

## Resistance training - health benefits

Resistance training is based on the principle that muscles of the body will work to overcome a resistance force when they are required to do so. When resistance training is undertaken repeatedly and consistently, muscles become stronger.

The best way to develop muscle strength is for the muscle to contract to its maximum potential at any given time. It is measured in resistance training by the term XRM, where RM is the maximum number of repetitions that can be completed with a given resistance or weight. X refers to the number of times a certain weight can be lifted before the muscle fatigues. It is the RM range that determines what type of improvements the muscles will make. The optimal range for improving muscle strength is 8–12 RM for a beginner and 2–6 RM for the more advanced.

If you vary your resistance training program, through the number of repetitions and sets performed, exercises undertaken and weights used, you will ensure that you maintain any strength gains you make.

### Examples of resistance training

Different types of resistance training include:

- **Free weights** – such as dumbbells or barbells.
- **Weight machines** – these are devices that have adjustable seats with handles attached to either weights or hydraulics.
- **Resistance bands** – these are like giant rubber bands. The bands are portable and can be adapted to most workouts. The bands provide continuous resistance throughout a movement.
- **Own body weight** – this can be used to do bent-knee sit-ups or abdominal curls, push-ups and chin-ups. Using your own body weight is convenient and free.

### Health benefits

There are a variety of physical and mental health benefits that can be achieved through strength training:

- Improved muscle strength and tone
- Weight management
- Prevention and control of health conditions such as diabetes, heart disease and arthritis
- Pain management
- Improved mobility and balance
- Improved posture
- Decreased risk of injury
- Increased bone density and strength
- Reduced body fat
- Increased muscle-to-fat ratio
- Boosted metabolism (burning more kilojoules when at rest)
- Improved sleep patterns
- Increased self-esteem
- Enhanced performance of everyday tasks.

### Getting started

Remember to consult with your doctor before you start any new exercise program, particularly if you are overweight, over 40 years, have a pre-existing medical condition or haven't exercised in a long time.

## Preventing injury

Resistance training can be dangerous if your technique is not right. If you are interested in starting resistance training, make sure you have an assessment and program written for your specific needs. Make sure you are shown the exercises by a physiotherapist, exercise rehabilitation professional or qualified gymnasium instructor.

Things to pay attention to include:

- **Clothing** – dress comfortably and practically (for example, items that do not restrict movement and allow you to sweat easily).
- **Personal feeling** – don't train if you are overtired or feeling ill.
- **Breathing** – breathe normally while lifting by exhaling during the exertion or harder phase and inhaling during the easier or relaxation phase.
- **Technique** – maintain a strong form while lifting, as this will prevent injury through incorrect technique. Always lift weights within your own capabilities and slow down or stop if you feel the weight is out of control or too heavy.
- **Full range of motion** – it is important when lifting a weight that it travels through the full range of motion of the joint. This develops strength of the muscle at all points of the motion of the joint and decreases the chance of injury through overstretching.

## Where to get help

- Your doctor
- Your local council
- Local gymnasium or qualified trainer
- Physiotherapist
- Smartplay Tel. (03) 9674 8777

## Things to remember

- Resistance training increases muscle strength by pitting the muscles against a weight or force.
- Different forms of resistance training include free weights, weight machines, resistance bands and your own body weight.
- The beginner should consider training two or three times per week to gain the maximum benefit.

**This page has been produced in consultation with, and approved by:**

Smartplay

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