



Alzheimer's Society

Dementia care and research

Be head strong

**A guide to help you reduce your risk
of developing dementia**

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Reducing your risk

You cannot eliminate all risk factors for dementia. The most significant—age—is unavoidable. But there are some risk factors we can do something about.

We know that living a healthy lifestyle can reduce your risk of heart disease and stroke. It may also reduce your risk of developing dementia. By keeping your body healthy—especially your heart—you can help to keep your brain healthy too.

By eating sensibly and exercising in moderation you can do something positive to help delay the onset of dementia.

The risk factors for vascular dementia are the same as those for stroke and heart disease, such as high blood pressure, high cholesterol, diabetes and obesity.

Eat well: enjoy your food, and eat a wide variety of different foods to make sure you get a full range of vitamins and minerals. Eat lots of fruit and vegetables, and enjoy high-fat and sugary foods in moderation.

Exercise in moderation: try to be active for 30 minutes at least five times a week. You don't have to join a gym or take strenuous classes—walking, dancing, gardening and housework will all keep you fit.

Keep your brain active: read widely, tackle word and maths puzzles, and keep abreast of current affairs.

Be sociable: try not to isolate yourself, and take time to go out with your friends or your partner. Even a phone call or email can help you to keep in touch.

Are you at risk?

Age is the most significant risk factor for dementia. One in 50 people between the ages of 65 and 70 has some form of dementia, compared with one in five people over the age of 80.

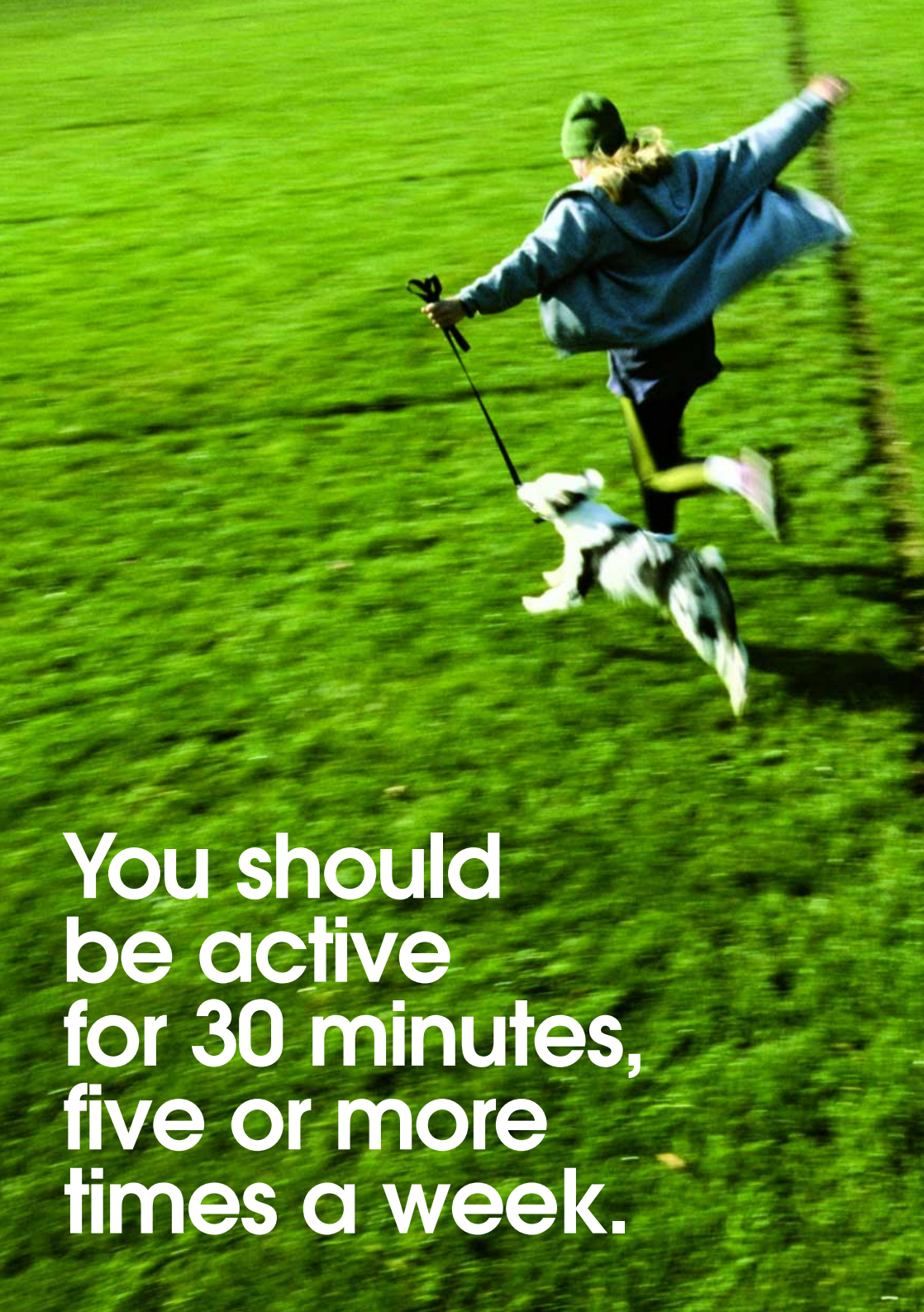
Women are slightly more likely to develop Alzheimer's disease than men, even taking into account that women are likely to live longer.

Researchers still don't know why this might be, and hormone replacement therapy (HRT) has not been found to help delay the onset of the condition.

Vascular dementia, on the other hand, is more common in men than women. This may be because heart problems and high blood pressure are more common in men than women.

One particular gene called ApoE comes in three variants. The variant ApoE4 is linked to an increased risk of developing dementia in the 60s and 70s. Current research is revealing more links between genes and the risk of dementia.

However, we do not fully understand the role of genetics in the development of dementia, but some of the diseases that cause dementia do have a hereditary component. These include early onset dementia (before the age of 65), and some diseases that can cause dementia, such as Huntington's and Niemann-Pick. But in most cases the effect of inheritance seems to be small: if your parent has dementia, your own chances of developing it are only a little higher than if there were no dementia in your family.



**You should
be active
for 30 minutes,
five or more
times a week.**

Exercise your mind

Exercising and challenging your brain – by learning new skills, doing puzzles such as crosswords, and even learning a new language – will keep your brain in good shape. Even playing card games and doing mental arithmetic can sharpen your short term memory.

Read a book

Reading is to the mind what exercise is to the body. It exercises your cognitive skills, and increases your vocabulary. If you never read books, choose an easy novel. If you read a lot, pick a classic that you've always been meaning to read but never got around to. Pick your book up whenever you have an idle moment, and try to read for a few minutes before you go to sleep each night.

Take a course

Enroll on an evening course in a subject that interests you – or even something that you'd not considered before. What about Philosophy For Beginners, Upholstery, or Contract Bridge?

Look in your local library or online for courses. You'll be challenging yourself to absorb new concepts, information and ideas, and honing your memory skills.

Learn a language

Language classes are the most popular evening classes there are and there is a wide choice on offer. Listen to language tapes or CDs in the car to help you learn. Learning a language is one of the best ways to exercise your mind – and you'll be able to use your new-found skills on holiday.

Languages keep the brain flexible and the mind sharp. Studies have also shown that once you have mastered one new language, a second one is even easier to pick up.

Be sociable

Staying healthy isn't just about keeping physically healthy. Making sure you spend time with other people can reduce any feelings of loneliness, depression and low self-worth.

Keep in touch with friends, spend time with others and engage in social activities: all will help to keep you alert and mentally healthy. Even a quick phone call, email or text can help you feel connected with those you love.

Make time

It's easy to come home from work and collapse on the sofa in front of the television. Try to make time to go out and see people as well, however tired you may feel. Keep a regular night a week free to see friends or go out with your partner.

Join a group

Whatever your interests – pub quizzes, five-a-side football or Fair Isle knitting – you will probably be able to find others who share them. Volunteering is also a great way to get involved with activities or organisations that you are passionate about. Visit your library, read your local paper or surf the internet to find a local group, or set up your own.

Get active

Most research in the last 20 years has shown that you should be active for 30 minutes, five or more times a week. This sounds like a lot, but it doesn't have to be strenuous, especially at first. If you haven't done any physical activity for a long time, build up slowly over several weeks. Start with five minutes each time, and add two minutes each day. If you are really unfit, consult your GP before starting any exercise programme.

Exercise for stamina, strength and flexibility

Stamina: walking, cycling, tennis, dancing, housework (washing floors or windows)

Strength: walking uphill, carrying shopping, climbing stairs, gardening (digging or mowing) and housework (vacuuming)

Flexibility: swimming, yoga, dancing, Pilates, T'ai Chi, gardening (weeding)

The most important aspect of any exercise programme is that you enjoy it, and can make it part of your daily routine. You won't be able to keep doing something that isn't fun. And you might find it difficult to maintain an exercise schedule that takes up too much of your day. It's easy to start with good intentions, but may be harder to keep going.

Simple ways to start exercising:

- Walk in your lunch hour with colleagues instead of staying in the office.
- Plan activities with friends instead of just meeting for a chat or for a drink.
- Join a class such as badminton or yoga.
- Swim once a week. Find out when your local pool has 'quiet times' and lane swimming so you don't feel intimidated.
- Keep an exercise record so you can see your progress.

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**By keeping
your body healthy,
especially your
heart, you can
help to keep your
brain healthy too.**

Five key tips

1 Don't smoke

If you want to do one thing to improve your health, stop smoking. Smoking has an extremely harmful effect on the heart, lungs and blood system (including the blood system in the brain).

2 Drink in moderation

People who drink excessive amounts of alcohol over a long period of time increase their risk of developing a form of dementia called Korsakoff's syndrome. However, some research has suggested that moderate amounts of red wine, which contains anti-oxidants, might help to protect the brain against dementia and keep the heart and blood system healthy.

3 Eat less saturated fat

Too much saturated fat can cause narrowing of the arteries, making heart attack or stroke more likely, in turn increasing the risk of vascular dementia. Saturated fat is found mainly in meat and dairy products, and in some processed foods. It is usually of animal origin (although some vegetable fat is saturated) and is solid at room temperature.

4 Drink fruit juice

Eating fruit and vegetables and drinking fruit juice (made with whole fruit) can lower the risk of developing Alzheimer's disease. Choose different coloured fruit and vegetables each day.

5 Drink tea

Both black and green tea have been found to benefit people with dementia. One of the effects of Alzheimer's disease is a reduced level of a brain chemical called acetylcholine, and tea inhibits the activity of an enzyme that breaks down this key chemical.

Eat healthily

The key to a healthy diet is balance. No food is bad for you in itself, but some may be unhealthy in excess. A diet without a little of the enjoyable foods you love would be very dull – and hard to stick to. Foods that contain a lot of fat, sugar or salt can be enjoyed in moderation.

A Mediterranean diet with lots of fruits, vegetables, cereals, some fish, moderate amounts of alcohol, and little dairy and meat is recommended, as it is low in fat, sugar and processed food, and high in protein, fibre and anti-oxidants.

Increasing the amount of fruit and vegetables you eat will help reduce your risk of dementia.

Fresh fruit and vegetables contain the anti-oxidant vitamins C and E and beta-carotene, which all have an important role in preventing heart disease (and the risk of vascular dementia), and in promoting good health generally.

The colours in fruit and vegetables are a result of their phytochemical content. These chemicals have also been linked to the prevention of dementia.

Foods can be roughly divided into five groups. An optimal diet contains servings from each of these every day. Try to eat as wide a variety from each group as possible.

Carbohydrates

Bread, pasta, rice, potatoes, cereals and grains.

This group of foods provides energy and is a good source of B group vitamins. B vitamins keep the blood and nervous systems healthy, and break down food to release energy.

Proteins

Meat, fish, offal, eggs, nuts, lentils, beans, soya.

This food group contains iron, zinc and vitamin B as well as protein. Meat can contain a lot of fat as well as vital nutrients, so eat in moderation. Beans and soya are high in fibre as well as protein and are an important part of one's diet.

Fruit and vegetables

All fruit and vegetables including dried fruit and fruit juices, pulses, beans.

Fruits contain fibre and vitamins A and C. Different fruits contain different vitamins, so it is important to eat a wide variety. Vegetables also contain vitamins A and C, as well as a range of other minerals such as iron and calcium. Again, it's important to eat a variety of different vegetables. Both fruit and vegetables are naturally low in fat, calories and salt.

Dairy

Milk, cream, yogurt, fromage frais, cheese.

Dairy foods are the best source of calcium, which is essential for keeping teeth and bones healthy. Dairy products also provide vitamin A, protein and phosphorus, which contribute to healthy bones. They can be high in fat, so eat in moderation or choose low-fat versions.

Fats, oils and sugar

Butter, lard, oil, all types of sugar.

Fats and sugar provide energy (calories) but not many nutrients, so they are often labelled 'empty calories'. However, they are not bad foods. They add interest and flavour to food, and can be enjoyed in moderation. Avoid hydrogenated vegetable oils.

Eat brain food

Some foods contain nutrients that are used to manufacture certain brain chemicals that may enhance mental tasks like memory, concentration, and reaction time. These nutrients may even help to slow down brain ageing. For example, protein foods enhance the brain's production of dopamine, a natural brain chemical that helps one to feel alert.

Some foods in particular appear to have a significant effect on brain function.

Fish oil

Fish oils help to keep the heart and blood vessels healthy, which in turn help prevent changes in the brain that are associated with dementia. The Society recommends eating oily fish at least once a week. Oily fish include salmon, trout, herrings, mackerel, kippers, sardines, fresh (not tinned) tuna and anchovies.

Blueberries seem to influence the way brain cells communicate with each other.

Blueberries

American studies have indicated that blueberries may reduce ageing – related damage in the brain. In the studies, blueberries also appeared to prevent mental decline in mice genetically engineered to develop Alzheimer's disease. Blueberries are an excellent source of anti-oxidants. The researchers believe that blueberries protect the brain through their anti-oxidant and anti-inflammatory action. Blueberries also seem to influence the way brain cells communicate with each other.

Iron-rich food

Studies show that iron deficiency anaemia is a risk factor for poor school performance in children. Iron is needed to carry oxygen to the brain cells, and it's used to make brain neurotransmitters, especially those that regulate the ability to pay attention. Iron deficiency causes poor attention span and affects learning ability.

The best sources of iron include lean beef, whole grain breakfast cereals, whole grain breads, raisins, dried apricots, beans and pulses.

Five a day explained

We all know that we should be eating five a day – five portions of fruit and vegetables. But what is a portion? Do potatoes count? What about pulses? Or fruit juice? Here's a guideline to make sense of the guidelines.

Fresh, frozen, chilled, canned, 100% juice, and dried fruit and vegetables all count.

The five portions include fruit and vegetables – you don't need to eat five of each. Try to eat a variety of fruit and vegetables each day to get the widest range of vitamins and minerals. It can be boring eating the same food all the time.

Fruit juice

Fruit juice counts as one portion per day, however much you drink. It doesn't count for more than one because it contains relatively little fibre, and because it contains a large amount of sugar, which can harm your teeth (particularly if you drink it between meals).

Pulses and beans

Pulses and beans also count for one portion only, no matter how much you eat. They contain fibre, which is good, but they don't have the same range of vitamins and minerals that other fruit and vegetables have.

Potatoes and starchy vegetables

Potatoes and other starchy vegetables such as cassava and sweet potatoes don't count as part of your five a day. Like rice, pasta and bread, they should be part of a balanced diet, but don't eat them in unlimited quantities.

Know your portions

The portion sizes in the table overleaf apply to adults and children over the age of five. You should encourage younger children to eat five a day too, but in smaller portions.

Don't forget you need five different portions a day.

Know your portions

| Fruit | Fresh | Canned | Dried | Cooked |
|----------------|----------------|--------------|--------------|--------|
| Apple | 1 medium | | 4 rings | |
| Apricot | 3 whole | 6 halves | 3 whole | |
| Banana | 1 medium | | 1 handful | |
| Blackberries | 1 handful | | | |
| Blackcurrants | 4 heaped tbs | | | |
| Blueberries | 2 heaped tbs | | | |
| Cherries | 14 whole | 11 cherries | 1 heaped tbs | |
| Clementines | 2 whole | | | |
| Currants | | | 1 heaped tbs | |
| Damsons | 5 or 6 whole | | | |
| Dates | 3 whole | | | |
| Figs | 2 whole | 2 figs | | |
| Fruit juice | 150 ml | | | |
| Fruit smoothie | 150 ml | | | |
| Fruit salad | 3 heaped tbs | 3 heaped tbs | | |
| Gooseberries | 1 handful | | | |
| Grapefruit | 1 half | 8 segments | | |
| Grapes | 1 handful | | | |
| Kiwi | 2 whole | | | |
| Kumquat | 6 to 8 whole | | | |
| Lychee | 6 whole | 6 whole | | |
| Mandarin | 1 medium | 3 heaped tbs | | |
| Mango | 2 slices (5cm) | | | |
| Melon | 1 slices (5cm) | | | |
| Mixed fruit | | 1 heaped tbs | | |
| Nectarine | 1 whole | | | |
| Orange | 1 whole | | | |
| Passion fruit | 5 or 6 whole | | | |
| Papaya | 1 slice (5cm) | | | |
| Peach | 1 medium | 2 halves | 2 halves | |
| Pear | 1 medium | 2 halves | 2 halves | |
| Pineapple | 1 large slice | 2 rings | 1 heaped tbs | |
| Plum | 2 medium | | | |
| Prune | | 6 whole | 3 whole | |
| Raisins | 1 tbs | | | |
| | 2 handfuls | 20 whole | | |

| Fruit | Fresh | Canned | Dried | Cooked |
|--------------------|--|---------------|--------------|---------------|
| Rhubarb | | 5 chunks | | 2 heaped tbs |
| Satsuma | 2 small | | | |
| Sharon fruit | 1 whole | | | |
| Strawberry | 7 whole | 9 whole | | |
| Sultanas | 1 heaped tbs | | | |
| Tangerine | 2 small | | | |
| Vegetables | | | | |
| Ackee | | 3 heaped tbs | | |
| Artichoke | 2 globe hearts | | | |
| Asparagus | 5 spears | 7 spears | | |
| Aubergine | one third | | | |
| Avocado | half | | | |
| Beans, blk. eye | | | | 3 heaped tbs |
| Beans, broad | | | | 3 heaped tbs |
| Beans, butter | | | | 3 heaped tbs |
| Beans, cannellini | | | | 3 heaped tbs |
| Beans, French | | | | 4 heaped tbs |
| Beans, kidney | | | | 3 heaped tbs |
| Beans, runner | | | | 4 heaped tbs |
| Beansprouts | 2 handfuls | | | |
| Beetroot (bottled) | 7 slices or 3 baby whole | | | |
| Broccoli | 2 spears | | | |
| Brussel sprouts | 8 whole | | | |
| Cabbage | one sixth small or 2 handfuls sliced | | | |
| Cabbage, shredded | 3 heaped tbs | | | |
| Carrots | 3 heaped tbs | 3 heaped tbs | | |
| Carrots, shredded | one third of a cereal bowl | | | |
| Cauliflower | 8 florets | | | |
| Celery | 3 sticks | | | |

| Vegetables | Fresh | Canned | Dried | Cooked |
|---------------------------|---------------------------------|---------------|-----------------------------|---------------|
| Chick peas | 3 heaped tbs | | | |
| Chinese leaves | one fifth head | | | |
| Courgette | half large | | | |
| Cucumber | 5 cm piece | | | |
| Curly kale | | | | 4 heaped tbs |
| Karela | half | | | |
| Leeks | 1 (white part) | | | |
| Lentils | 3 tbs | | | |
| Lettuce (mixed leaves) | 1 cereal bowl | | | |
| Mangetout | 1 handful | | | |
| Mixed veg. | 3 tbs (frozen) | | | |
| Mushrooms, button | 14 buttons 3 or 4 heaped tbs | | 2 tbs or handful porcini | |
| Okra | 16 medium | | | |
| Onion | 1 medium | | 1 heaped tbs | |
| Parsnips | 1 large | | | |
| Peas | 3 heaped tbs | 3 heaped tbs | | |
| Peas, frozen | 3 heaped tbs | | | |
| Pepper | half | half | | |
| Pigeon peas | | 3 heaped tbs | | |
| Radish | 10 | | | |
| Spinach | 1 cereal bowl | | | 2 heaped tbs |
| Spring greens | | | | 4 heaped tbs |
| Spring onion | 8 whole | | | |
| Sugarsnap peas | 1 handful | 7 spears | | |
| Swede | | | 3 heaped tbs | 3 heaped tbs |
| Sweetcorn | 6 baby corn | 3 heaped tbs | | |
| Sweetcorn on the cob | 1 | | | |
| Tomato | 1 medium | 2 whole plum | | |
| Tomato, cherry | 7 whole | | | |
| Tomato puree | 1 heaped tbs | | | |
| Tomato, sundried | 4 pieces | | | |

Talk to your GP

Ask your GP to check your blood pressure and cholesterol level regularly.

High blood pressure and cholesterol can lead to an increased risk of vascular dementia, stroke and heart disease. The average blood pressure for under 35s is 120/80, and for over 35s 140/90.

In very general terms, the lower the better. You should aim to keep your blood pressure under 140/90.

Your total blood cholesterol level should be less than 5.0.

You can help to reduce a high level by eating less saturated fat and by exercise.

The good news is that you can help delay the onset of dementia.

References

- Birks, J and Grimley Evans, J (2002). Ginkgo Biloba for cognitive impairment and dementia. *Cochrane Database of Systematic Reviews*, Issue 4. Art. No.: CD003120.
- Dai, Q et al (2006). Fruit and vegetable juices and Alzheimer's disease: the Kame project. *The American Journal of Medicine*, 119 (9): 751-9.
- Engelhart, MJ et al (2002). Dietary intake of anti-oxidants and risk of Alzheimer disease. *Journal of the American Medical Association*, 287: 3223-9.
- Grantham-McGregor, S and Ani, C (2001). A review of studies on the effect of iron deficiency on cognitive development in children. *The Journal of Nutrition*, (2S-2): 649S-66S.
- Joseph, JA et al (2003). Blueberry supplementation enhances signaling and prevents behavioral deficits in an Alzheimer disease model. *Nutritional Neuroscience*, 6(3): 153-62.
- Kalmijn, S (2000). Fatty acid intake and the risk of dementia and cognitive decline: a review of clinical and epidemiological studies. *The Journal of Nutrition, Health and Aging*, 4(4): 202-7.
- Kalmijn, S et al (1997). Dietary fat intake and the risk of incident dementia in the Rotterdam Study. *Annals of Neurology*, 42(5): 776-82.
- Myint, PK et al (2007). Fruit and vegetable consumption and self-reported functional health in men and women in the European Prospective Investigation into Cancer, Norfolk (EPIC-Norfolk): a population-based cross-sectional study. *Public health nutrition*, 10(1): 34-41.
- Okello, EJ et al (2004). In vitro anti-beta-secretase and dual anti-cholinesterase activities of *Camellia sinensis* L. (tea) relevant to treatment of dementia. *Phytotherapy Research*, 18(8): 624-7.
- Ruitenberg, A (2001). Incidence of dementia: does gender make a difference? *Neurobiology of Aging*, 22: 575-80.
- Ruitenberg, A et al (2002). Alcohol consumption and risk of dementia: the Rotterdam study. *The Lancet*, 26 January 2002: 281-6.
- Solfrizzi, V et al (2005). Dietary fatty acids intake: possible role in cognitive decline and dementia. *Experimental Gerontology*, 40(4): 257-70.
- Zandi, PP et al (2002). Hormone replacement therapy and incidence of Alzheimer disease in older women: the Cache county study. *Journal of the American Medical Association*, 288(17): 2123-9.

The Alzheimer's Society is the UK's leading care and research charity for people with dementia and those who care for them.

There are 700,000 people with dementia in the UK with numbers set to rise to one million by 2025.

The Alzheimer's Society provides information and support for people with all forms of dementia and those who care for them. It runs quality care services, funds research, advises professionals and campaigns for improved health and social care and greater public understanding and awareness of dementia.

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