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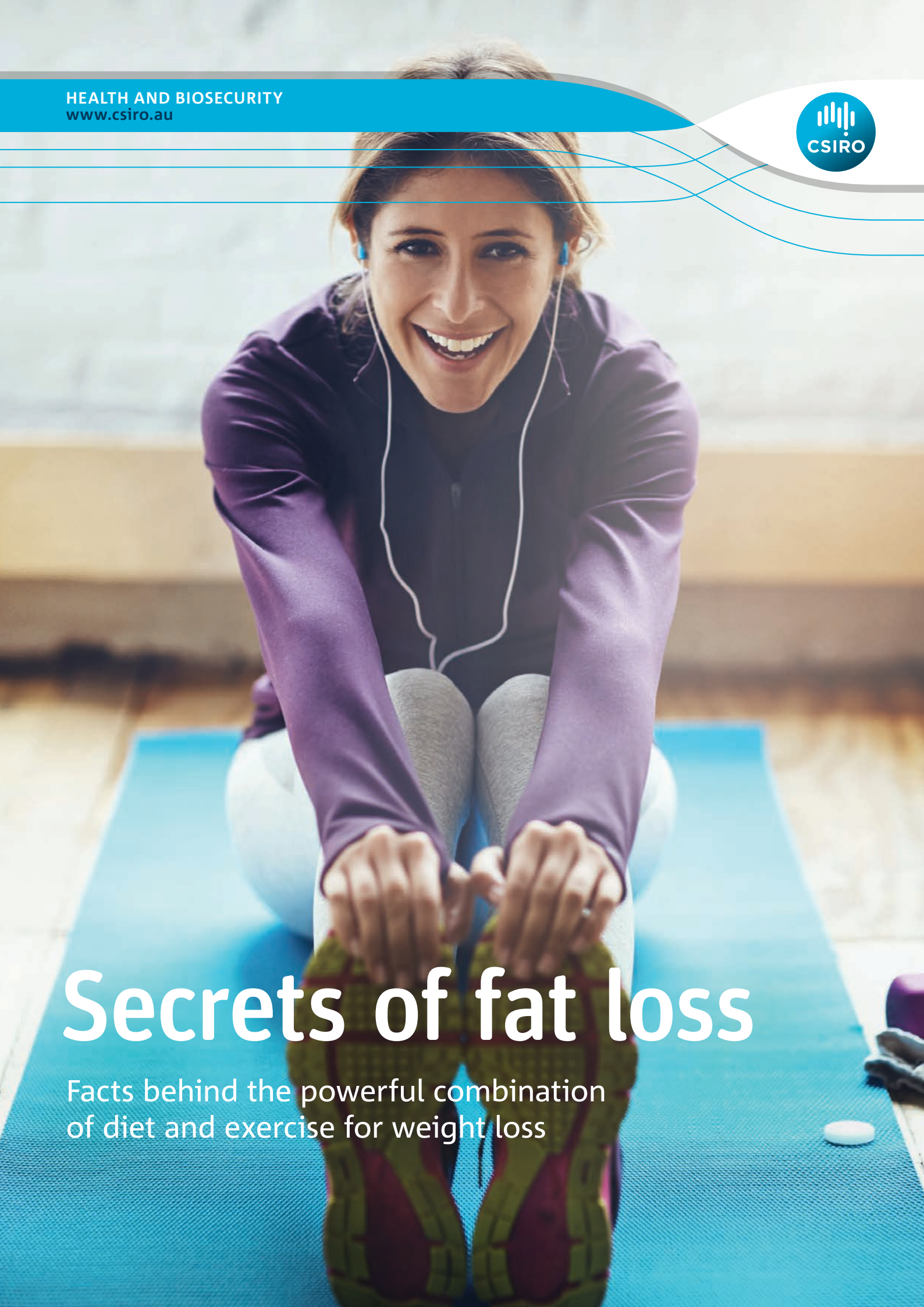

Secrets of fat loss

Facts behind the powerful combination of diet and exercise for weight loss

It’s time to diet and exercise

Every spring, many Australians put the winter months behind them and embark on diet or exercise regimes to get in shape for summer. But few Australians know the best combination of diet and exercise for optimal weight loss and wellbeing. This guide includes practical, science-backed tips on the role exercise plays in weight management, and how combining higher protein diets with resistance workouts is the power duo for fat loss.

Australia’s Physical Activity Guidelines

Being physically active and limiting sedentary time (or sitting) is essential for health and wellbeing. Very few people know that Australia has national guidelines for getting us to move more and sit less. In a survey of over 5,000 CSIRO Total Wellbeing Diet members, we found that only 1 in 3 people were aware of these guidelines.

The Australian Physical Activity Guidelines recommend adults aim for:

- 150-300 minutes of moderate intensity activity per week, or
- 75-150 minutes of vigorous intensity activity per week, and
- Muscle strengthening activities (or resistance exercise) on at least 2 days per week.

You can do a combination of both moderate and vigorous exercise. For example, 10 minutes of vigorous activity (such as running) equals 20 minutes of moderate activity (such as walking).

The lower end of the range will improve blood pressure, heart health, muscle and bone strength. For greater benefit, aim for the higher end of the range which will help to prevent unhealthy weight gain.

3 TYPES OF EXERCISE EXPLAINED

Moderate exercise

Activities that take some effort, but you can still talk while doing them.

- brisk walking
- recreational swimming
- recreational dancing
- social tennis
- golf
- household chores like cleaning windows or raking leaves

Vigorous exercise

Activities that require more effort and make you breathe harder and faster.

- running
- fast cycling
- aerobics
- high intensity interval training
- organised sports

Resistance exercise

Activities that help to strengthen your muscles.

- toning exercises such as push-ups, squats or lunges
- weights in a gym
- household chores like digging, lifting or carrying

The diet connection

Higher protein diets prevent muscle loss

All weight loss diets are low in kilojoules to some degree but the composition of the diet is an important consideration that may impact on weight loss success and weight maintenance.

Diets that are higher in protein increase satiety – that is, leave people feeling more satisfied. Foods high in animal and vegetable proteins help to reduce hunger for up to 4 hours after a meal, which helps to control appetite between meals and helps to reduce the amount we eat at the next meal.

Compared to higher carbohydrate diets, higher protein diets appear to result in greater weight loss and greater reductions in fat mass. They are also beneficial for mitigating reductions in fat free mass and metabolism.

During weight loss, we lose fat but about 20% of the weight lost is lean tissue (or muscle mass). When a high protein diet is adopted during weight loss, a greater amount of lean tissue can be maintained, which is important as this offsets this natural loss that can occur during weight loss.

20% of weight loss is muscle loss. Higher protein diets can offset this loss which helps keep your metabolism burning bright.

Power combo for fat loss

Diet and exercise are the two keys to achieving a negative energy balance and weight loss. In the short term, dieting, or kilojoule restriction, alone seems to have a greater, more consistent effect on weight loss then exercise alone. But the benefits of resistance exercise in reducing body fat are important, and **good weight loss results are achieved when resistance exercise is combined with a kilojoule restricted diet. In the longer term, exercise is very important for weight loss maintenance.**

CSIRO research shows that adding resistance exercise training to a kilojoule restricted diet results in favourable body composition outcomes and additional benefits over just dieting alone. For example, in a group of overweight and obese adults with type 2 diabetes, a 16 week diet program resulted in 8.8kg of weight loss compared to 12kg when diet and exercise were combined. The exercise program in this study was 3 sessions of resistance training per week.

There seems to be **an additive effect when a high protein diet plan is combined with resistance exercise**. This combination results in greater weight loss, greater fat loss and greater reduction in waist circumference compared to a higher carbohydrate diet with exercise, or just diet alone. In the CSIRO study referred to above, participants following a high protein diet with resistance exercise lost 40% more fat mass than those following a higher carbohydrate diet with resistance exercise, and almost twice as much fat mass as those on the diet programs without exercise.

40% MORE FAT LOSS

A higher protein diet combined with 3 resistance sessions a week resulted in the loss of 40% more fat mass in a CSIRO study comparing high protein and high carbohydrate diets.

When we asked CSIRO Total Wellbeing Diet members what they liked about resistance exercise, most people told us they liked the improvements in strength, the associated health benefits and muscle toning and fat loss as a result of doing regular resistance exercise training.

The resistance factor

Resistance exercise explained

Resistance exercise includes 'pushing' 'pulling' or 'lifting' activities in which the muscles work against some form of resistance. The resistance can be provided by bodyweight (e.g. push-ups), hand-held weights (e.g. dumbbells, resistance bands), or pushing or pulling using machines as resistance.

Resistance exercises include:

- Lifting weights at a gym or at home
- Bodyweight exercises such as push-ups, squats, or lunges
- Gymnastics or plyometric exercises
- Some styles of yoga or pilates
- Weight-bearing gym classes such as F45, CrossFit or Les Mills Body Pump
- Household or gardening type chores that involve lifting, carrying or digging

Resistance exercise has many benefits

Being physically active regularly and sitting less will:

- Reduce your risk of heart disease
- Reduce your risk of type 2 diabetes
- Help to control your blood pressure, cholesterol and blood sugar levels
- Prevent unhealthy weight gain and help with weight loss
- Create opportunities for you to socialise with other people
- Help to improve your mood and manage mental health problems
- Help you to develop and maintain overall physical and mental wellbeing

Regular resistance exercise is particularly beneficial to help strengthen your muscles as well as:

- Manage blood pressure, blood sugar and cholesterol levels
- Prevent and control heart disease and type 2 diabetes
- Improve your posture, balance and mobility
- Reduce the risk of falls or injury
- Make everyday tasks easier to do

Enjoy the afterburn

The benefits of resistance exercise can last well after you have finished your workout. Resistance exercise helps to retain or build muscle, and the preservation of lean muscle mass increases your metabolism. A higher metabolism is a good thing as you burn more energy all day. You even burn more kilojoules at rest, which makes weight loss easier.

The idea that you burn more kilojoules even after your workout has finished is called excess post-exercise oxygen consumption or oxygen debt. It is difficult to say how long this lasts for, as it depends on the duration and intensity of the exercise. The intensity of exercise seems to be particularly important in terms of increasing the afterburn effect of resistance exercise.

KNOWLEDGE GAP

75% of CSIRO Total Wellbeing Diet members know walking is good for weight loss but less than 40% believe resistance exercise is important.

Oxygen debt: the technical term for the afterburn created by resistance exercise. It means your body keeps burning kilojoules at an increased rate after your workout has ended.

Who needs resistance exercise most?

His vs Her resistance exercise

Gaining body strength is important for everyone. That is why the Australian Physical Activity Guidelines for resistance exercise are the same for men and women – at least twice per week.

The benefits of resistance exercise include gains in strength but this doesn't have to come with 'bulk' as many people might think. Resistance exercise can develop muscle definition and reduce your waist circumference, which in itself is a risk factor for disease.

Women have more to 'gain'

There is evidence that the results of dieting for weight loss, with or without exercise, are different for men and women. For example, men often start at a heavier weight and therefore lose more weight when dieting compared to women. Women tend to lose more off their hip circumference but also lose more lean muscle (or fat free mass). So, it might be particularly important for women to do resistance exercise during weight loss to maintain this lean muscle mass and strength.

Interestingly in the CSIRO Total Wellbeing Diet members we surveyed, women were more likely to report lifting weight or toning exercise as being important for weight loss – whereas men thought walking and jogging were the two most important types of exercise for weight loss.

It's never too late to start

You are never too old to start exercising. Resistance exercise is about gaining body strength, and this is important at any age. Resistance exercise has many benefits including increasing or maintaining muscle strength as you get older (muscle loss associated with age is called sarcopenia) and preserving bone strength (reducing your risk of osteoporosis).

Maintaining strength, balance and mobility improves your functional ability to do daily activities. Being fit and healthy helps you get the most out of life.

Advantages for overweight/obese

Some people find exercise hard, especially if they are overweight or obese. But with weight loss exercise does become easier.

The overweight and obese members we surveyed were more resistant to resistance exercise than those of a healthy weight but importantly they were equally aware of the benefits of doing muscle strengthening exercises for weight loss.

The benefits of resistance exercise are especially important for overweight or obese individuals. For example, insulin resistance is more common in overweight individuals and is a risk factor for type 2 diabetes and cardiovascular disease. Doing regular resistance exercise results in improvements in blood sugar control reducing this risk.

Resistance exercise is also particularly beneficial for reducing abdominal fat which will lower the risk for heart disease. As opposed to rhythmic, weight bearing aerobic exercise like jogging, resistance exercise may also be easier for overweight or obese people as it places less stress on the joints.

Overcoming the barriers to exercise

Excuses, excuses

The latest Australian Health Survey suggests that nearly 60% of Australian adults are sedentary or have low levels of physical activity.

'Move more, sit less' or 'Use it or lose it' are mantras we need to keep in mind. There are so many opportunities to sit in our lives and the key is to find opportunities to move more.

Common reasons people report for not doing enough exercise include not having enough time, it is inconvenient, they lack motivation, it's not fun or they are not confident to exercise.

Many of our members reported that resistance exercise was important to them but having to go to a gym, family commitments getting in the way, and the risk of getting injured were common things that people reported not to like about doing resistance exercise. It is important to find ways to overcome these potential barriers to achieve enough physical activity each day.

No gym membership necessary

Moderate intensity exercise like brisk walking is easy to do as you can just put your shoes on and head out for a walk. Doing resistance exercise can also be easy and doesn't need to always be done in the gym with heavy weights. The resistance can just be provided by your own bodyweight.

Depending on your fitness level and exercise experience, resistance exercise can be done with many different types of equipment.

No equipment – just your bodyweight to do push-ups, lunges, squats, jump squats or step-ups.

Resistance bands and dumbbells – these are inexpensive and can make resistance exercises a little more difficult – in a good way!

Household items can even be used in place of dumbbells. For example, shoulder presses with bags of rice, or squats holding a bag of potatoes.

Gyms provide access to more advanced equipment. So, a work out with machines or heavier free weights is great if you have a gym membership.

HOW TO DO RESISTANCE EXERCISE AT HOME

The following resistance workout is from the CSIRO Total Wellbeing Diet which includes 3 resistance workouts a week. For maximum benefit, our workouts target the whole body, require no equipment and can be performed at home in 15-20 minutes.

Squats x 15-20 reps

Push ups x 15-20 reps

Our programs can be tailored to suit a range of fitness levels.

Glute bridge x 15-20 reps

Arm circles x 60 seconds

IMPORTANT: Consult your doctor, physiotherapist or health care provider before starting a new exercise program.

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CONTACT US
t 1300 363 400
+61 3 9545 2176
e csiroenquiries@csiro.au
w www.csiro.au

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