medical

WRITTEN BY
Mark Nicholls

People with obstructive sleep apnoea (OSA), a common sleeping condition, can become caught in a 'vicious cycle' that sees them face increasing challenges as they endeavour to tackle their illness.

Latest research indicates that age and lifestyle factors contribute to people developing the disorder where sufferers face night-time breathing problems and choking episodes, leaving them tired during the day.

Ear, nose and throat (ENT) consultant Pavol Surda says that traditionally, patients are often encouraged to lose weight to ease their condition. However, because of their interrupted sleep, sufferers lack the energy to exercise and also tend to eat more.

Identifying choking episodes

Dr Surda is an ENT consultant at Guy's and St Thomas' NHS Foundation Trust in London with a focus on rhinology (the nose and sinuses), focussing on snoring and sleep in particular.

He explains that OSA is generally defined as a choking episode that lasts for 10 seconds, with more than five episodes per hour.

"We diagnose that by pulse oximetry, where we measure changes of oxygenation and heart rate," he says. "Based on that, we can measure whether they are choking episodes.

"There is a certain subset of patients that are more prone to it and from the studies we know they are mainly older, ages 30-69, and/or overweight."

Another contributing factor is a blocked nose, forcing people to breathe through their mouth and doubling the likelihood of snoring or OSA.

Stuck in a vicious cycle

Dr Surda says mild and moderate OSA is under-diagnosed, but a sign can be drowsiness during the day.

"It affects concentration, and performance at work and school," he says "Students with OSA are more likely to have worse marks than their counterparts. A worst-case scenario is that people are more likely to have a road traffic accident, for example.

"Longer-term, there will be organ changes in the lungs and the heart because it has to pump more blood into the lungs.

"OSA is a vicious cycle; you are tired, are less likely to go to the gym and will gain weight, eat more and sleep less. People then exercise even less and the OSA gets worse and worse."

Finding effective therapy options

An effective therapy for patients with mild OSA is NMES (neuromuscular electrical stimulation), particularly for patients with a body mass index (BMI) of less than 35.

Dr Surda explains: "We know one of the main reasons for OSA and snoring is that there is reduced tone of muscles in the tongue."

When patients sleep on their back, the tongue tends to fall back which can collapse the airway and create the choking episodes.

The NMES device is inserted into the mouth for 20 minutes during the day to stimulate muscles and increases the tone of the tongue.

"Essentially, that means the tongue will be less likely to fall back and cause obstruction," he adds. "This is ideal first line treatment and we are treating the root of the problem, not just the cause."

Reducing NHS pressures

He says there are studies showing good evidence that this non-invasive technology is effective and can help avoid more invasive therapies, which can be challenging for some patients.

Dr Surda says this treatment can be offered quickly, easily and also helps shorten waiting times and pressure on the NHS, leaving ENT specialists to focus on the more severe cases.

He says the success rate is more than 80% for milder OSA patients. One product he points to is eXciteOSA from Signifier Medical Technologies: "It is user-friendly, patients use it 20 minutes every day for an initial two weeks and then afterwards use it only once a week just to keep the tone of the tongue increased."

OSA is a serious condition that can have far-reaching consequences, meaning that early intervention is crucial in breaking the "vicious cycle" patients may find themselves.

Find out more at **nmesinosa.co.uk**

How we sleep affects how we feel about areas of our life – whether that's our mood, our relationships and even our work.

-Lisa Artis, *Deputy CEO, The Sleep Charity*