

Physical activity and the risk of dementia

Regular physical activity is one of the best things that you can do to reduce your risk of developing dementia.

Does a lack of exercise increase the risk of dementia?

A lack of physical exercise is one of the main factors where the evidence is strong enough to show that it increases a person's risk of developing dementia.

Studies looking at the effect of exercise in middle-aged or older adults have reported improvements in thinking and memory, and reduced rates of dementia.

How to reduce the risk of dementia

A lifelong approach to good health is the best way to lower your risk of dementia.

There are some lifestyle behaviours with enough evidence to show that changing them will reduce your risk of dementia.

Reduce your risk of dementia

Physical exercise to reduce dementia risk

Research has shown that people who take regular exercise may be up to 20% less likely to develop dementia than those who don't take regular exercise. This came from some analysis that combined the results of 58 studies into exercise and dementia.

It has been shown that going from being inactive to doing some amount of exercise has the biggest impact. Sustaining physical activity throughout midlife also seems to have the best effect on reducing dementia risk.

There is some evidence to show older people can also reduce their risk of dementia with regular exercise. One study looked at the amount of daily activity of older people. The ones who exercised the least (the bottom 10%) were more than twice as likely to develop Alzheimer's disease as the ones who exercised the most (the top 10%).

Types of physical activity

'Physical activity' usually refers to aerobic exercise (activity which increases the heart rate) performed for 20–30 minutes at a time. Most of the studies report on the effects of aerobic exercise done several times a week and maintained for at least a year.

Physical exercise does not just mean playing a sport or running. It can also mean a daily activity such as brisk walking, cleaning or gardening. One study found that daily physical tasks such as cooking and washing up can reduce the risk of Alzheimer's disease.

There are two main types of physical activity – aerobic activity and strength-building activity. Each type will keep you fit in different ways. Doing a combination of these activities will help you to reduce your risk of dementia.

Aerobic activity

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Aerobic activity helps to keep your heart, lungs and blood circulation healthy – and this is good for brain health too.

‘Moderate intensity’ aerobic activity is anything that makes you breathe faster and feel warmer. ‘Vigorous’ activity is anything that makes you sweat or get out of breath after a while, making it difficult to talk without pausing for breath.

In general, one minute of vigorous activity is equal to two minutes of moderate intensity activity. The official UK recommendation is to try to do at least 150 minutes of moderate intensity activity each week or 75 minutes of vigorous activity. You can break this activity up into smaller sessions if it’s easier for you.

It’s also a good idea to spend less time sitting or lying down and more time moving.

Moderate aerobic activities:

- brisk walking
- gentle swimming

- water aerobics
- hiking
- dancing
- cycling gently or on flat ground
- tennis (doubles)
- pushing a lawnmower
- painting and decorating

Vigorous aerobic activities:

- jogging or running fast
- cycling fast or uphill
- swimming fast
- tennis (singles)
- aerobics or spinning sessions

Strength-building activity

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Strength-building activity works your major muscles (legs, back, stomach, shoulders, arms). This helps you to do everyday tasks. This type of activity also helps you to control the level of sugars in your blood and reduce your risk of diabetes, which is a risk factor for dementia.

Ideally you should do strength-building activities on at least two or more days each week.

Strength-building activities:

- heavy gardening (such as digging and shovelling)
- lifting weights or similar objects in the home, like cans or heavy books
- working with resistance bands
- exercises that use your body weight, such as push-ups and sit-ups
- dancing
- yoga, tai chi or Pilates
- wheeling a wheelchair

Activities that are both aerobic and strength-building:

- football
- circuit training
- running
- netball or basketball
- hockey
- martial arts
- walking up stairs or a hill
- heavy gardening

Tips for keeping active

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You might find it difficult to start being more physically active or worry it means doing an activity you don't enjoy. It's important to find activities that work for you. You might find it helpful to start off with a small amount of activity and then build up gradually.

- Choose an activity you'll enjoy – this makes it more likely that you'll keep doing it.
- Try using a wearable gadget (such as a wristband fitness tracker) or a smartphone app (such as the NHS '[Active 10](#)' app or '[Couch to 5K](#)' app) to track your progress. Set yourself a target and try to stick to it. A good target for many people is to aim to walk 10,000 steps per day.
- You might find a workout video helpful, such as the [videos on the NHS website](#).
- Group activities like hiking clubs are a great way to connect and interact with people. This helps to keep the brain active and engaged.
- If you enjoy activities like tai chi, Pilates and yoga, keep doing them. They're also good for balance and staying flexible, and may prevent you from falling.

Physical exercise to help memory and thinking skills

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Aside from dementia, many studies have shown a clear link between physical activity levels and thinking skills. The studies suggest exercise might be an effective way to reduce cognitive decline in later life. Several studies have also shown people who were physically active at age 70 experienced less brain shrinkage over three years than those who were not. Other studies show that people who do more vigorous exercise have larger brains than those who do less exercise or none.

As with drug trials to find treatments for dementia, similar studies have also been carried out to look at the impact of exercise regimes on memory and thinking problems. One such study – called the EXERT study - found that people taking part in a 12-month programme of aerobic or stretching exercise showed no decline in memory and thinking skills. Whereas people who did not do either exercise regime showed some decline in their mental abilities.

From the results of 29 clinical trials, a month or more of regular aerobic exercise showed great benefits. Regular exercise showed improvements in memory, attention and thinking speed when compared with regular non-aerobic exercises such as stretching and toning.

In one trial, a year of doing regular exercise resulted in a small increase in the size of the memory centre of the brain. This is the same as reversing one to two years of age-related shrinkage.

Further research into physical exercise and dementia risk

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Exercise is important to stay healthy and lower the risk of dementia, but we need more research to know what types of exercise are most effective. This will look at the level and intensity of exercise, and track exercise levels throughout someone's life.

We also need more research to understand the role that physical activity plays in reducing the risk of some of the specific diseases that cause dementia.