



# Sleep and Exercise Routine: Tips from Your USPHS Sleep Wellness Champions

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## Introduction: Relationship between Sleep and Exercise

Sleep and Exercise have a bidirectional relationship.

**Exercise can improve sleep:** Regular physical activity—particularly moderate to vigorous intensity—can help adults *fall asleep faster* and improve overall sleep quality. It's linked with reduced sleep onset latency (time to fall asleep) and less time awake during the night.

**Sleep influences exercise behavior:** Poor or insufficient sleep can lead to *lower levels of physical activity* the next day, suggesting that not sleeping well may reduce your motivation or energy to exercise.

**Why it matters:** This two-way connection means improving one's behavior (e.g., exercising regularly) often helps the other (better sleep), and vice versa.

The National Institute of Health emphasizes that **getting enough sleep (7–9 hours for adults)** is a key part of overall health and wellbeing, comparable in importance to diet and exercise.

## How Exercise Positively Affects Sleep:

People who engage in consistent physical activity often report more restful sleep, with better sleep continuity and efficiency.

### ✓ Reduces Sleep Problems

- Regular activity is associated with fewer symptoms of insomnia and can decrease daytime sleepiness.

### ✓ Enhances Sleep Through Health Pathways

- Physical activity assists in weight management and reduces conditions (like obesity) that increase risk for **sleep apnea**, indirectly supporting better breathing and sleep continuity.

**Note on timing.** According to the Centers for Disease Control, very late or very intense workouts may temporarily raise body temperature or alertness close to bedtime for some people, which can make falling asleep harder. Adjusting the workout time earlier in the day often helps solve this.

## How Sleep Affects Exercise and Physical Performance

### 1. Sleep Is Critical for Physical Recovery

- During sleep, the body carries out key repair functions including muscle recovery and hormone regulation that support exercise adaptations (e.g., release of growth hormone).

### 2. Lack of Sleep Impairs Performance

- Insufficient sleep has been linked in related research to *decreased aerobic power, endurance, and slower reaction time*, meaning athletes and regular exercisers may perform worse after sleep restriction.

## Best General Guidelines for Exercise Timing and Sleep

### Morning Exercise



✓ **Why it helps:** Early workouts—especially outdoors—expose you to natural light and help regulate your **circadian rhythm**, the body's sleep–wake clock, which can make it easier to fall asleep at night. Morning aerobic workouts also support improvements in sleep quality and depth.

✓ **Good for:** People who want to anchor their sleep schedule earlier and improve overall sleep quality.

✓ **Bottom line:** *Morning exercise (including walking, jogging, or resistance training) is a strong option if improving sleep onset and circadian rhythm stability is a priority.*

## Afternoon/Early Evening Exercise

✓ **Benefits:** Many studies show that exercise at **moderate intensity** during the afternoon or early evening can *promote better sleep* without disrupting it.

✓ **Why it works:** This timing still allows your body temperature and arousal levels to return to baseline before bedtime.

✓ **Sweet spot:** Aim to finish workouts **at least 3–4 hours before bedtime**—especially if they're vigorous—to avoid stimulating your body too close to sleep.

## Late Evening or Close to Bed

✓ **What the research says:**

- *CDC states vigorous exercise* within about **2–3 hours of bedtime** may delay sleep onset and reduce sleep quality in some people due to elevated heart rate, body temperature, and stress hormones.

- But **light, low-intensity activities** (gentle yoga, stretching, walking) can still be compatible with sleep and may even help wind down.

✓ **Individual variation:** Some people *don't experience sleep problems* from evening workouts as long as they finish at least ~90–120 minutes before bed.

**Key advice:** If you notice difficulty falling asleep after late workouts, consider moving them earlier or choosing lighter evening activity.

## Sleep Quality and Sleep Habits

### What Good Sleep Looks Like

✓ Adults generally need **7–9 hours per night** for optimal health.

✓ Consistent sleep schedules and a relaxing, dark bedroom environment support better sleep.

✓ Avoid caffeine and large meals close to bedtime; turn off screens ~30 min before sleep.

### Consequences of Poor Sleep

✗ Not getting enough quality sleep is strongly linked with higher risks of:

- Obesity
- Type 2 diabetes
- Heart disease and stroke



- Mood disorders like anxiety and depression, as well as *poorer decision-making* that can lead to other unhealthy behaviors (e.g., poor diet, reduced exercise).

## Sleep as a Mission-Critical Lifestyle Factor

### Sleep Is Not Optional for Readiness

Service members often face irregular schedules, deployments, shift work, and operational demands that disrupt normal sleep patterns. Yet research and service guidance emphasize that *quality sleep is essential for physical, cognitive, and emotional performance*.

Key points for service members:

- Sleep helps with cognitive performance, alertness, decision-making, and reaction time — all critical in high-stakes military environments.
- Chronic sleep deprivation (e.g., < 7 hours/night) is very common in the military and *linked with reduced effectiveness and higher injury risk*.
- Guidance recommends, *when possible*, duty schedules that accommodate eight consecutive hours of sleep in 24 hours and allow for sleep banking before periods of unavoidable deprivation.

Sleep hygiene practices (consistent bedtime, limiting caffeine before bed, quiet/dark environments) are recommended even in service life to *support restorative sleep whenever possible*.

## Exercise and Physical Activity for Readiness and Sleep

- Fitness Is Foundational but Must Be Balanced

- Physical activity is central to readiness, helping service members maintain strength, endurance, and resilience. The CDC highlights physical activity as critical for military readiness and overall health.

Readiness specific insights:

- Regular moderate exercise can improve *sleep onset and depth*, helping with recovery after training or missions.
- However, intense exercise immediately before sleep can interfere with rest, so timing matters (similar to civilian guidance but contextualized for military schedules).
- Service members who routinely meet sleep recommendations also tend to engage in *more weekly exercise* and have healthier body composition.

**Applied tip: schedule physical training or workouts earlier in the day when possible and use moderate activity as part of recovery routines to support sleep and performance.**



## Key Takeaways

- Exercise generally promotes better sleep quality and efficiency.
- Good sleep enhances physical performance and recovery.
- There's a feedback loop – improving one behavior tends to help the other.
- Timing matters: exercise too close to bedtime may not benefit sleep for everyone

**Physical fitness prepares the body for the mission – Sleep prepares the mind and body to perform it**

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