

## Heart Health through Resistance Exercise

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### DESCRIPTION

Resistance exercise, commonly known as strength training or weight lifting, is often associated with building muscle mass and improving overall strength. However, it also plays an important role in enhancing cardiovascular health. While aerobic exercises like running and cycling are typically highlighted for their heart health benefits, resistance exercise offers unique and complementary cardiovascular advantages. Understanding these benefits can help individuals incorporate a well-rounded exercise regimen that supports both muscle and heart health. Resistance exercise has been shown to improve various aspects of heart function. Regular strength training can enhance the heart's ability to pump blood more efficiently. This improved efficiency reduces the workload on the heart, allowing it to operate more effectively. Over time, this can lead to a decrease in resting heart rate, a key indicator of cardiovascular fitness. A lower resting heart rate signifies that the heart is functioning efficiently, requiring fewer beats to pump the same amount of blood.

### Reduced blood pressure

High blood pressure, or hypertension, is a significant risk factor for cardiovascular disease. Resistance exercise can play a role in managing and reducing blood pressure levels. Studies have shown that regular strength training can lead to reductions in both systolic and diastolic blood pressure. This effect is thought to result from improved vascular function and increased production of nitric oxide, a molecule that helps relax blood vessels, thereby reducing resistance to blood flow. Blood lipid profiles, including levels of cholesterol and triglycerides, are critical indicators of cardiovascular health. Resistance exercise has been found to positively influence these lipid levels. Regular strength training can increase levels of High-Density Lipoprotein (HDL) cholesterol, often referred to as "good" cholesterol, which helps remove Low-Density Lipoprotein (LDL) cholesterol, or bad cholesterol, from the bloodstream. This balance reduces the risk of plaque buildup in the arteries, which can lead to atherosclerosis and subsequent cardiovascular events.

### Improved insulin sensitivity and muscle mass

Insulin resistance is a condition where the body's cells become less responsive to insulin, leading to higher blood sugar levels and an increased risk of type 2 diabetes and cardiovascular disease. Resistance exercise has been shown to improve insulin sensitivity, allowing the body to use insulin more effectively. This improvement helps regulate blood sugar levels and reduces the strain on the cardiovascular system. Enhanced insulin sensitivity also contributes to a lower risk of metabolic syndrome, a cluster of conditions that increase the risk of heart disease. Increased muscle mass from resistance exercise leads to a higher resting metabolic rate, which means the body burns more calories at rest. This increased metabolism can help manage body weight, reducing the risk of obesity, a major risk factor for cardiovascular disease. Additionally, stronger muscles support better overall function and mobility, contributing to a more active lifestyle, which is beneficial for heart health.

### Stress reduction and balanced exercise

Mental health and cardiovascular health are closely linked. Chronic stress, anxiety, and depression can negatively impact heart health. Resistance exercise has been shown to reduce stress and improve mood by promoting the release of endorphins, the body's natural mood enhancers. Improved mental health can lead to lower levels of stress hormones like cortisol, which, in high amounts, can contribute to hypertension and other cardiovascular issues. Incorporating resistance exercise into a balanced fitness routine that includes aerobic activities provides comprehensive cardiovascular benefits. While aerobic exercise primarily improves cardiovascular endurance and efficiency, resistance exercise enhances muscle strength and metabolic health, offering a holistic approach to heart health.

### CONCLUSION

Resistance exercise is a powerful tool for enhancing cardiovascular health. By improving heart function, reducing blood pressure, enhancing blood lipid profiles, increasing

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insulin sensitivity, and promoting mental well-being, strength training offers a multitude of benefits that support a healthy heart. Integrating resistance exercise into a regular fitness

routine can provide a well-rounded approach to maintaining and improving cardiovascular health, making it an essential component of any exercise program.