



**HealthyBodyHealthyLife**  
with *Melissa Koerner*

## **Total Transformation**

### **Module 4 – Part 1:**

# **How Sleep Affects Your Health and Weight**

**With Nutrition, Fitness & Integrative Medicine Health Coach Melissa Koerner**

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## **Interesting Statistics**

- You can go about **6 minutes** without air
- You can go about **3 ½ days** without water.
- You can go about **30 days** without food.
- You can only go about **6 days** without sleep.

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Sleep is necessary for your immune system to run as **efficiently** as possible...

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## Sleep Fosters T Cell Production

- T Cells are white blood cells that play a **critical** part in the immune system's response to viruses.
- The more T cells the better the chance of **fighting** off infection.
- Sleep deprivation, **stops** T Cells from responding efficiently , makes it more difficult for the body to **fight** back against disease.

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## The immune system's response time is also improved by getting a good night's sleep.

- By completing the sleep cycles, you're **supporting** the release and production of *cytokine*, a multifaceted protein that helps the immune system **quickly** right infections.
- Melatonin helps **balance** cytokine response and slow down inflammation rise.

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It's estimated that nearly **half** of Americans are **sleep deprived**.

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According to the British Sleep Council, getting **less than 6 hours** of sleep each night makes you **12%** more likely to die young.

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## Sleep Deprivation and Inflammation

Studies show that people who sleep poorly or do not get enough sleep each night have much **higher levels of inflammation.**

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## Sleep Deprivation and Inflammation

- A study conducted by the Morehouse School of Medicine and the Emory University Sleep Program found that acute sleep deprivation leads to an **increased production of inflammatory hormones** and changes in blood vessel function.
- The study showed that people who reported **six or fewer hours** of sleep had higher levels of three inflammatory markers, one of them being C-reactive protein (CRP).

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## Sleep Deprivation and Inflammation

Loss of sleep, for even just a few short hours during the night, can trigger your immune system to **turn against** healthy tissues and organs, causing **tissue-damaging inflammation**.

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### Sleep Deprivation Can Trigger a Range of Health Problems:

- High blood pressure
- Heart disease
- diabetes (ability to make insulin and glucose declines)
- Weight gain
- Alzheimer's disease
- Cancer
- Poor memory and concentration
- Depression and anxiety

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### Just *one* Night of Poor Sleep Can Trigger a Variety of Health Problems:

- You're **hungrier** and more apt to eat more **high-carb** foods triggering blood sugar imbalances)
- You're more likely to have an **accident** because reaction time **slows**.
- You're more susceptible to getting a **cold**.
- You're more susceptible to **losing** brain tissue.
- You're more **emotional** and more likely to get into **arguments**.
- You're less able to think **clearly** and **concentrate**.

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When you're sleep-deprived your metabolism **won't** work properly

*Here's why...*

(two key hormones *ghrelin* and *leptin*)

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Ghrelin is the hormone that tells you **when** to eat—  
when you're sleep-deprived, you have  
more ghrelin.

Leptin is the hormone that tells you to **stop** eating—  
when you are sleep deprived, you have  
less leptin.

So, more ghrelin plus less leptin = eat more and **gain weight**

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More ghrelin plus less leptin =  
eat more =  
**gain weight**

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## How Much Sleep Do You Need?

- Studies show we go through **five 90-minute** sleep cycles.
- So, on average we need **7.5 hours** (5 cycles X 90 minutes = 450 mins./ 60min. = 7.5 hrs.)
- You may a bit more or a bit less.

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**Sufficient Sleep is the Amount of Sleep that Allows you to Perform Daytime Activities Optimally:**

- Thinking quickly
- High energy
- Upbeat mood
- Positive overall sense of physical well-being
- No stimulants are needed to wake you up!

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**Next Up...**

**Module 4 – Part 2:**  
**Action Steps to Get a Good Night's Sleep**

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