FEATURES

The Secret to Sound Regenerative Sleep

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The regenerative powers of the human body are well known, but nothing puts this into perspective like the fact that, on an average, 98 percent of the atoms inside the body are replaced each year. A significant portion of this regeneration involves the repair of wear and tear brought upon by physical activities.

The key to good health, as you can see, is through efficient repair, and almost all of the repair process takes place during rest. Sleep, therefore, is one of the most fundamental pillars of health, even surpassing exercise and nutrition in the totem pole of wellness. Even though exercise stimulates healing process and food provides fuel for the same, it is during sleep that most of the repair actually takes place.

That's pretty much why, the lack of sleep has far reaching negative effects on your health; going beyond the grogginess and haze that one experiences due to insufficient sleep. In fact, getting less than adequate sleep not only makes you unwell, but missing sleep altogether for days on end can even kill you. However, getting your recommended dosage of 7 to 8 hours of sleep a night isn't always the veritable silver bullet to great health. The quality of sleep is a lot more important than the sheer quantity of it. Sleep, you see, isn't that all that straightforward.

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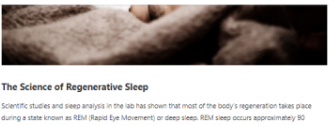
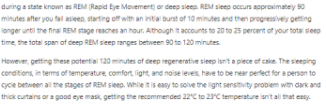


The Science of Regenerative Sleep

Scientific studies and sleep analysis in the lab has shown that most of the body's regeneration takes place during a state known as REM (Rapid Eye Movement) or deep sleep. REM sleep occurs approximately 90 minutes after you fall asleep, starting off with an initial burst of 10 minutes and then progressively getting longer until the final REM stage reaches an hour. Although it accounts to 20 to 25 percent of your total sleep time, the total span of deep REM sleep ranges between 90 to 120 minutes.

However, getting these potential 120 minutes of deep regenerative sleep isn't a piece of cake. The sleeping conditions, in terms of temperature, comfort, light, and noise levels, have to be near perfect for a person to cycle between all the stages of REM sleep. While it is easy to solve the light sensitivity problem with dark and thick curtains or a good eye mask, getting the recommended 22°C to 23°C temperature isn't all that easy. That's because noise and temperature tend to be mutually exclusive parameters in the bedroom setting.



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Catch-22: Cooling Without Raising a Racket

Bringing the room temperature down from ambient temperatures of 28°C to 30°C typical to our climate requires the ceiling fan to be run at the maximum speed. That, as we all know, isn't ideal because that makes the average ceiling fan too noisy for comfort. This is a textbook catch-22 situation, wherein going into regenerative REM sleep requires comfortable room temperature, but turning up the ceiling fan speed to ensure just that makes things too noisy for comfort. What's more, opting for an expensive fan, housing motors with the best noiseless bearings isn't of much help either.

That's primarily because air resistance increases with the cube of the speed. In layman's terms that means the fan blades experience an exponential resistance at higher speeds, which in turn causes significant noise and vibration. While incorporating high-quality bearings in motor housings is far easier from an engineering perspective, making considerable R&D spend to create aerodynamically efficient fan design is a whole different ball game. Thankfully, Orient Electric, which is the leading domestic producer of all sorts of fans and happens to be a part of the $1.6 billion CK Birla Group, has the foresight and wherewithal to do exactly that.

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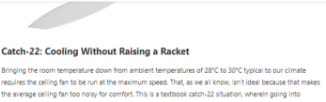

Aerodynamics to the Rescue

Cue the Orient Electric Aeroquiet ceiling fan – India's only fan aerodynamically designed not only to maximise airflow, but also to be whisper quiet even at higher speeds. The Aeroquiet revolutionises ceiling fans by fusing its high-tech electromechanical underpinnings with cutting-edge aerodynamics to achieve the holy trinity of enhanced power, silent operation, and maximum efficiency. It employs a number of neat tricks to achieve whisper quiet operation at higher speeds, some of which involve fundamental design and construction concepts.

While ordinary ceiling fans employ metal blades that sap power efficiency, reduce airflow, and increase operating noise, the blades on the Aeroquiet are fashioned out of tough glass-reinforced ABS plastic compound. This renders the blades lightweight and allows them to spin quicker while drawing less power. The ABS blades are also stiffer than metal blades leading to reduced flex and better, more streamlined airflow. And reduced flex equals non-existent vibration, which happens to be one of the major contributing factors to fan noise.

The other major factor affecting operating noise in ceiling fans is air resistance itself. The Orient Electric Aeroquiet fan fixes this problem with an aerodynamically efficient blade design. The engineers at Orient Electric have achieved this by reducing the number of blades and compensate for that by giving each blade a more aggressive angle of attack. The high torque of the motor combined with enhanced stiffness of the

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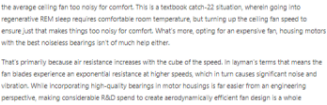

The Veritable Silver Bullet for Regenerative REM Sleep

In effect, the Aeroquiet fan not only delivers increased airflow, it does so while rotating at lower speeds. This consumes less power and also leads to a phenomenal reduction in noise due to the virtues of aerodynamically efficient design and stiffer fan blades. This here is the veritable holy grail of power, efficiency, and refinement.

Long story short, thanks to some clever engineering and pioneering efforts in ceiling fan aerodynamics, Orient Electric has managed to crack the age-old problem of maintaining comfortable room temperatures without raising a sleep-disrupting racket. The Orient Aeroquiet ceiling fan, therefore, is the cheapest way to get sound REM sleep, this side of an expensive air conditioner.

If you're ready to take the plunge into quality sleep, you can purchase the Orient Aeroquiet ceiling fan by clicking on this link. For more information, navigate here for a comprehensive product brief and technical specifications. If you're still on the fence, though, there's nothing better than checking out an in-depth review of the product itself.