



Week 7:

The Wisconsin AD Exercise

Newsletter



Pro Tip

Are the heat and humidity of summer putting a damper on your exercising?

Here are a few tips to keep you safely exercising when the heat is on!

1. Try exercising in the morning or evening when it is cooler.
2. Wear lightweight, light-colored clothing.
3. Hydrate! Drink non-caffeinated beverages before, during, and after exercise. Consider bringing water with you.
4. If needed, move your exercise indoors.
5. Reduce exercise intensity and duration.
6. Plan around the weather forecast. If one day looks particularly hot, take it as a rest day and focus on exercising on the cooler days.

Coach's Playbook

Exercise and Hypertension

[Pescatello et al. 2015](#) and [Borjesson et al. 2016](#)

What impact does exercise have on blood pressure, specifically hypertension?

Aerobic exercise can reduce systolic blood pressure 5-7 mmHg and resistance training can reduce systolic blood pressure by 2-3 mmHg in those with hypertension. (Systolic blood pressure is the top number listed in the blood pressure fraction, and it represents the pressure in your arteries when your heart is contracting.) These decreases can reduce cardiovascular disease risk by 20-30%, demonstrating that even a slight decrease in blood pressure can have a big impact.

Many professional organizations including Joint National Commission 8 (JNC 8), American Heart Association, American College of Cardiology, and American College of Sports Medicine recommend exercise to prevent, treat, and manage

hypertension. Exercise is one of the paramount modifiable lifestyle therapies for adults with hypertension. Conversely, physical inactivity may account for a 5-13% risk of developing hypertension later in life.

The reduction in blood pressure after exercise is called *post exercise hypotension (PEH)*. This reduction can last up to 24 hours after exercise and can be elicited with as little as 10 minutes of aerobic exercise, although 150 min/week is still recommended. Exercise reduces blood pressure through the following mechanisms:

1. **Reduced** sympathetic nervous system activity (the fight or flight part of the autonomic nervous system) through an increase in vagal tone which decreases the resistance within blood vessels.
2. **Reduced** levels of norepinephrine, a stress hormone, and neurotransmitter that increases the heart rate and pumping strength of the heart (known as cardiac output).
3. **Reduced** levels of plasma renin, a hormone secreted by the kidneys that increases blood pressure.
4. **Increased** levels of endorphins, which can help blood vessels relax, resulting in a **reduction** in blood pressure.
5. **Secondary gains** from exercise are reduced body weight, and stress levels.

Just how much and what kind of exercise do I actually have to do to get this benefit?

Even small amounts of consistent aerobic exercise can elicit benefits.

Those who exercise every day achieve the greatest benefits of PEH. Recent

data demonstrates that high-intensity interval training (HIIT) seems to reduce blood pressure slightly more (8 mmHg reduction) than moderate aerobic exercise (5-7 mmHg reduction).

Are you short on time? New data supports multiple shorter episodes of exercise. For example, three 10-minute episodes of exercise in a day could reduce blood pressure as much as exercising in one single bout (i.e. 30 minutes daily). *Pescatello et al (2015), p. 6*

Ask the Exercise Physiologist

The Importance of Variety



Do you have a question for our Exercise Physiologists?

Send your question(s) to [Camille Conway](#).

You may be featured in an upcoming newsletter!

**Tune in next week for information on exercising
and appetite control.**

Going the Extra Mile...

Check out this additional resource to help you on your exercise journey.

Boots et al. 2015. [Going the extra mile: Cardiorespiratory fitness is associated with brain structure, cognition, and mood in a middle-aged cohort at risk for Alzheimer's disease](#)



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