

Strategies to Minimize the Blood Pressure Response during Resistance/strength Training

Examples of Conditions that may require you to follow the Resistance Training Modifications on page 2 below:

- borderline high resting blood pressure (just less than 160 mmHg (systolic BP) and just less than 100 mmHg (Diastolic BP))
- poor heart function (weak heart muscle)
- aortic aneurysm (an abnormal bulge that occurs in the wall of the major blood vessel (aorta) in your body)
- eye conditions such as retinopathy (related to diabetes)
- cervical artery dissection (a tear in the lining of a blood vessel in the neck)
- patent foramen ovale (PFO) (a hole in the heart that did not close after birth)

Please check the pre-participation safety screening criteria regarding the conditions above and check with your primary care physician or health care professional to ensure that it is safe for you to participate.

Strategies to Minimize Blood Pressure Response during Resistance Training

1. Blood pressure gradually rises as the number of repetitions performed increases
 - a. Reduce number of repetitions (i.e. start at 6 repetitions and progress to 10)
2. There is a greater increase in blood pressure when the amount of muscle mass engaged during the exercise increases.
 - a. Perform the exercise on one limb at a time. For example, 10 repetitions of bicep curls on one arm, followed by 10 repetitions on the alternate arm.
3. Blood pressure increases more with a heavier weight load.
 - a. Start with a light weight and gradually progress to a moderately heavy weight.
4. Avoid exercises that have an isometric component. An example of an isometric contraction is holding a dumbbell up without moving. An isometric contraction can occur when supporting your own body weight in a specific position as well.
5. Maintain a loose grip on the dumbbells to minimize the isometric contraction effect.
6. Avoid the Valsalva maneuver (avoid breath holding).
7. Take longer rests between sets (1 to 1 ½ minutes instead of 30 seconds).
8. Avoid performing exercises that require you to lie down.
9. Perform exercises at time when beta-blocker medication is at peak effect (i.e. about 2-4 hours after oral administration depending on the dose).
 - a. Examples of beta-blocker medication are Metoprolol (Lopressor) and Atenolol (Tenormin).