



The Importance of Sleep for Heart Health



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What is Sleep?

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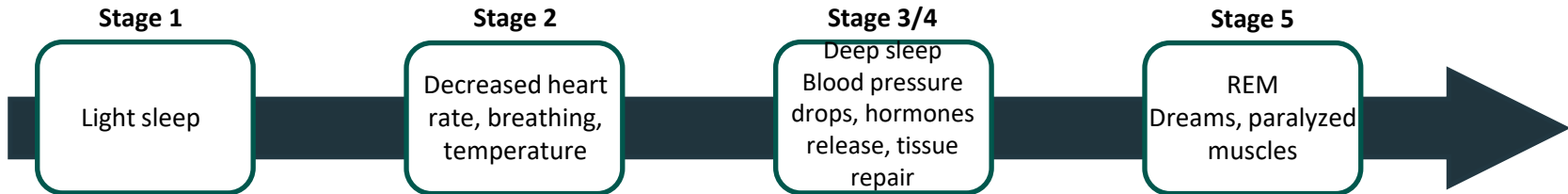
- Sleep is one of the most important parts of your daily routine – you spend about one-third of your life doing it.
- Getting good quality sleep is as essential as food and water.
- Scientists still have a lot of questions related to sleep, but what we do know is that sleep functions to:
 - Recuperate the body from the day's activities,
 - Facilitate learning and form memories,
 - Play a key role in our immune system,
 - Decrease risk of high blood pressure, diabetes, cardiovascular disease, and obesity.



What happens to your body when you sleep?



- Nerve cells communicate with each other to remove toxins from your brain and consolidate memories.
- Hormones are released: melatonin, growth hormone, and antidiuretic hormone.
- Immune system fights infection, immunological memory is enhanced, and vaccine response is improved.
- You cycle through 5 stages of sleep:

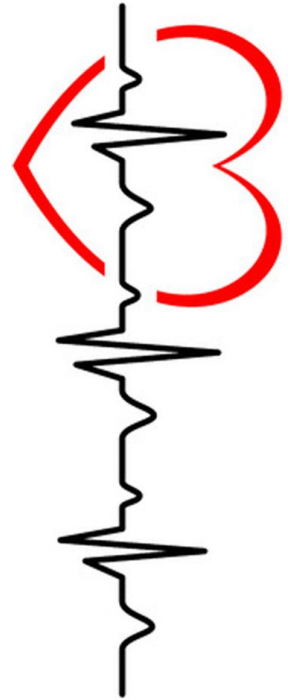


What happens to your body when you sleep?

- Two internal biological mechanisms *1. Cardiac rhythm and 2. Homeostasis*, work together to regulate when you are awake and asleep.

1. Cardiac Rhythm (Biological Clock):

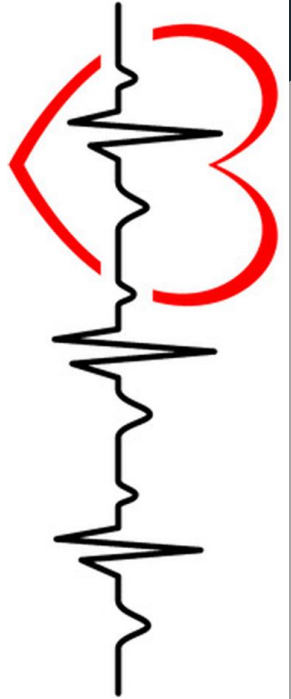
- Directs a wide variety of functions from daily fluctuations in wakefulness to body temperature, metabolism, and the release of hormones.
- Controls your timing of sleep and causes you to be sleepy at night and awake in the morning.



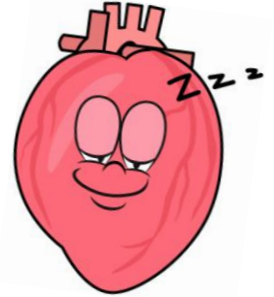
What happens to your body when you sleep?

2. Sleep-Wake Homeostasis:

- Regulates sleep intensity and helps the body remain asleep after a certain time.
- Factors that influence your sleep-wake cycle include medical conditions, stress, sleep environment, and what you eat and drink.
- The greatest impact is your exposure to light - too much light or light when you are trying to sleep makes it very difficult to go to bed.



Sleep and Heart Health



So how does sleep impact our heart health?

1. Sleep conditions

- Sleep apnea: prevents restful sleep and pauses in breathing cause increased blood pressure.
- Insomnia: linked to high blood pressure and heart disease.

2. Stress

- Being stressed releases cortisol which over time can increase cholesterol, triglycerides, blood pressure, and blood sugar – during sleep our cortisol levels are at their lowest.

3. Poor eating habits

- Sleep loss can increase cravings for “junk food” full of salt, sugar, and fat – these foods in excess can contribute to heart disease.

4. Increased weight

- Lack of sleep slows down metabolism and can decrease motivation to exercise, leading to weight gain.

Health Benefits of a Good Sleep

To summarize, getting a good sleep helps you:

- Get sick less often,
- Stay at a healthy weight,
- Lower the risk of serious health problems like diabetes, hypertension, dyslipidemia, and heart disease,
- Reduce stress and improve mood,
- Think more clearly and retain memories.



How do we get a good sleep?

- Stick to a sleep schedule that allows for 8 hours of sleep.
- Avoid caffeine, alcohol, and large meals before bedtime.
- Create a restful environment – sound, light, temperature.
- Limit long daily naps.
- Create a nightly routine.
- Manage stress.
- Limit electronics usage before bed.
- **Include daily physical activity.**





Sleep and Exercise

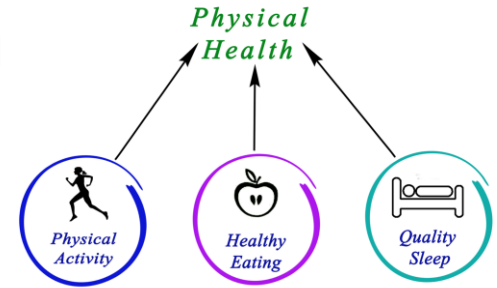
Exercise on the Body

- Exercise strengthens your heart and improves circulation.
- This helps oxygen flow throughout the body which helps lower your risk of coronary artery disease, hypertension, dyslipidemia, and heart attack.
- It has also been determined that getting regular exercise can increase sleep quality for adults:
 - Reduces time it takes to fall asleep at night,
 - Helps improve mood (eases stress, anxiety, depression),
 - Reduce chances of sleep apnea and restless leg syndrome,
 - Reinforces circadian rhythms (if exercise is done outdoors).



Exercise Strategies for a Better Sleep

- The more regular your exercise routine is, the more powerful your sleep benefits will be.
- Aerobic exercise has been shown to improve insomnia.
- The only time exercise may impact sleep negatively is if you exercise too close to bedtime. Moving your workouts to an earlier time will allow for your vital signs to reach a state of rest closer to sleep.
- Some exercises you can do before bed include gentle stretching or yoga.



Advice from Dr. Lai

“Does your heart ever take a break?”

If not, how can we protect it?

Our heartbeats follow circadian rhythms, like the sun and the moon. It does not stop; it peaks at noon and slows down at night.

If the heart’s circadian rhythms are thrown off, it will affect our heart health.”







Workout Session

30 Minutes



Remember...

- Always maintain a proper body position.
- Breathe during each exercise
 - Holding your breath increases your internal pressure, thus increasing your blood pressure.
- Not sure if you are doing it correctly? Ask!



Warm-Up

30 Seconds Each Exercise



- Marching on the spot
- Shoulder rolls
- Side steps
- Arm circles
- Side bends with arms
- Butt kicks
- Ankle circles
- Torso twists
- Neck rolls
- Front leg swings



Guided Resistance Exercises



Session Breakdown

First Round 6 min <i>Lower Body</i>	Second Round 6 min <i>Upper Body</i>	Third Round 6 min <i>Abdominals</i>
2 exercises 30 seconds on 20 seconds off 3 rounds	2 exercises 30 seconds on 20 seconds off 3 rounds	2 exercises 30 seconds on 20 seconds off 3 rounds

#1

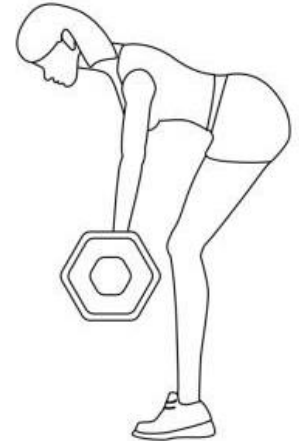
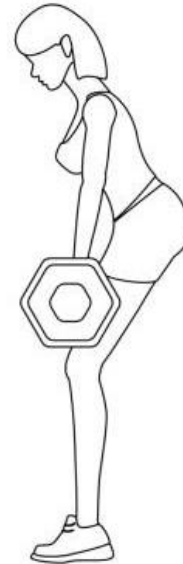


Sumo Squat

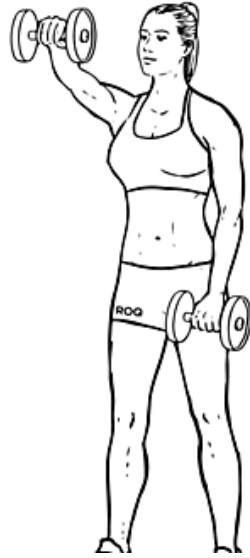


#2

Romanian Deadlift



Water Break



#3

Shoulder Raise

Chest Fly



#4

Water Break

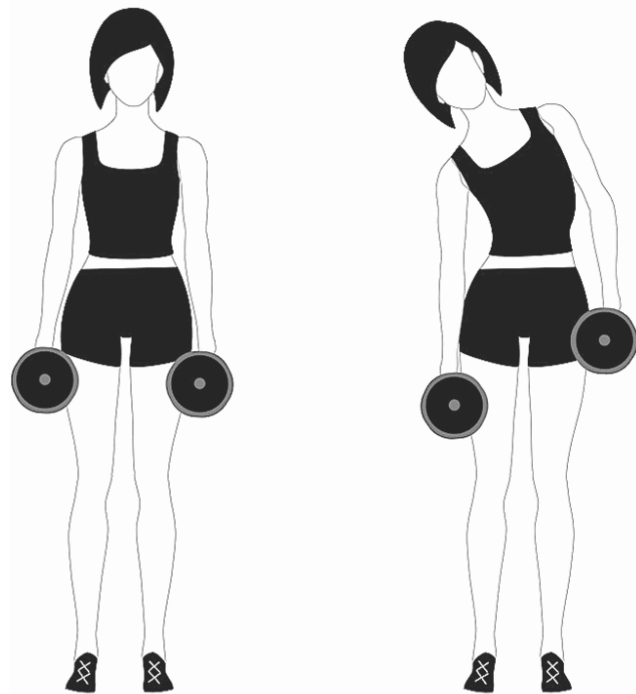


#5

Standing Crunch

#6

Side Bend



Cool-Down



Stretches to Enhance Sleep

- Spinal Rolls 30-60 seconds
- Knee to Chest 30 seconds each side
- Bear Hug 30 seconds
- Butterfly Stretch 30 seconds each side
- Cobra Pose 30-60 seconds
- Neck Stretch 30 seconds each side
- Supine Twists 30 seconds each side



Thank
you

The text "Thank you" is written in a bold, black, cursive script. The word "Thank" is on the top line and "you" is on the bottom line. The text is surrounded by several short, black, radiating lines of varying lengths, creating a sunburst or starburst effect around the words.

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