

SLEEP

The Best Medicine



Did you know that men who have less than 5 hours of sleep have significantly smaller testes than men who sleep 7 hrs or more a night? Or, if you get less than 5 hours of sleep a night you are likely to have testosterone levels of men 10 years your age? Sleep is a **super-drug that has been widely studied and underutilised in treating disease.**

Below are 3 reasons why getting enough sleep is important for long term health and well-being:

1. Learning

You need sleep before and after you learn. Sleep deprivation causes a reduction in learning tasks by up to 40%. The part of your brain that receives memories shuts down and cannot take more information in. Deep sleep is also important after you learn as the nerve network which is generated during this time acts like a **file transfer system** converting short term memories into long term ones.

2. Alzheimer's Disease

In our brain we have a sewerage system which mops up all the metabolic toxins that are left over at the end of the day. One protein that is left in the brain is called **beta amyloid** and is directly correlated with Alzheimer's disease. The less sleep you get every night the more "build up" of beta amyloid in the brain.

3. Immune System Compromise

Our body makes us tired & reduces our ability to move when we are recovering from a disease so we have a chance to fight the infection. If we do not rest then our body finds it harder or impossible to fight the infection. For example, when students who received a hepatitis vaccine were sleep deprived the night after, they only had half the antibodies formed than that of the students having a full night of sleep. Also, a study done on healthy males getting 4 hrs of sleep reduced their killer T cell by 70% after one night (ref).

Even comparing 6 vs 8 hours of sleep after one week a staggering 700 genes were altered. Half of the genes were down regulated which were associated with your immune system. In contrast, there was an up regulation of genes that promote long term inflammation, cancer and cardiovascular disease.

References:

*Rogers NL ,Szuba MP , Staab JP , Evans DL , Dinges DF ; Neuroimmunologic aspects of sleep and sleep loss. Seminars in Clinical Neuropsychiatry [01 Oct 2001, 6(4):295-307]

*JAMES M. KRUEGER AND JEANNINE A. MAJDE (2003); Humoral Links Between Sleep and the Immune System; ANNALS OF THE NEW YORK ACADEMY OF SCIENCES.

*Tanja Lange; Stoyan Dimitrov ; Jan Born; Effects of sleep and circadian rhythm on the human immune system; ANNALS OF THE NEW YORK ACADEMY OF SCIENCES;

*Penelope A. Bryant, John Trinder & Nigel Curtis; Sick and tired: does sleep have a vital role in the immune system?; Nature Reviews Immunology; v. 4, pages457-467 (2004)

*Picture - <https://www.medibank.com.au/livebetter/be-magazine/wellbeing/sleep-is-the-best-medicine/>