

Introduction

Exercise and the fitness lifestyle make up a large part of our modern life, as ideals of beauty influence a person's appearance and impression they make, and greatly increase the demands they place on their own body. Body-consciousness has also become significantly more prominent due to the high risk of disease associated with the wrong kind of diet and high rates of obesity. A healthy diet does of course play a role, but stomach fat cannot be broken down through diet only. The ultimate solution for getting rid of stomach fat is to stimulate metabolism through sporting activity. Keeping fit remains for this reason consistently in trend and will in future determine people's appearance all the more.

Medical Background

Everyone's abs are similarly pronounced. However, they are located beneath a layer of fat, which is present in different amounts depending on genes and predisposition. Important prerequisites for training the stomach are distinct abs and low body fat. This means that body fat must be reduced prior to any ab training.

Ab training for men and women - what's the difference?

Ab exercises are as a rule equally effective for men and women. Only the initial requirements and demands differ from each other. The difference, however, isn't only to be seen in features characteristic to one gender or the other, but also in build and sporting activity.

Even the most athletic woman will have higher fat content than men. Hormone levels are also different in men and women. Women's bodies produce less androgens, which means it is more difficult to increase the musculature. Nevertheless, this is not a major problem as for aesthetic reasons women much prefer to be adequately trained rather than appear overly muscular, while men tend to emphasise their visible muscles much more.

Men and women must train their abs with comparable intensity. Even a half-hour per day spent on an intensive training plan can be enough to achieve success within weeks.

Muscles involved in ab training

Ab training takes place at several levels to ensure muscle buildup in specific locations. The back muscles also need to be strengthened, as they are the ab's antagonistic muscles. The intensity of the exercises is controlled by varying between them, fast reps and breaks.

The function and anatomy of the various abdominal muscles

The entire abdominal musculature consists of two layers of skeletal muscle that spread throughout the whole stomach and pelvic areas and bind the pelvis to the ribcage. Abdominal muscles are divided into three groups:

- Front abdominal muscles such as the rectus abdominis and pyramidalis muscles.
 - ⇒ Responsible for forming a six-pack
- Side muscles such as the external and internal abdominal oblique muscles, as well as the transverse abdominal muscle.
- Rear abdominal muscles such as the quadratus lumborum and psoas major muscles.
 - ⇒ Antagonistic muscles for the front abdominal muscles

There are firm fibrous structures, known as fasciae, between the larger abdominal muscles; these are important for the whole stability of the abdominal wall.

Ab training and nutrition: the key to success

In many respects, the right training requires a balanced diet which supports the breakdown of fat. Nutrition should not be seen in terms of a particular diet regime or abstaining from certain food groups, but rather approaching food in a completely new way, which should also ensure that the effects will be lasting. Your food should consistently be made up of 40% carbohydrates, 30% fat and 15% protein. If your tummy is a bit fatter, then the share of protein should be higher, roughly 30%. You shouldn't abstain from carbohydrates, as is advocated by many diets, in order to achieve a toned stomach or six-pack. These should, however, be oligosaccharides and easily absorbed in reduced form. Protein intake is of particular importance for ab training and also helps to reduce body fat.

Feeling full is a result both of protein consumption and stretching of the stomach, i.e. by consuming food that has low calorie density but a large volume, such as vegetables, salad, fruit and fluids.



What actually makes up a six-pack?

A six-pack looks different on different people. You can even see the diversity in six-packs among those who work out, where it isn't related to levels of body fat. The differences are much more as a result of anatomy, on the one hand, and individual predisposition on the other. A six-pack is characterised by a strongly pronounced rectus abdominis muscle surrounded or covered by very little fatty tissue. This muscle is subdivided by connective tissue termed 'tendinous intersections' and 'linea alba', which creates individual sections. Not everyone, however, has this subdivision.

Your own performance limits can be gradually increased to obtain a six-pack. Two to three training units should be completed per week. The body should always feel the need to continually build up muscle. If the stress is always the same or too mild, then this need is lacking and a six-pack remains elusive. The demands placed on the body must therefore be increased or varied:

- crunches or sit-ups
- side or forearm push-ups
- Passive training: Push-ups, leg work or skipping
- Planks or swimming

Correct ab training

The constant everyday movements of the abdominal muscles means they regenerate faster than other muscles; you can by all means have 2-3 ab training sessions per week. Training every day, however, will have the opposite effect, as the lack of an opportunity to regenerate inhibits muscle growth. You should of course also be sure to warm up the muscles for approx. 10 minutes before training sessions, for example by skipping, to reduce the risk of pulled muscles or other injuries.

The intensity of your training exercises is crucial for stimulating muscle growth. Executing the exercise in a slow and controlled manner is preferable to lots of reps of the same exercise. The optimal workout for a six-pack consists of active and passive ab training methods, complemented by a set number of basic exercises.

Ab training with the ab roller

Ab rollers are a good way to supplement ab training. The rolling motion of the ab roller places demands on the whole body, allowing the abdominal and back muscles to be exercised.

Kneeling exercises (10-15 repetitions) Standing exercises (10 repetitions)

[Image]

Push-ups or side push-ups with the ab trainer (10 repetitions)

[Image]

The following are important to note for ab training:

- A balanced diet
- Adequate knowledge of the muscles and body
- A detailed training plan
- Sufficient recovery periods of up to 48 hours
- An increase in exercise intensity
- Motivation and perseverance (training diary)
- Varied training
- Training periods of 10-15 minutes

The ten most common mistakes

- Lots of reps to achieve stronger ab muscles
- Training abs daily in an attempt to build up muscle quicker
- Exercising abs before all other training

- A narrow focus on ab training only
- Ab training without back muscle training
- Believing crunches on their own are enough for ab training
- Omitting recovery phases
- Thinking that stomach fat can only be burned off by ab training
- Believing anyone can have a six-pack



Training plans

Training has to be varied so that new demands both in terms of exertion and endurance are placed on the body and to provide the suitable stimulation during ab training. Training focus areas are determined on a percentage basis and are connected to the maximum heart rate. The number of heartbeats per minute determines the pulse; the maximum heart rate is therefore the heartbeats that the cardiac muscle manages per minute under maximum strain. Whoever wants to figure out their training plan must therefore first know their maximum heartrate.

Formula - Men: Heart rate max = 220 - age; Women: Heart rate max = 226 - age

The pulse can also be read by a heart rate monitor. This is done by performing an exercise at full exertion, taking a short break, and then repeating exercise. 2 sets of 20 reps of, for example, crunches, are enough for a heart rate watch to ascertain the maximum heart rate. This rate then determines the training intensity, calibrated to your own body.

Training is made up of five levels -

- Regeneration: no acceleration of the pulse
- Basic endurance 1 (fat metabolism): acceleration of the pulse and breathing, low strain/tempo
- Basic endurance 1/2 (endurance): acceleration of the pulse and breathing, increasing strain/tempo
- Basic endurance 2 (tempo endurance): intense breath acceleration, high mental and physical resilience, high sweat production
- Peak performance: intense breath acceleration, high mental and physical resilience, high sweat production, possibly pain

Whoever just wants to train their abs to have a fine summer figure only needs to work up to the Basic Endurance 1/2 level, as this training intensity will suffice.

Training methods

Training techniques that can be alternated are popular. Among them are isolation exercises, slow-motion workouts, drop sets, negative reps and supersets. All increase training intensity. Supersets, for example, are excellent for ab training. This method entails combining two training sets from two different exercises.

The purpose of this training technique to is work on the deeper abdominal muscles. When the transverse abdominal muscle is activated you get the feeling of having put on a corset. If this muscle is worked on in a targeted way, the abdominal wall loses its body fat and is reduced with double the effect. Ab training for beginners should be combined with strength training that is suited both to muscle build-up and weight loss.

The right training plan

The training plan includes the organisation of training methods, intensity, the focus areas and variations. For example, it makes sense to train early in the morning, as increased testosterone levels enable especially high performance.

Conclusion

Whoever fulfils all the above in their ab training will be delighted with the end result. Once the fat has been burned off to reveal the muscles, then it will be considerably easier to maintain your toned stomach or six-pack. Whoever feels fit and healthy and satisfied with their figure will deal with the challenges of life very differently and their self-confidence in public will be clear for all to see. The main priority, of course, remains the health benefits of exercise. A fit and healthy body is indispensable in dealing with everyday hustle and bustle. Not for nothing is the saying 'a sound mind in a sound body'.