## SLEEP \& RECOVERY

Sleep is one of the most important aspects of recovery for athletes. Unfortunately, it is often one of the most neglected parts of our training.

- Stimulation and recovery happens during sleep.
- Tissue regenerates and neuropathways are formed.
- Growth hormone (HGH) is produced which is essential to the repair and restoration process of the body.
- Cortisol, the "stress" hormone, is produced which enables anti-stress \& anti-inflammatory functions.
- Limited sleep can lead to elevated production of cortisol which can cause rapid weight gain, high blood pressure, muscle weakness, and mood swings.
- Adequate sleep and exercise helps to regulate proper cortisol levels.
- If we don't recover, the potential for injury increases.

HOW MUCH SLEEP DO WE NEED EACH NIGHT?

| AGE | HOURS |
| :--- | :---: |
| Newborns (0-3 months) | $14-17$ |
| Babies (4-11 months) | $12-15$ |
| Toddlers (1-2 years) | $11-14$ |
| Preschoolers (3-5 years) | $10-13$ |
| Children (6-13 years) | $9-11$ |
| Teenagers (14-17 years) | $8-10$ |
| Adults (18-64 years) | $7-9$ |
| Elderly (65+ years) | $7-8$ |

## RISKS OF SLEEP DEPREVATION

- Decreased athletic performance
- Trouble concentrating
- Poor memory
- Decreased motor skills
- Increased impulsiveness
- Mood swings
- Low sex drive
- Suppressed immune system
- Vision issues
- Type 2 diabetes
- Cardiovascular disease
- Obesity
- Depression

THE AVERAGE PERSON ONLY GETS 5 HOURS OF SLEEP EACH NIGHT

## Sleep is the \#1

## performance enhancer!



## CYCLES OF SLEEP

- Melatonin levels increase at night and peak between 2-3am.
- Our circadian rhythm (sleep/wake cycle) makes us sleepy at night and wakes us in the morning.
- Each cycle lasts between 90-120 minutes.
- HGH and cortisol levels are regulated during stages 3 and 4 of the sleep cycle.
- $75 \%$ of the HGH in our bodies is produced when we sleep; most during stages 3 and 4.

