Sleep Matters.
So Does Your Mattress.

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While the body sleeps, it heals. Injuries and illnesses improve when the body gets adequate sleep; so do chronic conditions such as arthritis and fibromyalgia. Research shows that most healing takes place during stage 2 and stage 3 sleep, when sleep is deepest, without dreams.

During stage 3 sleep, healing hormones such as human growth hormone are released, and the production of stress hormones such as cortisol is inhibited. Tissue repair happens during this stage. Blood pressure drops and blood flows more to the muscles. Inflammation is suppressed so that healing can happen. Stage 3 deep sleep is when muscles and joints are at their most relaxed.

Adequate, high-quality sleep is also crucial for brain health and keeping your memory sharp. Memories are consolidated during sleep as the information we learn during the day is transferred from short-term memory to long-term memory. The connections between brain cells that help you remember things are strengthened. Long-term memories are formed in the brain during stage 3 deep sleep, another example of how the quality of sleep is as important as the quantity.

Another cause of poor memory and bad decision-making from lack of sleep is high levels of the stress hormone cortisol. Elevated levels of cortisol have a bad effect on the hippocampus, a structure in the brain that is closely tied to consolidating information into long-term memory.

When you get adequate, high-quality sleep, your cortisol levels drop during the night, giving your hippocampus a chance to do its job of memory consolidation. When you don't sleep well, cortisol levels remain higher than normal. The result is forgetfulness, difficulty processing new information, and trouble concentrating and staying focused.

Lack of good sleep is associated with Alzheimer's disease and some other forms of age-related dementia. During sleep, the brain's specialized lymphatic system flushes out metabolic waste products that accumulate in the fluid between brain cells. That includes beta-amyloid and tau, the proteins that form the characteristic brain plaques and tangles of Alzheimer's disease.

We know from earlier studies that acute sleep deprivation elevates beta-amyloid levels in the brain. Recent research has shown that even one night of poor-quality sleep is enough to cause an immediate rise in beta-amyloid levels; a week of poor-quality sleep raises both beta-amyloid and tau. The quality of sleep here is more important than quantity. Reaching stage 3 deep sleep is crucial for letting the brain flush out the waste.

Sleep Deep

About 20 percent of sleep time is spent in stage 3 sleep, mostly during the first half of the night. A variety of factors can prevent you from reaching stage 3 or from staying in it long enough for the restorative effects to be felt. Anxiety, pain, noise, light, bed partners, and being too warm or too cold can interfere with the normal sleep cycle.

Your Mattress Matters

Just as important as sleep surroundings is the mattress on which you sleep. A proper mattress can help you fall asleep faster, stay asleep longer, and attain stage 3 sleep on schedule. The right mattress provides a moderately firm, comfortable surface that supports the body's natural curves without pressure points and leads to a healthier sleep position. It's not only comfortable, but it also creates a therapeutic sleep environment by encouraging deeper sleep with fewer awakenings.
The best material for a supportive mattress is high-density, open-cell memory foam. Because memory foam mattresses contour to the body, they don't cause pressure points. Instead, they support the body and align the spine correctly by distributing the body weight evenly. Modern memory foam responds to the pressure signature of the body, and then returns quickly to its original shape.

Memory foam mattresses are particularly helpful for patients with injuries, arthritic joints, back pain, neck pain, and conditions such as fibromyalgia that cause chronic pain and loss of sleep. These patients may benefit from a doctor-recommended infrared-enhanced mattress. By embedding thermo-reactive minerals into polyester fibers used in the mattress, the infrared electromagnetic energy given off by the body during sleep is captured and reflected back. The recycled far infrared (FIR) wavelengths penetrate the cells under the skin, triggering the capillaries to open and bring more blood flow and oxygen to the cells. Studies show that on average, recycling infrared energy during sleep increases blood flow by about 8 percent and increases the duration and quality of sleep.

Unintended Chemical Exposure Matters

Since 2007, federal law has required that all mattresses must be treated with flame-retardant chemicals as a safety measure. Most of the flame retardants used in modern mattresses contain chemicals such as decabromodiphenyl oxide (deca) that are associated with health risks, including kidney and nerve damage. A limited number of memory foam mattress brands are available without toxic flame retardants if a doctor provides a letter of medical necessity. Particularly for non-smoking patients with chemical sensitivities, a flame-retardant-free mattress can improve sleep and overall health.
For everyone, a good night's sleep leads to a healthier you.