



## **SLEEP GUIDE**

*Your Guide To Better Rest So You  
Can Recover Faster, Live Pain-Free,  
and Perform Your Best.*

# SLEEP BETTER

*Sleep is an opportunity to relax every part of your body, and is critical for all of us to recover for the next day's activities. If we don't get the right amount of sleep, our mental and physical acuity is lowered, we don't recover well, and our energy and overall performance fall flat.*

*Here at TB12, we see sleep as one of the most crucial components of daily recovery – it's essential to prioritize consistent sleep if you want to perform your best. This comprehensive guide will help you better understand the science of sleep, lay out some helpful steps for improving your sleep hygiene, and introduce some exciting new ingredients that we have our eye on for their sleep-supporting benefits.*

*We're here to help you sleep better and feel your absolute best. Let's go!*

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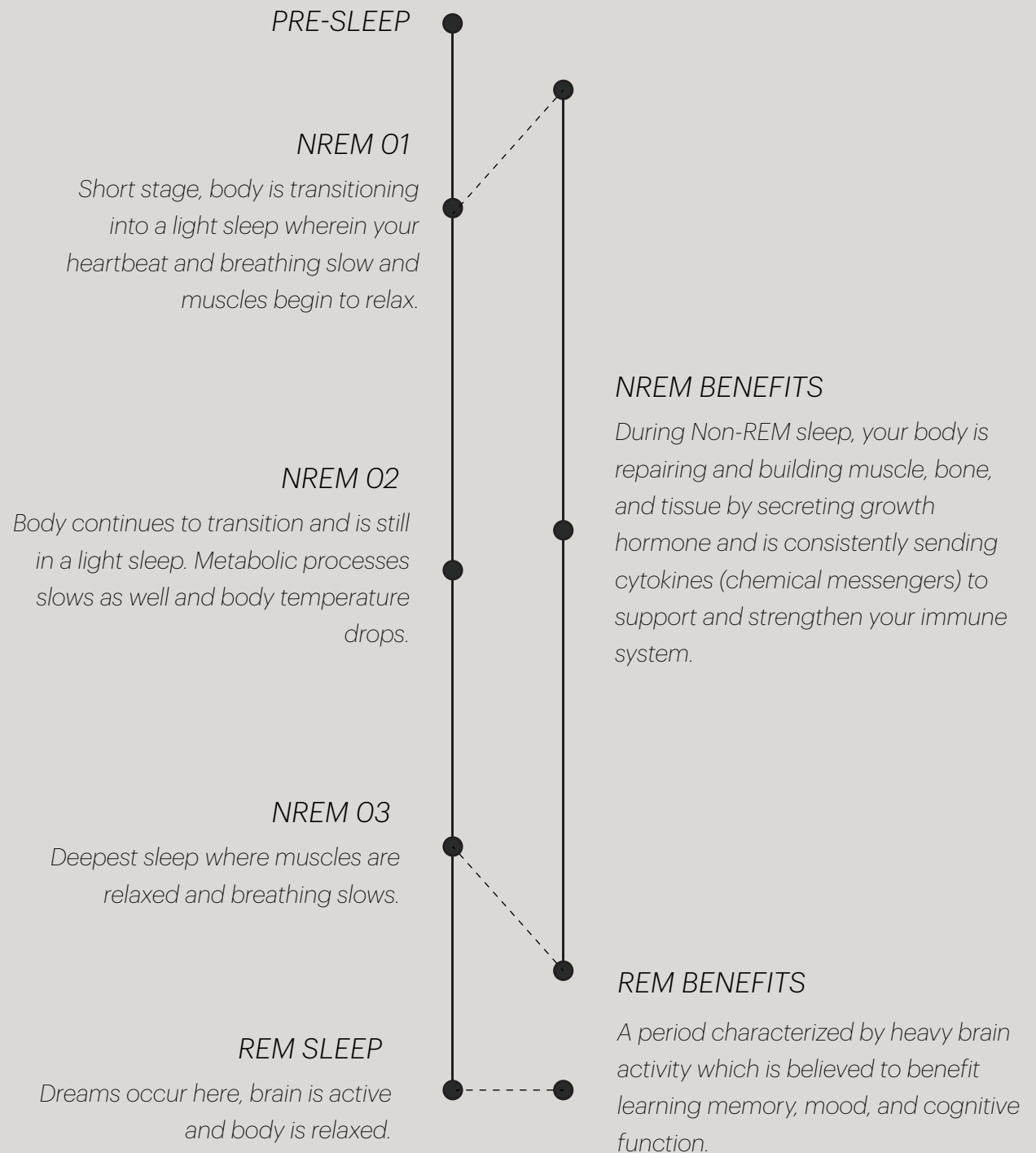
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SLEEP  
SUPPLEMENTATION

# SLEEP WELL. LIVE WELL.

Sleep is not a universal state – instead, there are a number of different phases (NREM 1, NREM 2, NREM 3, and REM Sleep) that make up what's known as the **sleep cycle**. The average person will go through roughly 4 to 6 rounds of this cycle in an average night, and the cycle is comprised of four stages.



# CIRCADIAN RHYTHM

The term “circadian rhythm” is used to talk about all the body processes that happen on a regular, near-24-hour interval. The human circadian rhythm is centered around three things: light, breakfast, and physical activity — in that order.

## **LIGHT**

In the morning, while we sleep, the body tapers down its production of melatonin, the hormone that makes us feel sleepy. Breathing, heart rate, and core temperature gradually increase until we finally wake up, open our eyes, and take in the first light of the day — historically, the blue light of the sky.

## **BREAKFAST**

Breakfast is a key regulator of our internal clock. What and when we eat helps give our body its sense of time. A great rule of thumb is to eat breakfast within two hours of waking up

## **PHYSICAL ACTIVITY**

Exercise also has an effect on the circadian rhythm. Research shows that working out earlier in the day can help you feel more energized the following morning, while working out in the evening may make it harder to get started the next day.





# SLEEP BENEFITS

## FROM DR. CHRIS WINTER

Dr. Christopher Winter is a world-renowned sleep expert and the author of **The Sleep**

**Solution: Why Your Sleep Is Broken and How To Fix It.** His current research focuses on sleep and athletic performance, and he has been tapped to work with teams across the MLB, NBA, WNBA, as well as the Women's National Soccer Team. Here are the primary benefits of quality sleep, from Chris himself:

### CONCENTRATION

Concentration is affected negatively by poor sleep. Just a few nights of restricted sleep results in lapses in concentration.

### MEMORY

Once you're out there on the field, you need to remember what you are doing. Sleep positively affects multiple aspects of memory.

### SPEED

Sleep deprivation has been shown to reduce sprint speed and swimming speed reaction time. Insufficient sleep slows reaction time.

### STRENGTH

A few nights of restricted sleep has been shown to reduce bench press by as much as 20 pounds.

### ACCURACY

Studies have shown that tennis hitting accuracy and basketball shooting accuracy are positively impacted by quality sleep.

### RECOVERY

Sleep speeds up recovery from illness and injury and may act to prevent illness and injury before it even happens. It is also the key to recovery from the average wear and tear of any athletic endeavor and is key to career longevity.



“

**SLEEP IS A DYNAMIC PROCESS. IF YOU CHOOSE TO MAKE IT A PRIORITY IN YOUR LIFE, IT IS LIKE AN INVESTMENT — IT WILL PAY YOU BACK.**

- Dr. Chris Winter, MD

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# SLEEP AND PAIN-FREE LIVING

## PHYSICAL REST

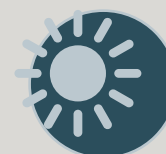
*Sleep plays a key role not just in your ability to perform, but in your ability to perform pain-free. On the physical side of things, the body goes to work repairing and rejuvenating muscle tissue during sleep. In the deeper stages of sleep, more blood flow occurs in your muscles and tendons – bringing vital nutrients and oxygen to damaged or fatigued areas of the body. This process helps accelerate the critical process of healing that occurs after an acute injury, and allows healthy tissue to fully recover and prepare for the next challenge.*

## COGNITIVE REST

*Sleep also has a significant impact on the brain's day-to-day recovery. A lack of sleep disrupts an essential relationship between two parts of your brain. The amygdala, which plays a big role in fear, anxiety, and aggression, typically sends messages to the MPFC, or medial prefrontal cortex, for approval. When everything is working correctly, this circuit allows you to respond appropriately to what you experience in the moment, especially if the experience is negative. When you haven't gotten enough sleep, communication between the amygdala and the MPFC appears to fall apart, and all the negativity of the amygdala runs straight past the MPFC uncontrolled and unchallenged. You can guess the result: emotional imbalance and – in the worst case – emotional overload.*



*It's no secret that there is no better source of natural recovery for both the mind and body than sleep. Sleep has a lot of different effects on your waking performance — that is, the quality of your sleep has a big impact on the quality of what you do when you're awake.*



*Tom Brady routinely sleeps from 9 p.m. to 6 a.m. – and keep in mind that other sports stars like LeBron James and Roger Federer have been reported to get 12 hours of sleep a night. For an active person holding down a career or managing a family — or both — sleep is often the first thing to be sacrificed when life gets busy. We want that to change*



*When you consistently sleep less than you need to, you can significantly reduce your body's ability to bounce back after exercise or injury. Not only will your body have a harder time healing, but you'll also increase your risk of injury.*

# THE COGNITIVE CONNECTION

*Beyond its role of supporting physical recovery and a healthy inflammatory response, sleep quality can have a significant impact on your attention, reaction time, and your overall performance. Our level of cognitive performance is directly correlated to our quality of sleep and affects not only our motor skill capabilities, but our ability to focus, learn, plan, remember, and adapt.*

*A good night's sleep leads to better cognitive function and performance the next day. Our body recovers when our breathing, body temperature and heart rate slow while asleep, which is amplified by hormonal changes that stimulate muscle growth and cell repair. Our brain consolidates and saves important past information—whether spoken or motor related—so that we can learn new information and make sound decisions in the future.*

*Without a good night's sleep and a solid recovery, we may notice fatigue, difficulty learning or recalling information, and irritability within our mental state throughout the next day. Physically, our motor skills and physical abilities may be diminished, and reaction times may slow as well. By making sleep a priority, we can perform at our best—both physically and mentally—for the days to come.*



# ***SLEEP WELL. LIVE WELL.***

*Some studies found that the blue light from computer screens, TVs, and smartphones negatively impact your ability to fall asleep. Turning off all your electronic devices at least a half-hour before bedtime will quiet your mind.*

**PROPER SLEEP HAS HELPED  
ME GET TO WHERE I AM  
TODAY AS AN ATHLETE.**

-TOM BRADY

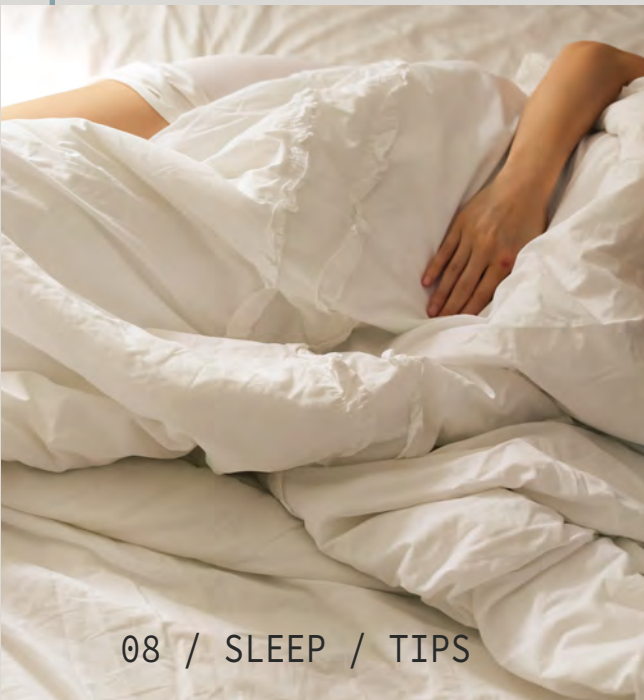






## **JUST RELAX**

*Some studies found that the blue light from computer screens, TVs, and smartphones negatively impact your ability to fall asleep. Turning off all your electronic devices at least a half-hour before bedtime will quiet your mind. Instead of surfing the web, focus on something relaxing and serene. Turn off or down the lights in your room and create a relaxing environment before bed. This will help you get to sleep on time, every night.*



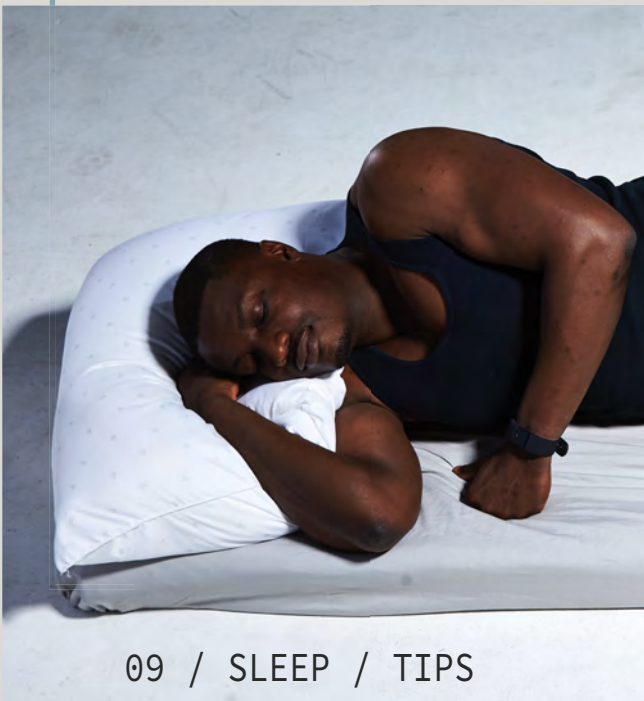
## **STAY COOL**

*The ideal temperature for sleeping is around 65 degrees Fahrenheit, or 18.5 degrees Celsius. If you're too hot or cold at night, you'll be too uncomfortable for quality sleep. Keeping your bedroom around that temperature will help you get to sleep and stay asleep.*



## **CIRCADIAN CLOCK**

*Take advantage of your circadian clock by sticking to a schedule. A rhythm of waking up and going to bed at the same time every day will help your body get the most out of your sleep. Yes, that includes weekends! Choose a bedtime and wake time, ideally 8 hours apart, and commit to it. It might be hard at first, but a consistent schedule does wonders for the body and mind. You'll feel the difference.*



## **KEEP IT QUIET**

*While you're trying to sleep, noise can be very disruptive. If you're in a noisy area like a city, consider using a sound masking or noise-cancellation machine — white noise machines are great for this. It'll block out all the cars speeding by with a soothing, gentle sound in the background — creating a quiet environment will improve your sleep tenfold.*



## STAY ACTIVE

*Studies show that physical activity has positive effects on sleep.*

*Try to exercise every day, even if it's only for a few minutes. A quick, interval-based resistance band exercise can make a big difference. Sticking to a daily workout schedule can help you fall asleep faster and improve the quality of your sleep. Following a regular exercise schedule will benefit your sleep and leave you feeling well rested and ready to attack your day each morning.*



## ALCOHOL & CAFFEINE

*Caffeine is a stimulant, whether you drink it at 7 a.m. or 7 p.m. Drinking coffee in the afternoon will keep you awake later into the night, disrupting your normal sleep cycle and throwing off your circadian clock. Alcohol, on the other hand, may cause you to fall asleep faster, but it will reduce your quality of sleep. It's also dehydrating, so you'll deprive your body of the hydration it needs. Avoiding both alcohol and caffeine around bedtime will improve your sleep.*

# INGREDIENTS

WE DON'T SLEEP ON



## **L-THEANINE**

*Promotes a sense of calm before bed.*



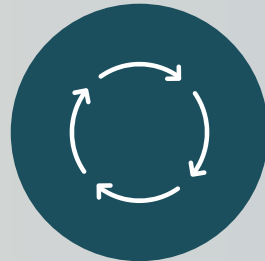
## **GABA**

*Improves mood & occasional anxiety.*



## **MAGNESIUM**

*Supports melatonin to prepare us for sleep.*



## **MELATONIN**

*Helps regulate your body's sleep cycle.*



## **CHAMOMILE**

*A natural relaxant.*



# TB12

## SLEEP



## SLEEP BETTER

No matter your activity level, there's nothing more valuable than a good night's sleep. Of course, getting one is easier said than done. Enter TB12 Sleep: your secret weapon to help you relax before bed, ease into sleep, and ensure your body gets the rest it needs to make the most of tomorrow.

