

Physical Activity For Health

Doing regular physical activity can make you feel good about yourself and it can have a number of benefits for your health. For example, it reduces the risk of developing heart disease, stroke, high blood pressure, some cancers, type 2 diabetes and osteoporosis. Regular physical activity also helps to control weight, and may help to ease stress. Ideally, you should aim for at least 30 minutes of moderate intensity physical activity on at least five days of the week. You should also aim to do a minimum of two sessions of muscle-strengthening activities per week, although these should not be on consecutive days.

What is physical activity?

Physical activity is any activity that you may do that helps to improve or maintain your physical fitness as well as your health in general.

It can include:

- **Everyday activities.** For example, walking or cycling to work or school, doing housework, gardening, DIY around the house, or any active or manual work that you may do as part of your job.
- **Active recreational activities.** This includes activities such as dancing, active play amongst children, or walking or cycling for recreation.
- **Sport.** For example, exercise and fitness training at a gym or during an exercise class, swimming and competitive sports such as football, rugby and tennis, etc.

How much physical activity should adults do?

Adults should aim to do a mixture of aerobic activities and muscle-strengthening activities.

Current recommendations

During the daytime, all age groups should minimise the amount of time spent being sedentary (sitting).

Under-5s:

- Physical activity should be encouraged from birth, particularly through floor-based play and water-based activities in safe environments.
- Children of pre-school age who are capable of walking unaided should be physically active daily for at least 180 minutes (3 hours), spread throughout the day.

Children and young people (aged 5-18 years):

- Moderate-to-vigorous intensity physical activity for at least 60 minutes and up to several hours every day.
- Vigorous intensity activities, including those that strengthen muscle and bone, should be incorporated at least three days a week.

Adults (aged 16-64 years):

- Over a week, activity should add up to at least 150 minutes (2½ hours) of moderate intensity activity in bouts of 10 minutes or more. For example, 30 minutes on at least five days a week.

- Comparable benefits can be achieved by 75 minutes of vigorous intensity activity spread across the week or combinations of moderate and vigorous intensity activity.

Older adults (aged 65 years and older):

- Older adults who participate in any amount of physical activity gain some health benefits. Some physical activity is better than none, and more physical activity provides greater health benefits.
- Older adults should aim to be active daily and, if possible, aim for the same amount of physical activity as younger adults.

Aerobic activities

Aerobic activities are any activity that makes your heart and lungs work harder. To gain health benefits, government experts in the UK suggest that you should do at least 30 minutes of moderate intensity physical activity on most days of the week.

- **30 minutes** is probably the minimum but you do not have to do this all at once. For example, cycling to work and back for 15 minutes each way adds up to 30 minutes. A recent study showed that even less time may have some health benefits.
- **Moderate intensity physical activity** means that you get warm, mildly out of breath, and mildly sweaty. For example, brisk walking, jogging, swimming, cycling, dancing, badminton, tennis, etc. However, as mentioned above, normal activities that are part of your daily routine (everyday activities) may make up some of the 30 minutes. For example, fairly heavy housework, DIY, climbing the stairs, or gardening can make you mildly out of breath and mildly sweaty.
- **On most days** means that you cannot store up the benefits of physical activity. You need to do it regularly. Being physically active on at least five days a week is recommended.

The amount of physical activity that you do may need to be a little more in some situations:

- If you are at risk of putting on weight, you should ideally build up to 45-60 minutes of moderate intensity physical activity on most days to help to manage your weight.
- If your body mass index (BMI) was in the obese category and you have lost a lot of weight, or if you are in this situation and you are trying to lose weight, you should ideally build up to 60-90 minutes of moderate intensity physical activity on most days to help manage your weight.

Muscle-strengthening activities

In addition to the above aerobic activities, adults should also aim to do a minimum of two sessions of muscle-strengthening activities per week, although these should not be on consecutive days.

Muscle-strengthening activities can include climbing stairs, walking uphill, lifting or carrying shopping, digging the garden, weight training, Pilates, yoga or similar resistance exercises that use the major muscle groups. Ideally, the activities and exercises should not only aim to improve or maintain your muscle strength, but also aim to maintain or improve your flexibility and balance. A session at a gym is possibly ideal, but activities at home may be equally as good. For example, stair climbing, stretching and resistance exercises can be done at home without any special clothing or equipment.

A session should be a minimum of 8-10 exercises using the major muscle groups. Ideally, to help build up your muscle strength, use some sort of resistance (such as a weight for arm exercises) and do 8-12 repetitions of each exercise. The level (weight) of each exercise should be so that you can do 8-12 repetitions before the muscle group gets tired. So, for example, for the upper arm muscles, hold a weight in your hand and flex (bend) your arm up and down 8-12 times. This should make your arm muscles tire.

You can do the exercises one after another to complete a session. Or, you can split a session up over a day in, say, bouts of 10 minutes.

What about older people, children and teenagers, and pregnant women?

Older people

If you are over the age of 65 you should still aim to do the same amount of aerobic activity and muscle-strengthening activity as younger adults, depending on your ability. As well as this, a particular goal for older people should be, where possible, to do activities to help with flexibility and balance. This is to help reduce the risk of falls, and injury from falls. Examples of activities to help flexibility include yoga, housework such as vacuuming, and DIY. Examples of activities to help balance include dancing, tai chi or keep fit classes. Special keep fit classes for older people are available in many areas and will usually include activities for flexibility and balance.

Children and teenagers

Children and teenagers should get at least 60 minutes of moderate intensity physical activity per day. The 60 minutes can be made up from various shorter sessions and a mixture of different activities. For example, a mixture of play, Physical Education (PE) at school, games, dance, cycling, a brisk walk to school, sports, various outdoor activities, etc.

Pregnant women

It is safe to continue to do some physical activity during pregnancy. However, the type of activity that you choose needs to be appropriate. A separate leaflet called '*Pregnancy and Physical Activity*' discusses this in more detail

What are the health benefits of physical activity?

The health benefits of doing regular physical activity have been shown in many studies. You are likely to get the most benefits to your health if you are someone who is not very active at all and you become more active. However, there are still benefits to be gained for anyone who increases their physical activity levels, even if they are already doing 30 minutes of moderate intensity activity on most days.

Overall, people who do the recommended levels of physical activity can reduce their risk of premature death by 20-30%. Other health benefits include the following:

Coronary heart disease

Your risk of developing coronary heart disease, such as angina or a heart attack, is much reduced if you are regularly physically active. Inactive people have almost double the risk of having a heart attack compared with those who are regularly physically active.

If you already have heart disease, regular physical activity is usually advised as an important way to help prevent your heart disease from getting worse. Special rehabilitation physical activity programmes exist if you have had a heart attack or have another heart problem. These are supervised by physical activity specialists who can help you do physical activity safely.

Stroke

Physically active people are less likely to have a stroke. One study found that women aged 45 and older who walk briskly (at least three miles per hour), or who walk for more than two hours a week, reduce their risk of stroke by a third compared with less active women.

Cholesterol

Regular physical activity has been shown to raise levels of high-density lipoprotein (HDL) cholesterol. This is good cholesterol because it may actually help to protect against cardiovascular disease (coronary heart disease, stroke and peripheral vascular disease). HDL cholesterol seems to help prevent patches of atheroma forming. These are like small fatty lumps that develop within the inside lining of arteries (blood vessels) and are involved in the development of cardiovascular disease.

High blood pressure

Regular physical activity can help to lower your blood pressure levels if you have high blood pressure. It can also help to prevent high blood pressure from developing. High blood pressure is one of the risk factors for heart disease and stroke.

Diabetes

If you are regularly physically active then you have a lower risk of developing type 2 diabetes than inactive people. The greater the amount of physical activity that you do, the lower your risk of developing type 2 diabetes. If you have been diagnosed with impaired glucose tolerance (prediabetes), regular physical activity can help to prevent this from developing into diabetes. Also, if you already have type 2 diabetes, regular physical activity can help improve the control of your diabetes.

Weight control

Physical activity helps you to burn off excess fat. Regular physical activity combined with a healthy diet is the best way of losing weight, and keeping that weight off.

Bone and joint problems

Regular weight-bearing physical activity can also help to prevent osteoporosis (thinning of the bones). The pulling and tugging on your bones by your muscles during exercise stimulates bone-making cells, which strengthens your bones. If your bones are stronger, you have a reduced risk of breaking your bones when you are older. (Weight-bearing physical activity means physical activity where your feet and legs bear your body's weight, such as brisk walking, aerobics, dancing, running, etc.)

Physical activity has also been shown to help treat osteoarthritis and lower back pain in some people.

Cancer

Regular physical activity can help to reduce your chance of developing cancer. It roughly halves your chance of developing cancer of the colon (bowel cancer). Breast cancer is also less common in women who are regularly physically active.

Mental health

Physical activity is thought to help ease stress, boost your energy levels and improve your general well-being and self-esteem. It can also help to reduce anger. As well as this, physical activity can make you sleep better. (But do the activity during the daytime or early evening, not near to bedtime.)

Keeping you mobile and more able to live by yourself

Regular physical activity throughout life can help to keep you more mobile as you get older. Still being mobile is one of the things that helps older people remain independent and able to live by themselves at home. As mentioned above, as you get older, flexibility and balance exercises are important to help reduce your risk of falling and becoming injured. If you are aged over 70, you are less likely to fall and be injured if you are regularly physically active.

Memory loss and dementia

Regular physical activity may help to prevent some types of dementia. If you do have dementia, regular physical activity may also help to keep you mobile for longer.

Smoking cessation

Increasing physical activity levels has been shown to help people trying to quit smoking. It can help to reduce your desire to smoke and can also help with withdrawal symptoms.

For children

There are many benefits to regular physical activity for children. It helps with healthy growth and development and, if children are physically active, they are less likely to become overweight, or obese, adults. A recent study found that teenagers who carry a gene for obesity are less likely to become overweight or obese if they are physically active for an hour a day. If an overweight child becomes an overweight or obese adult, they are more likely to develop health problems, including diabetes, stroke, heart disease and cancer.

Regular physical activity also helps children to socialise and mix with others and helps with their psychological well-being. A study that took place in Southern California also found that children with average or above-average fitness levels did better in terms of their academic performance than children with below-average fitness levels. However, more studies are needed to confirm this potential benefit.

Are there any risks with physical activity?

There are only a few reasons why physical activity may be harmful. A common wrong belief is that physical activity may be bad for the heart. On the contrary, physical activity is good for most people with heart disease provided they follow guidelines given by exercise specialists or health professionals. In general, if you gradually build up to do regular moderate intensity physical activity, the potential benefits to your health will greatly outweigh the small risks involved.

However, sometimes problems can occur with physical activity:

- Injury is possible. Sprains, and sometimes more serious injuries, are a risk with some types of physical activity. You can cut down your risk of injury by warming up before any activity, and by wearing the correct footwear.
- Endurance sports such as marathon running can sometimes cause stress fractures in bones. Prolonged endurance exercising can mean that some women stop having their monthly periods.
- In rare cases, sudden death can occur in people who are doing some physical activity. However, most of the time, there is usually an underlying heart problem (which may not have been previously diagnosed) and it is the excess stress that is placed on the person's body during exercise that causes the sudden death. It should be stressed that, in general, regular exercise protects the heart.

Do I need to see a doctor before I start a physical activity programme?

If you have a problem or medical condition that you are worried may be made worse by physical activity, then see a doctor before starting a programme to increase your physical activity levels. In particular, you should see your doctor before you start if you:

- Have a known heart condition or have had a stroke.
- Have any chest pains, particularly if chest pain is brought on by exercise.
- Have had falls due to becoming dizzy or blacking out.
- Get very breathless on mild exertion.
- Are intending to start a vigorous physical activity programme.
- Are worried that a joint or back problem may be made worse by increasing your physical activity levels.

Tips when considering increasing your physical activity levels

Physical activity is not just for young sporty types. It is never too late to start to gain the benefits, no matter how old or unfit you are.

- If you are not used to physical activity, it is best gradually to build up the level of activity. Start with 10 minutes and over time build this up to 30 minutes. Brisk walking is a great activity to start with.

- One big obstacle is the uphill battle to become fit. Many people feel that the first few attempts at physical activity are quite a struggle. Do not get disheartened. You are likely to find that each time it becomes easier and more enjoyable.
- Try to keep physical activity high on your list of priorities. If one kind of activity becomes boring, try switching to another type. A variety of different activities may be better. Physical activity needs to be something that you enjoy or it will not be something that you will keep up.
- Some people set their goals too high. For example, aiming to run a marathon. This may take too much time, you may lose enthusiasm, and physical activity may become a drudge. Be aware of this pitfall.
- Use everyday activities as part of your physical activity programme. Consider a brisk walk to work or to the shops instead of using a car or bus; take the stairs in the office or shopping centre and not the lift, etc. Reduce the amount of time that you spend being inactive (watching TV, sitting in front of a computer screen, etc).
- Remember to include some muscle-strengthening exercises.
- Talk to your doctor or practice nurse about any groups or initiatives in your local area. For example, Exercise Referral Schemes run in some areas. They are programmes designed especially for people with various medical conditions (such as asthma, high blood pressure, type 2 diabetes, chronic obstructive pulmonary disease, anxiety, depression or obesity) who may benefit from increasing their physical activity levels. There are also a number of government campaigns and initiatives aimed at increasing physical activity levels in everyone. Details can be found below.

Using a pedometer

A pedometer is a small device, usually worn on a belt, that counts the number of steps that you have taken, by sensing the motion of your hips. Many people find it a useful tool to help with motivation and monitoring when trying to increase their physical activity levels.

Wearing a pedometer on an average day can give you a baseline for the number of steps that you generally take. A very sedentary person will take between 1,000-3,000 steps per day. However, most people are in the range of 4,000-6,000 steps per day.

About 30 minutes of brisk walking should be around 3,000 steps. So, a good target could be to add 3,000 steps to your baseline number and aim for this. You may want gradually to build up by increments of 500-1,000 steps. The magic number to aim for in the end is at least 10,000 steps per day. It is thought that if you can manage this, it will help to keep you fit and healthy.

New research about people with a sedentary lifestyle

Recent research has suggested that a sedentary lifestyle in general may have adverse health effects *even if* you do the recommended amounts of moderate exercise. A sedentary lifestyle may still increase your risk of obesity, diabetes, heart disease and cancer.

It is not certain why this is and further research is needed. However, it is thought perhaps to be related to the effect that sitting down too much has on certain enzymes in the body which help to process fat and sugar.

So to combat this:

- Take regular breaks from your desk while you are at work (a short break of a few minutes every hour).
- Take the stairs and not the lift.
- Walk to the shops instead of taking the car.
- Stand up while you are talking on the phone.
- Don't spend hours sitting in front of the television, etc.

Further help and information

Let's Get Moving

Web: www.dh.gov.uk - then search for 'lets get moving'

The Department of Health has produced a guide to help you become more active. It can be downloaded using the link above. The guide contains tips and examples and helps you to plan your physical activity programme.

Change for Life

Tel: 0300 123 4567

Web: www.nhs.uk/change4life

A government campaign that began in January 2009. It aims to prevent people from becoming overweight by encouraging them to eat well, move more and live longer. On joining, you can receive a personalised pack with tips and advice. The website has details of activities in your local area.

Department of Health - healthy living section of their website

Web: www.dh.gov.uk/health/2011/07/healthy-lives-healthy-people/

Information from the Department of Health on their strategy for public health in England.

The Keep Fit Association (KFA)

Tel: 01403 266000

Web: www.keepfit.org.uk

Gives thousands of people the opportunity to get together in a spirit of fun and friendship to exercise regularly together.

Walking The Way To Health

Tel: 01242 533337

Web: www.whi.org.uk

This is an initiative sponsored by the British Heart Foundation to encourage people who do little physical activity to walk more in their own neighbourhoods.

Further reading & references

- [At least five a week: Evidence on the impact of physical activity and its relationship to health](#), Dept of Health, 2004
- [Energising Lives: A Guide to Promoting Physical Activity in Primary Care](#), NHS Health Scotland (July 2008)
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- [Be active, be healthy: a plan for getting the nation moving, Dept of Health \(11 February 2009\); in partnership with other Government Departments](#)
- [Staying active](#), British Heart Foundation
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- [Ruiz JR, Labayen I, Ortega FB, et al; Attenuation of the effect of the FTO rs9939609 polymorphism on total and central Arch Pediatr Adolesc Med. 2010 Apr;164\(4\):328-33.](#)
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