

Treadmill Stress Test

Part of your medical exam includes a “Bruce Protocol” treadmill stress test. The stress test provides a measure of your physical fitness and how your heart tolerates stress. You’re required to reach certain criteria during the stress test, which is measured by your VO₂ level.

What is VO₂?

- The volume of oxygen consumption, or VO₂, is a measurement of the body's cardiorespiratory fitness. It reflects the rate at which the body can consume and transport oxygen to working muscle. The oxygen is used to produce energy.

What does VO₂ measure?

- It measures the efficiency of a person's body to generate the energy required for activities with increasing workloads.

Why is VO₂ Important?

- The better your VO₂, the easier it is to complete day to day activities.
- Being physically fit decreases the risk for heart disease, high blood pressure, diabetes, and other health conditions.

Tips to improve your VO₂.

- High intensity interval training produces greater increases in VO₂ than continuous steady state training.
- Quit smoking.
- Losing weight if needed.
- Practice the "Bruce Protocol."
- Engage in a consistent exercise training program. See attached workouts.

Treadmill Protocol Used for Testing

Bruce Protocol			
Stage	Minutes	Grade (%)	MPH
1	3	10	1.7
2	6	12	2.5
3	9	14	3.4
4	12	16	4.2
5	15	18	5.0

Workouts

Always consult your primary care provider before beginning any exercise program.

The following workouts can be completed on your choice of exercise equipment. The intensity of each interval can be adjusted with resistance, duration, incline, and/or speed.

Intensity Definitions:

REST: Sit there and catch your breath (restore slower breathing).

EASY: A flat road, with slight base resistance, moving at a pace you could hold all day.

MODERATE: This will start to feel like work but is maintainable. Use resistance like you're on a small hill.

HARD: You are working! Breathing is heavy and it feels hard to hold this. Use medium - heavy resistance.

ALL-OUT: Give everything! Use heaviest resistance you can handle.

COOL-DOWN: Allow your body to gradually return to normal physical level.

INTERVAL: Alternate two or more activities requiring different rates of speed and degrees of effort.

Warm up for 10 minutes before your workout.

Workout 1.

30 seconds HARD

60 seconds EASY

REPEAT interval 4 times

4 minutes EASY

REPEAT entire series a total of 3 times

4 minutes cool-down

Workout 2.

1 minute HARD

2 minutes EASY

REPEAT interval 4-7 times

5 minutes cool-down

Workout 3.

20 minutes MODERATE

10 minutes EASY

20 minutes MODERATE

10 minutes cool-down

Workout 4.

20 seconds ALL-OUT

10 seconds REST

REPEAT interval 8 times

2 minutes EASY

REPEAT entire series a total of 4 times

5 minutes cool-down

Workout 5.

30 seconds HARD

30 seconds MODERATE

REPEAT interval 4 times

1 minute EASY

1 minute HARD

30 seconds Moderate

REPEAT interval 4 times

1 minute EASY

45 seconds ALL-OUT

15 seconds EASY

REPEAT interval 3 times

2 minutes EASY