



Advice on Resistance Exercise

You are aiming to increase your amount of body muscle as well as the endurance and strength of your muscles. For endurance training you need a lighter weight or smaller resistance and more repetitions. For strength training you need a heavier weight or greater resistance and fewer repetitions. We've designed the resistance sessions to work for everyone, whatever their fitness level. Do them two to three times a week to help maintain your muscle mass while you're losing weight. Always do a warm-up and cool-down before and after resistance training.

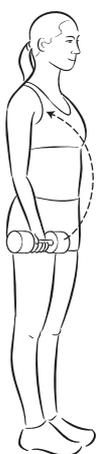
- Keep your movements slow and controlled, both when you contract and relax the muscle. Focus on your breathing – you should breathe out on exertion and breathe in as you relax the muscle. As with the stretches, avoid holding your breath when you're concentrating on an exercise.
- Think about your posture and balance. Stand in front of a mirror to check your posture. Stand tall – imagine a string attached to the top of your head pulling upwards – with your shoulders relaxed and down and your weight balanced equally on each foot, with your feet hip-width apart. Good posture will help the important core muscles around your back and stomach area to do their job properly.
- These exercises shouldn't hurt or be uncomfortable – if they are, stop!
- Avoid locking your elbows or knees straight or overextending joints.
- Familiarise yourself with the jargon. Exercise programmes often refer to 'sets' and 'reps' (repetitions), so 'one set of 10 reps' for a bicep curl would be 10 repetitions of a bicep curl and two sets of 10 reps would be 10 repetitions, a pause or rest and then another 10 repetitions.

You can do repetitive resistance exercises using free weights (dumbbells), resistance bands, the weight of your own body, inflatable gym balls or one of the many different exercise gadgets on the market. Free weights don't have to cost you a penny. Water weighs 1 g per ml so if you fill a 500 ml (17. fl oz) plastic water bottle your handmade weight will be 500 g (1 lb 1 oz). To make heavier weights, fill bottles with sand. Once you start needing heavier weights you might want to think about buying a set. Latex resistance bands come in a variety of colours, which refer to their thickness. The thicker they are, the tougher they are to stretch and the more resistance they produce. They can be used with most exercises: for example, to do bicep curls, place the resistance band on the floor and position your



foot in the middle of the band. Pick up an end of the band in either hand, making sure you have a good grip. You can then use the resistance of the band to do your bicep curls. Don't wrap the band around your hand and cut off the blood flow. If you're using your own body weight for a resistance exercise, for example a press-up/push-up, make sure you start with the easiest position before you progress over time: for example, start by pressing from all fours and progress to full-on toes press-ups.

Bicep curls



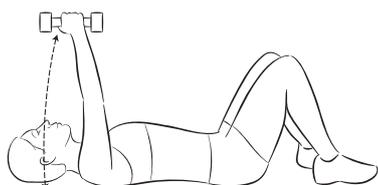
Active muscles: Biceps

Description: Stand with your feet shoulder-width apart and your arms down by your sides, palms facing forwards. With a light weight in your right hand, bring the weight up towards the shoulder. Bend the elbow but keep it by your side. Switch arms and repeat.

Progression:

1. Try doing both arms together.
2. Increase the weight.

Triceps extension



Active muscles: Triceps

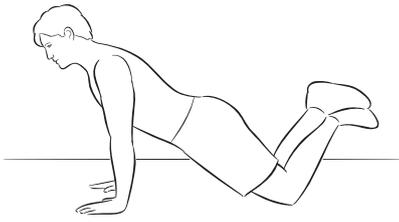
Description: Lying on the floor on your back with a light weight in your right hand, raise it straight above your head, gently bending your elbow, lowering the weight to the side of your head. Switch arms and repeat.

Progression:

1. Try doing both arms together.
2. Increase the weight.
3. Do the exercise standing up allowing the arm and weight to go behind the head.



Push-ups



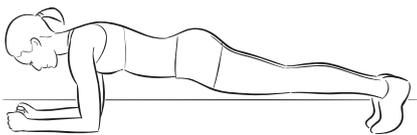
Active muscles: Chest (Pectoral muscles)

Description: Kneeling on all-fours, with your hands flat on the floor shoulder-width apart, lift your feet off the floor so that the weight is now on your knees and arms. Slowly bend your elbows, keeping your back straight, taking your nose to the ground.

Progression:

1. Extend your legs, going up onto your toes, spreading your legs apart and repeat.
2. Extend your legs, going up onto your toes and keep your feet together.

Plank



Active muscles: Abdominals

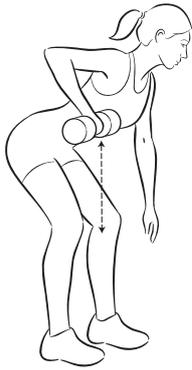
Description: Lying on your front with palms and all of your lower arm in contact with the floor, think of yourself from neck to toes as one long, rigid piece of wood. Raise yourself up (the palm and lower arm stay in contact with the floor) and you're on your toes in a position similar to a press-up but much closer to the floor. Hold this straight, horizontal plank position. Be very careful if you suffer from lower-back problems. Try not to cave in and let your stomach fall to the floor. If the plank feels too intense, relax to the floor and try an easier version on all-fours. Progress by moving your knee position further back, until your legs are straight as above.

Progression:

1. While you are in the plank position, raise one leg 2.5 cm (1 in) off the ground, hold for two seconds and switch legs.
2. Rotate to the side so that your elbow, shoulder and head are in a line.



Single arm row



Active muscles: Back and biceps

Description: Stand with your feet shoulder-width apart, legs and back straight. Lean forwards holding a weight in one hand and, arm extended, pull the weight back towards you, bending the elbow. Repeat with the other arm.

Progression:

1. Exercise both arms together.
2. Increase weight.
3. Lean over further (make sure your back is straight).

Squats



Active muscles: Thighs and buttocks (Hamstrings, quadriceps and gluteal muscles)

Description: Stand with your feet slightly wider than hip distance apart, with both feet facing forwards. Slowly push your bum backwards and then, keeping a straight back, shoulders and your head up, bend at the knees, in a sitting motion.

Progression:

1. Raise your arms up straight as you squat.
2. Try the same thing, but with small weights.
3. Try while doing arm weights (e.g. bicep curls).

Home circuit class

For a complete workout, combine cardiovascular, resistance and flexibility training, and make yourself a home circuit using five or six of the above resistance exercises. Alternate between leg and arm exercises to prevent fatigue and add marching, side-stepping or skipping in between each strengthening exercise to raise your heart rate. Start with low, or no, weights and slowly increase as you progress. Gradually add more exercises to your circuit and increase the number of repetitions and sets that you do. Cool down and stretch to complete your workout. The exercises that you can do with weights are marked * in the table overleaf.



EXERCISE	WEEK 1	WEEK 4	WEEK 8
Squat	1 set x 10 reps	2 sets x 10 reps	3 sets x 10 reps
Bicep Curls*	1 set x 10 reps	2 sets x 10 reps	3 sets x 10 reps
Lunges	1 set x 10 reps	2 sets x 10 reps	3 sets x 10 reps
Tricep Extensions*	1 set x 10 reps	2 sets x 10 reps	3 sets x 10 reps
Plank	2 sets 20 seconds hold	2 sets 30 seconds hold	3 sets 40 seconds hold
Push-Ups	1 set x 10 reps	2 sets x 10 reps	3 sets x 10 reps

After the first 12 weeks ...

You can continue with the same exercise programme for the next three months, to give your body time to adapt before you step things up to aim for 300 minutes of moderate or 150 minutes' vigorous cardiovascular exercise a week. If you feel ready to do more before the end of the three months, go for it! Remember that you don't have to stick with the same exercise classes or activity, but you should keep doing the same amount of exercise, at the same level of intensity.

