

# Physical Therapy: The Magic of Motion



## Cadette Badge

Being physically active isn't just for athletes, it's for everyone! Exercise is important to your body's health. Like any machine, if you don't use it, the parts get rusty. Choosing to exercise will help you sleep better, stress less and keep your body healthy and strong. In this badge, find out how activity helps your body and learn how to incorporate exercise in your life.

### Purpose

When I've earned this badge, I'll know how to be physically active and the role exercise plays in healing the body and keeping me healthy.

### Steps

1. Know how physical activity helps the body heal and stay healthy
2. Find out how exercise can improve your life
3. Learn how to create your own exercise program
4. Investigate what types of equipment you can use and how
5. Explore professions that use physical activity

Complete one activity from each step.

### STEP 1 - Know how physical activity helps the body heal and stay healthy

Exercising promotes blood flow throughout your body. This blood flow carries nutrients that feed your body parts keeping them strong. Blood also contains substances that help the body recover from injuries. So it's important to stay in motion! Are you using your body so that the parts stay healthy and useful? Set habits now that will help your body stay healthy and strong throughout your life. Begin by taking a look at the physical activity in your life.

### Make your own exercise log

For two weeks, record the amount and type of exercise you do each day. The American College of Sports Medicine (ACSM) says that any healthy person under the age of 65 should do moderately-intense cardio (Increased heart rate, sweat and can carry on a conversation) for 30 minutes a day, 5 days a week OR vigorously intense cardio 20 minutes a day, 3 days a week. See if you meet this requirement and what changes you can make to improve your fitness.

### Live Strong

Did you know that if you don't use a muscle at all, in only FIVE days it will get smaller and weaker? Lifting weights is not just for men. In fact, it is very beneficial to women. It helps them develop stronger bones and digest food more quickly. Try to learn about some muscles in the body. Choose FOUR muscles from the list below.

- 1) Biceps      2) Quadriceps      3) Gastrocnemius      4) Deltoids      5) Abdominals      6) Hamstrings

Think about activities you do in your everyday life that require these muscles to be strong. Use the internet or your local library to find out where they are located and how they help you move. Learn how to do a simple stretch for each one to prevent injury while exercising and an exercise that will allow you to make each one stronger. Share what you've learned with an adult.

## Muscle Pumps

Exercise is so important in helping the body because it promotes blood flow. When we exercise, our muscles contract and relax which helps our blood flow through out our bodies. Our blood brings nutrients to and removes wastes from the body's tissues to keep them strong and help the body heal. An important form of exercise is walking. For, two weeks wear a pedometer and record the amount of steps you take each day. Compare the amount of steps you take to the chart below and find ways you can improve if you don't fall in the active or highly active category.

Steps per Day	Physical Activity Level
< 5000	Sedentary
5000 -7499	Low Active
7500 - 9999	Somewhat Active
10,000 - 12,499	Active
>/= 12,500	Highly Active

Tudor-Locke et al. Expected Values for Steps/Day in Special Populations. Preventive Medicine. 2009; 49, 3-11.

### STEP 2—Find out how exercise can improve your life

As a young adult, it is important to get a good night's rest and remove as much stress as possible. Insufficient sleep affects your ability to focus in school and can impact your mood. Stress can lead to weight gain and even weaken your body's defense against illness. Exercise can combat these things. It can improve your mood, reduce stress and help you sleep better. Check out how exercise impacts you.

#### Mood Ring Journal

For one week, you and a friend or family member will exercise every day for at least 45 minutes. Keep a journal of how you felt before and after you exercised. For example: Were you happy, energetic, okay, sad, annoyed, etc. Compare how your mood changed after exercising and see how the other person was affected.

#### Biochemical Detective

Go online or to a library to research Cortisol and Endorphins. Find out what these substances are. Identify which improves your mood and which is related to stress. Learn how these two chemicals are affected by exercise.

#### Experimental Exercise

For one week, track how exercise affects your sleep. For the first three days, do little to no exercise. For the last three days, exercise for at least 45 minutes each day. Do you notice a difference in how you sleep or how easily you fall asleep?

For More Fun: Try this for two weeks: one week with exercise and one without. See if you notice a difference.

### STEP 3— Learn how to create your own exercise program

There are many opportunities for you to find the exercise program that works for you. Any exercise program should be composed of three parts: warm up, exercise and cool down. The warm up involves stretching and raising your heart rate a little to help prepare your body for exercise and prevent injury. The exercise is the actual physical activity you are doing. The cool down involves stretching and lowering your heart rate to prevent cramping and muscle soreness.

#### Follow Your Heart

Your heart rate tells you how hard you are working your body. Therefore, it is important to be able to figure out what your heart rate is and see how it changes with exercise. Follow these steps on how to check your heart rate.

1. Locate your heart beat on your neck under your jaw or on your wrist on the side of your thumb. The reference sheet on page 5 has pictures of these locations.
2. Once you feel your pulse, record the amount of beats you feel for 15 seconds. DO NOT use your thumb because it has its own pulse.
3. Multiply the number of beats by four.
4. This is the number of times your heart beats in one minute!

Now do jumping jacks for one minute. Check your pulse and see how the number changes!

Rest for five minutes and check your pulse again. How has it changed?

#### Create Your Own Work Out

When you exercise, you can focus on your entire body or one part. Be sure that your warm up and cool down gets the body parts you decide to exercise involved. Below are three categories with a list of activities you can do. Mix and match at least one activity from each category to create your own exercise program! If you're not sure what the activity is, check out the reference sheet on page 5! Make sure an adult checks it before you get started.

##### WARM UP

*Jumping Jacks for one minute*

*\*Good for the entire body*

*High Knees for 30 seconds two times.*

*Butt Kicks for 30 seconds two times.*

##### EXERCISE

*Push Ups- two sets of 20*

*Crunches for one minute.*

*Jog/Run for 30 minutes.*

##### COOL DOWN

*Quad Stretch- 30 seconds each leg.*

*Calf Stretch- 30 seconds each leg*

#### Activity Awareness

There are exercise programs and classes offered through local gyms, community centers, Girl Scout Councils or schools that you can get involved in. Find an exercise class you are interested in and get a friend or family member to participate in it with you!

#### **STEP 4— Investigate what types of equipment you can use and how**

You can exercise with or without equipment. For some devices, you may need an adult's supervision, but for others all you need is yourself and motivation!

##### **Household Fitness**

You don't need a gym to exercise. For example, you can run laps around your backyard or use water bottles as weights. The average water bottle is at least one pound. Take a look at your home and neighborhood. Determine if there are ways for you to exercise without going to a gym.

##### **Fitness Investigation**

Visit a local gym or fitness center. Ask one of the employees if they can teach you about some of the equipment in the facility, how to use it and how it helps your body.

##### **Speak with a health professional**

Go to the clinic of a health professional that uses exercise equipment or invite a health professional to speak to your group. Ask them about the types of exercise equipment that exists, how to use them and their benefits.

#### **STEP 5— Explore professions that use physical activity**

In a world where everything is so fast paced, many people don't have the time to exercise. This leads to health problems like obesity, diabetes and more. Other things like car accidents and sports lead to injuries which can also change people's lives. Since physical activity is so important, there are many professionals that use exercising to help improve the lives of people with health conditions and injuries. Take a look at some of these professions. Find out what type of education they need and the types of people they work with. Maybe you'll be interested in one!

##### **Physical Therapist**

Visit a physical therapy clinic or invite a Physical Therapist to speak to your group about how they use exercise to help their patients.

##### **Athletic or Personal Trainer**

Invite an Athletic or Personal Trainer to speak to your group about how they use exercise to help their clients.

##### **Physical Education Teacher**

Ask a physical education teacher why they teach physical activity to students.

For More Fun: Find other professions that use exercise.

Carotid Artery



Radial Artery



Jumping Jacks



Quad Stretch



Start with your hands at your side and feet together. As you jump, have your feet separate and your hands clap above your head. Then jump back to your start position. Alternate between the two positions as fast as you can.

Triceps Stretch



Slightly pull at the elbow to feel a stretch.

High Knees



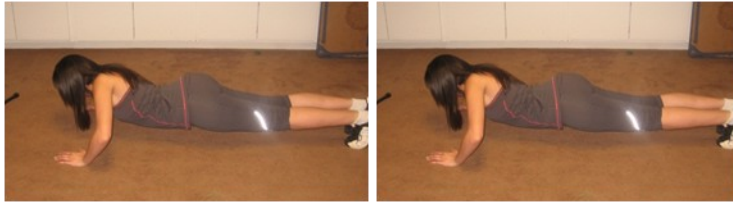
Calf Stretch



Start with your hands at your side and feet together. Lift one knee up to your chest. Put it down and then lift the other. Alternate between the two as fast as you can.

Start with your hands placed against the wall and feet staggered. Bend your elbows and front leg so that you feel a stretch, in your other calf. Keep the heel of the leg you are stretching down on the floor.

## Push Ups



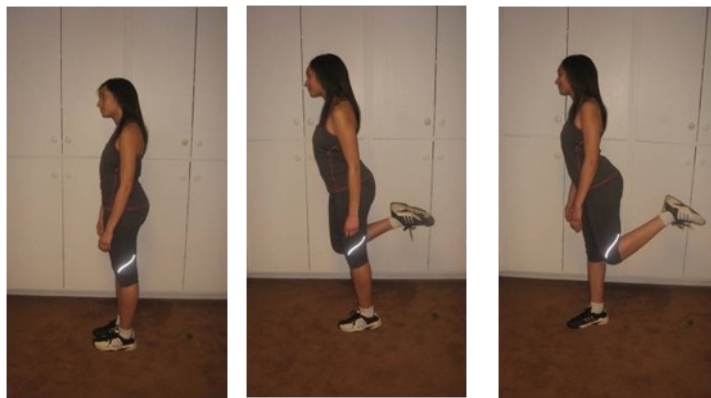
Start with your arms and back straight and on your toes. Then using your arms and bending at your elbows, lower your body towards the ground. Keep your stomach tight and back straight. Do not let your chest or stomach touch the ground. Then push yourself back into the starting position. Repeat.

## Crunch



Lay on your back with your knees bent and hands across your chest. Squeeze your stomach and lift your shoulders and head off the floor. Look up towards the ceiling as you perform this exercise.

## Butt Kicks



Start with your hands at your side and feet together. Try to have your foot touch your butt, as though you were trying to kick yourself. Put it down and then lift the other foot and try the same thing. Alternate between the two positions as fast as you can.