



The Science

An introduction to
strength training

STRONGLY

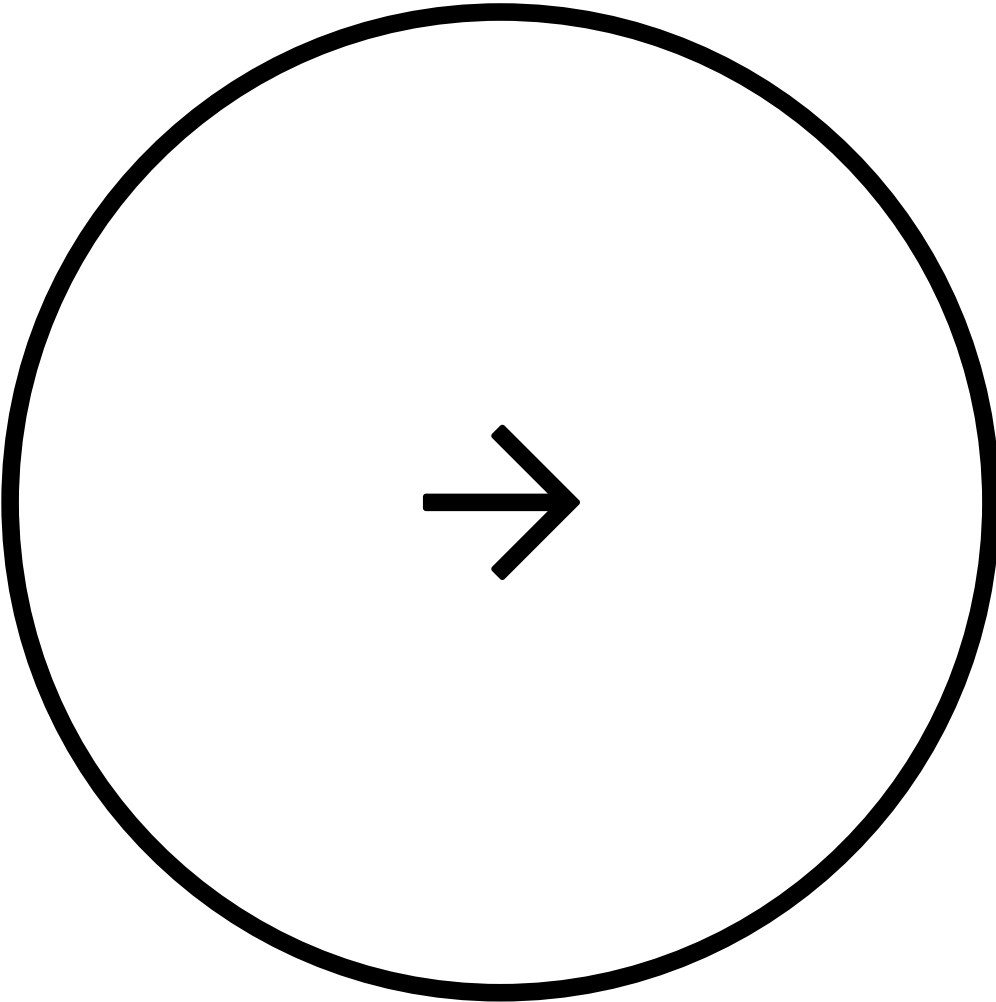
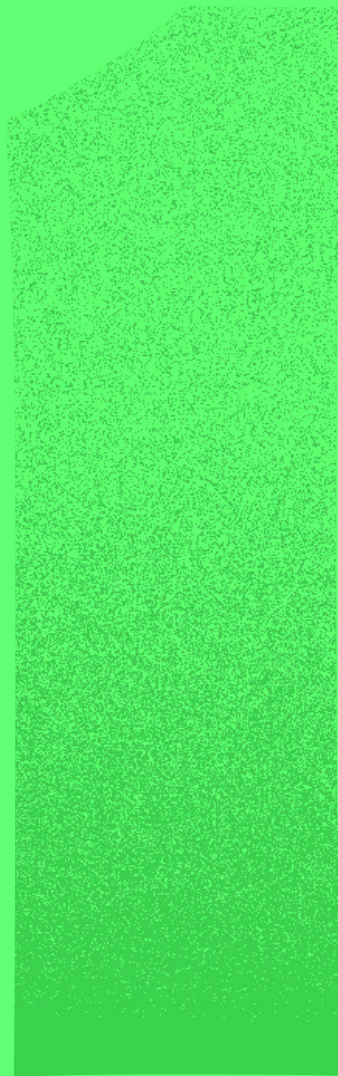


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The questions

What is strength training?

Put simply, strength training is a type of exercise that is designed to strengthen your body.

Strength training involves weight bearing exercises that put force on muscles (and in turn, bones) to strengthen the human body.

Strength training is often also referred to as *resistance training* so be mindful that when you see this term, it is in fact the same thing as strength training.

There are various types of strength training and resistance equipment but generally the two most common forms of strength training include hypertrophy and muscular strength.

Hypertrophy is concerned with increasing the size of muscles, whilst muscular strength is concerned with building the amount of weight you can lift. Both are very beneficial, and Strongly recommends a combination of the two.

Why is strength training so important?

In a study conducted in the UK, two thirds (67%) of adults met guidelines for aerobic activity such as walking, running and cycling, yet less than one-third met guidelines for the Health Survey for England (HSE) definition of strengthening activities^[1]. There is an obvious need for more people to take up strength activities.

One thing that's becoming very clear is that research is showing strength training is quickly becoming recognised as the number 1 way to improve your health overall. As you'll see throughout this article, there are numerous reasons strength training is increasingly recommended by health professionals.

Who is strength training for?

Strength training has traditionally been associated with men looking to get bigger, and this has been a problem that undoubtedly contributes to the lack of people (as mentioned above) doing strength training.

The truth is that strength training is for everyone. Whatever your goals now and later in life, strength training creates a healthy, resilient body so you can do all the things you want both now and for decades to come.

Strength training is often more preventative – being stronger prepares you for life’s challenges.

In fact, as you’ll see below, strength training is directly beneficial for cognitive decline – it’s more important than ever for us to encourage others who may think they are too old for strength training to give it a try. But younger people strength training will also see incredible cognitive performance and sense of clarity.

At Strongly we believe that the supplement, gym and fitness marketing industries over the past few decades has had a negative effect on peoples’ perceptions of training with weights. When companies use big muscular men in their marketing efforts, it alienates a large portion of the population, and also creates myths (such as women will get ‘too bulky’) that become dogma.

Thankfully, we are well on our way to moving forward from this, with many companies now creating more inclusive campaigns, and a massive 54% of gym memberships are from female members^[2].

Strength training & burning fat

What we need to distinguish between at this point is burning fat vs losing weight.

Often people focus on losing weight as a goal, particularly in combination with a short term diet. The thinking here is that increasing exercise (of any kind) whilst reducing calories (eating less) will result in a reduction of body weight.

And if done correctly, this is true. But there are a number of points that make this a bad approach for health.

Weight lost could come from anywhere – including muscle. It is certainly not a good thing to lose muscle. In the section below on ageing we dig deeper on this point, and studies have shown that a loss of muscle mass is a direct contributor to conditions of metabolic syndrome and also a contributor to fat gain^[3].

Not only that, but most diets and workouts aimed at weight loss are usually short term – you can't sustain them — so are guaranteed to fail.

This is where resistance training comes into play.

Studies have shown that the more muscle mass you have on your body, the higher your metabolic rate – and ability to burn fat^[4]. This is why strength training, and the associated muscle gain that comes with it, is the best way to keep fat at bay – consistently.

So using weights is better than doing cardio?

We still recommend cardio as part of your routine to contribute to overall aerobic health, although there are also many cardiovascular benefits to resistance training^[5].

But if one of your core goals (like many) is to change your body composition, as well as staying healthy, then strength training will be more beneficial and should be your priority.

When it comes to fat loss, strength training burns less calories during your workout vs high intensity cardio (such as interval training). However, following your workout you will burn more fat after a resistance training session, and for longer^[4].

At Strongly we recommend 3 weight sessions and 1 cardio session per week.

THE SCIENCE



The combinations

Strength training & weight management

What's the difference between burning fat and weight management? Well as we mentioned in the last section, as you add more muscle to your body it becomes a much better fat burning machine.

One of the core teachings at Strongly is how to change your body.

When you use only cardio to lose weight, you just lose weight based on how little you can eat and how much exercise you can do. You're not changing your body, you're simply making it smaller, and likely losing muscle over a wider percentage of your body in the process.

Using resistance training instead will change your body for the better by adding more lean muscle, and in turn your resting metabolism increases, making it far easier to manage your weight^[4].

You'll also find that the stronger you get, the more you'll enjoy lifting weights, and therefore the more likely you are to go to the gym, and keep fat off.

Gaining more lean muscle not only looks great, but has immediate weight management benefits.

Improved cognitive function & mood

Easily the most overlooked benefit of strength training is its effect on mood.

Cognitive function, quality of life and sense of coherence (ability to manage life) have been studied and improved by resistance training in older populations^[15, 16] and even more research is on the way.

Resistance training has also been shown to improve symptoms of depression in at least 20 studies^[4] which is slowly making its way into medical recommendations.

And whilst we follow scientific studies closely, the effect strength training has on mood is certainly the one that gets most praise anecdotally.

At Strongly we've heard strength training described as "empowering" and providing "resilience", and it is striking how quickly you will notice this if you are new to it. What is often seen as something extremely simple – literally picking something heavy up and putting it down – can have a very complex and positive impact on your mind. The discipline that develops from lifting weights is an incredible thing.

If you're thinking about strength training to improve your physical appearance, you can be safe in the knowledge that it will have an incredible effect on your mood too.

Working with heavy weights is challenging, but what challenges you physically will strengthen the mind.

Strength training to slow ageing

There is a large volume of research on the benefits of resistance training for combating the effects of ageing, and for good reason.

As we age, we lose skeletal muscle mass^[6]. The dogma here has traditionally been that it is something we can't do much about, it just happens as we age.

However, studies have shown that resistance exercises can be a countermeasure to many age related chronic diseases. This primarily includes cardiovascular disease and type-2 diabetes, which are more prevalent in older age groups^[7]. No matter your age, starting strength training now helps build a platform to make you more mobile and active in later life.

Many studies are showing that the use of resistance training should be prescribed more often to keep the negative effects of ageing at bay^[8] yet even without considering scientific studies we can apply some common sense and realise that strength is extremely useful as we grow older.

Imagine being stronger into your 50's, 60's and even 70's – being able to play with grandchildren or easily get up and down the stairs are simple examples – but ones we'd surely all like to be comfortable with. These improvements for “simple functional tasks” are obvious to us, yet also well researched^[11].

It's never too late to try strength training, just ensure that if you are completely new to strength training and are in an older age group, that you test your strength first before moving straight into work with barbells. Kettlebells can be a great place to start to assess your maximum weight lifting benchmarks.



The bonuses

Stronger bones & joints

Most of the other benefits of strength training are only just becoming well known and recommended by doctors, but strengthening bones has been a more common recommendation, particularly where illnesses such as osteoporosis are concerned.

When we practice resistance training, we exert pressure on our bones from the muscles contracting around them. This pressure leads to more “bone density”^[10]. Because our bones are essentially made from minerals, the pressure on them makes the composition of minerals more compact, or dense.

Put simply, strength training improves the strength of our bones.

This is obviously a huge benefit for ageing populations^[9] as well as a preventative benefit for younger age groups.

Further to bone strength, there have been studies on older populations with osteoarthritis that concluded strength training programmes with progressive overload (progressing by increasing weights) will improve the condition at any age group. Your aching joints may thank you for trying resistance training.

Reducing chronic pain

It may seem counterintuitive to recommend training with weights when you are experiencing chronic pain such as lower back pain. However, studies have shown that resistance training and the increase in muscle strength it brings can actually reduce pain and make life easier for those living with it^[12].

Of course, if you are experiencing chronic lower back pain or similar, you will need to consider using less weight if you are new (or returning) to strength training, to assess your abilities and create a baseline to work from.

One of the issues you may face is when speaking to your GP, who will usually recommend to stop exercise entirely if you are in pain. Our advice is to consult with someone who is trained in biomechanics such as an osteopath or physiotherapist. They will be able to guide you in a more constructive way to using strength training as a way to relieve pain.

Improving blood pressure

High blood pressure, or hypertension, is a condition that affects around 1 in 3 adults in the UK^[13] and even more in the US.

We have known for quite some time that endurance exercise helps to reduce blood pressure, and now there is also evidence to suggest that a combination of endurance and resistance exercise could be more beneficial^[4] – whilst resistance training on its own is also effective at reducing systolic and diastolic blood pressure^[14].

Due to the nature of strength training being so rewarding and meditative (more on the next point) plus benefits to reduce blood pressure, it seems like a no brainer for those diagnosed with hypertension.

Boosting your confidence

Feeling more useful, being stronger, improving your posture and improving mental health: these things tend to stack up, and an overall effect is great confidence.

The science says so too. One study looked at the relationship between physical activity and self-esteem among adults, and concluded that regular physical activity be recommended to those reporting lower self esteem^[17].

The impact on “the self” from resistance training has also been studied, showing increases in self-efficacy and self-worth^[18] resulting from resistance training.

There is no doubt that the confidence gained from feeling and looking stronger will have a positive impact in other areas of life, be it relationships or work. Resistance training is an effective tool to achieve this.

Summary

This article is a comprehensive guide to the benefits of strength training. It goes beyond just building muscle mass and explains how strength training can contribute to weight management, cognitive function, bone strength, and overall health.

We hope that we have shown how strength training is not just for men who want to build big muscles but is beneficial for everyone, regardless of age or gender. Strength training can be preventative and prepares the body for life's challenges. Furthermore, it is directly beneficial for cognitive decline and has an incredible impact on mood, providing resilience and empowerment.

If you're starting your strength training journey, Strongly provides the resources for you to jump right in.



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THANKS

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