

Why We Sleep

Dr. Matthew Walker, PhD

Published in 2017, **Why We Sleep** is a groundbreaking work by neuroscientist Dr. Matthew Walker. It argues that sleep is the single most effective thing we can do to reset our brain and bodily health each day.

1. THE TWO DRIVERS OF SLEEP

- **The Circadian Rhythm (Process C):** An internal 24-hour clock that regulates energy, temperature, and melatonin release.
- **Adenosine & Sleep Pressure (Process S):** A chemical that builds up in the brain while awake. Caffeine tricks the brain by blocking adenosine receptors, though the "pressure" continues to mount in the background.

2. NREM VS. REM SLEEP

Sleep consists of 90-minute cycles alternating between two distinct phases:

- **NREM Sleep:** Dominant early in the night; performs structural "cleanup," pruning neural connections and moving memories to long-term storage.
- **REM Sleep:** Dominant later in the night; acts as "overnight therapy," processing emotions and sparking creativity by cross-referencing new data with old experiences.

3. THE COSTS OF DEPRIVATION

Walker identifies catastrophic health consequences of routine sleep loss:

- **Brain Decline:** Impairs the prefrontal cortex and is linked to beta-amyloid plaques (a trigger for Alzheimer's).

- **Immune Collapse:** One night of 4–5 hours of sleep wipes out 70% of cancer-fighting Natural Killer cells.
- **Heart Health:** Daylight Saving Time shifts show a 24% spike in heart attacks the day we lose one hour of sleep.
- **Metabolism:** Disrupts leptin and ghrelin, causing cravings for carbohydrates and weight gain.

4. WALKER'S 5 TIPS FOR BETTER SLEEP

Schedule Consistency

Keep it Cool (65°F)

Kill Blue Light

No Caffeine/Alcohol late

Don't lie awake

THE ULTIMATE TAKEAWAY: Sleep is an evolutionary necessity and a biological mandate. Prioritizing 8 hours of sleep is the most powerful preventative medicine available to mankind.