At Home Fitness Cardio

Do it Right!
Exercises you Should Do

Want Vigorous Exercise. Try Stepping.

Great and Easy. Stair climbing is Vigorous. It expends approximately **9.0 METs or more.**

The ability to climb 4 flights of stairs without stopping is a sign of adequate aerobic fitness.

Train Using a Bottom Step of Home: Step up and down off a bottom 8”step for 30 to 90 seconds for one or more sets. This is another form of HIGH INTENSITY INTERVAL TRAINING (HIIT). Try 30 seconds of climbing, followed by 30 to 60 seconds of slower marching recovery and then repeat.

STAIR CLIMBING

It requires a good deal of strength and aerobic capacity. It gets you out of wind because it is vigorous AND REQUIRES A HIGHER DEGREE OF STRENGTH THAN RUNNING. It has a MET value equivalent to running.

Benefits of Taking the Stairs from Duke

- No special equipment is needed
- Stair climbing can be accumulated across the course of the day, making a significant contribution to the recommended 30 minutes of daily physical activity
- There is a significantly lower risk of mortality when climbing more than 55 flights per week
- Stair climbing requires about 8 - 11kcal of energy per minute, which is high compared to other moderate level physical activities.
- Active stair climbers are more fit and have a higher aerobic capacity
- Even two flights of stairs climbed per day can lead to 6 lbs of weight loss over one year
- There is a strong association between stair climbing and bone density in post-menopausal women
- Climbing stairs can improve the amount of "good cholesterol" in the blood
- Stair climbing increases leg power and may be an important priority in reducing the risk of injury from falls in the elderly
- Stair climbing can help you achieve and maintain a healthy body weight
- Stair climbing can help you build and maintain healthy bones, muscles and joints.

PERFORMANCE 101

PHYSICAL

CARDIO

MUSCLE

MOVEMENT

Why do I get out of Breath Climbing Stairs?

Summary: Stair climbing is high intensity exercise. So you should get out of breath. Normal paced stair climbing is similar to running at a 12 to 10 minute mile pace. You are doing an incredible amount of work when you climb stairs. If you analyze the movement of stair climbing you find out that you are moving both horizontally and vertically, so you have to propel yourself forward, but also lift your body weight up. The muscle fibers required to do stairs are not great at aerobic work because they are designed for power and they rely on anaerobic pathways, which produce CO_2. Interestingly, endurance athletes have an increased sensitivity to carbon dioxide and hydrogen, which are produced during anaerobic metabolism. The issue of being in shape for them is not being out of breath, but the inability to climb more steps. When your muscles aren't primed through a warm up to tackle the climb, it'll be more of a challenge and you will get out of breath. For endurance athletes who get out of breath stair climbing it may suggest you need to do strength training. Research currently has stair climbing in the No. #1 spot for calories burned beating running, swimming, cycling and walking.

PERFORMANCE 101: Why is Step Climbing so Hard and why do I get out of breath?

It is normal to get breathless during exercise.The great thing is that regular exercise can increase the strength and function of your muscles, making them more efficient. Stair climbing is high intensity exercise. Normal paced stair climbing is similar to running at a 12 to 10 minute mile pace. As matter of fact research supports that being able to climb 4 flights of stair vigorously without stopping is an indicator of adequate aerobic ability. You are doing an incredible amount of work when you climb stairs. If you analyze the movement of stair climbing you find out that you are moving both horizontally and vertically, so you have to propel yourself forward, but also lift your body weight up. Somewhat similar to walking on an incline, but harder. It requires not only endurance, but strength. Added to this the heavier you are the more work you are doing. To add to the difficulty stairs require more muscle mass activation because you're lifting your knees higher than when walking up a hill. To propel your body vertically takes more strength and power, thus requiring more fast-twitch fibers to be recruited to accomplish the task. These type of fibers are not great at aerobic work because they are designed for power and they rely on anaerobic pathways which produce CO2. Most people get out of breath when climbing stairs, but have you ever noticed being out of breath after climbing several flights. If you are in good shape do not worry that you that you are out of shape, because even people who are in shape get out of breath because of the elevated CO2. Interestingly, endurance athletes have an increased sensitivity to carbon dioxide and hydrogen, which are produced during anaerobic metabolism. The issue of being in shape for them is not being out of breath, but the inability to climb more steps. The other point to consider is some endurance athletes may not have enough strength since they do not do strengthening exercises. This means they might start breathing heavier sooner than someone who gets very little exercise. Also, since stairs are usually apart of your everyday life, you rarely (if ever) warm up before climbing. When your muscles aren’t primed to tackle the climb, it’ll be more of a challenge and you will get out of breath. Research currently has stair climbing in the No. #1 spot for calories burned beating running, swimming, cycling and walking according to a study from the University of Pennsylvania School of Medicine. In fact stair climbing burns 23% more calories than running, 250% more than swimming, 63% more than bicycling and 400% more than walking at 3.22 km/h (from cite).

Why is the StairMaster so Hard ?

Stair Stepping
Steady Pace =
Running 5-6 mph

Working Vertically and Horizontally is difficult.

The muscle fibers required to do stairs are not great at aerobic work because they are designed for power and the rely on anaerobic pathways.

$8000 Machine = Same Benefit at Home Using Your Stairs

Stair Climbing

METs = >7-14

VIGOROUS

METs can also be translated into light, moderate, and vigorous intensities of exercise.

1. Sedentary—Uses 1.5 or fewer METs. Examples are sitting, reclining, or lying down.
2. Light intensity—Uses from 1.6-3.0 METs. ...
3. Moderate intensity—Uses from 3.0-6.0 METs. ...
4. Vigorous intensity—Uses from 6.0+ METs.

INDOOR WINTER FITNESS

Stair Climbing

SAFE SIMPLE SUSTAINABLE EFFECTIVE

BECAUSE IT IS HARD