

What Happens as We Sleep

Non-rapid eye movement (NREM) & rapid eye movement (REM) sleep

(Excerpt from the National Sleep Foundation (2007). What happens when you sleep [on-line]. Retrieved August 5, 2008. From http://www.sleepfoundation.org/site/c.huIXKjM0IxF/b.2419159/k.A817/What_Happens_When_You_Sleep.htm)

NREM – Non-Rapid Eye Movement Sleep (75% of night)

As we begin to fall asleep, we enter NREM sleep, which is composed of stages 1-4.

Stage 1

- Between being awake and falling asleep
- Light sleep

Stage 2

- Onset of sleep
- Becoming disengaged from surroundings
- Breathing and heart rate are regular
- Body temperature drops (so sleeping in a cool room is helpful)

Stages 3 and 4 (also called “slow wave sleep”)

- Deepest and most restorative sleep
- Blood pressure drops
- Breathing becomes slower
- Muscles are relaxed
- Blood supply to muscles increases
- Tissue growth and repair occurs
- Energy is restored
- Hormones are released, such as: growth hormone, essential for growth and development, including muscle development.

REM – Rapid eye movement sleep (25% of night)

REM sleep first occurs about 90 minutes after falling asleep and recurs about every 90 minutes, getting longer later in the night. REM sleep:

- provides energy to brain and body;
- supports daytime performance;
- brain is active, and dreams occur;
- eyes dart back and forth; and
- body becomes immobile and relaxed as muscles are turned off.

In addition, levels of the hormone cortisol dip at bed time and increase over the night to promote alertness in morning.



Source

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