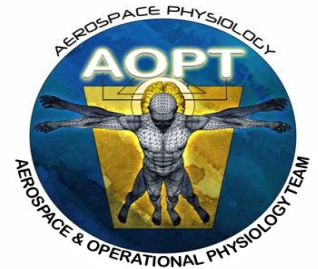


The Phiz Biz

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Courtesy of Aerospace and Operational Physiology
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High vs Low Impact Exercise

You may have previously heard someone say something along the lines of; *“Don’t run. It’s hard on your joints.”* *“You should try a low impact exercise, like swimming.”* *“Stay away from high-impact exercise.”* On the other hand, you may have also been pushed towards high impact exercises for the calorie torching benefits and the endorphin release. Either way, each type of exercise has its own pros and cons.

High Impact Exercise

High impact activities are types of strenuous cardiovascular routine where both feet may be off the ground at the same time. Some examples are dancing, aerobics, jogging, and hiking.¹ The jolting motions resulting from these types of activities can have an impact on the joints of about three times a person’s body weight with every step. Being overweight would only compound that stress and may result in an increase in pain and wear and tear on your joints. If you already have some joint damage from a preexisting injury, high impact exercise may only generate further damage. Also, certain pregnancy complications may make this type of exercise unsafe or uncomfortable as well.²



For most people, however, studies show that high impact exercise has positive effects. Like other body tissues, bone is living and responds to the stress placed on it by adapting and creating more bone, increasing strength and density.³ High impact exercise also strengthens joints by training all the muscles and ligaments surrounding it to become functionally stronger. For example, when you jump up, you fire up your muscles to launch yourself off the ground. When you land, those muscles contract eccentrically and brace you to soften the landing. Muscle strength is increased due to impact and diversity of the movements. Additionally, there is an increase in calorie burn due to the all out effort required.⁴

Low Impact Exercise



Low impact activities still allow a person to gain cardiovascular benefits and increase muscular strength and endurance, but place relatively minimal stress upon joints such as the knee, hip, and ankle.⁵ This type of exercise is also great for building flexibility and mobility. It provides an exercise alternative for individuals dealing with excess weight, injury, or even pregnancy, and potentially reduces the risk of injury. Some examples include swimming, biking, yoga, and the elliptical machine.⁶

However, low-impact exercise does not generally raise the heart rate as high and quick as other high impact workouts. A person would have to exercise for a longer period of time in order get the same cardiovascular benefit as higher intensity exercises. Low-impact exercise is also less effective at building bone density.⁷

The End Goal

Exercise is beneficial to the heart, muscles, joints, and mind. No matter what type of exercise you choose, the key is to find something that works for you. High impact and low-impact activities provide many benefits and switching between the two can give you the best of both worlds. Consider what you like to do and what your body needs. Do you like to work out on your own and want a quick, “to the point” workout? Activities like running or biking might be a great fit. Or do you like working together with a team or group for a little extra motivation? Sports, club teams or exercise classes might be a great option for you. Whatever it is—get moving and have fun.

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1, 3, 4 - <https://www.bones.nih.gov/health-info/bone/bone-health/exercise/exercise-your-bone-health>
2- <https://www.healthline.com/health/osteoarthritis/knee/alternatives-to-high-impact-exercises#1>
5-7 - <https://www.fitday.com/fitness-articles/fitness/5-foods-that-affect-your-mind.html>