

Assistive technology

Dementia can make day-to-day life more difficult. Little things like forgetting to turn the gas off or letting the bath overflow can cause great damage and may put the person with dementia and others in danger. This information sheet looks at technological developments that can help make life easier for people with dementia and their carers. It also suggests the steps to take if you think that you, or someone you are caring for, could benefit from some of these devices.

What is assistive technology?

The term 'assistive technology' refers to any product or service designed to enable disabled and older people to be independent. This includes equipment and devices to help people who have problems with:

- speaking
- hearing
- eyesight
- moving about
- memory
- cognition (thought processes and understanding).

Assistive technology ranges from very simple tools, such as walking sticks, to high-tech solutions such as satellite-based navigation systems to help find someone who has got lost.

What are the benefits?

Assistive technology can help by:

- Enabling people with dementia to retain their self-reliance and confidence
- Helping carers monitor the person they are caring for 'remotely' - from another room or another location - without having to watch the person all the time, so they can offer their help when they are needed
- Allowing people to choose whether to stay at home for longer or move to a residential home or hospital.

Finding the right solution

Selecting the right device is not an easy task. Different people react differently to different products. One person might find a sophisticated monitoring system helpful, while another might prefer a simple tape-recorded message that plays when they open the front door, reminding them to take their keys. Seek as much advice as possible. Whenever you can, involve social services and your occupational therapist or GP in your decision, to ensure a tailored solution.

Keep it simple: tips

- Solutions don't need to be high-tech. Simple ideas such as a diary, notebook or noticeboard can provide a reminder of appointments, important phone numbers and things to do.
- Decide on a permanent place to keep important items such as keys.
- Label cupboards or rooms to help you remember where things are.

What technology is available?

There are many different technologies that can be adapted to the needs of someone with dementia. You can buy many of these devices independently, but before you do, contact your local authority social services or Supporting People departments (see Useful contacts), or your occupational therapist or GP. Even if they can't offer you the products, you may be eligible for a proper assessment, help in finding the best product, or financial assistance.

Sensors

Unobtrusive wireless sensors can be placed around the home to raise the alarm if there is a potential problem inside the home of the person with dementia. If the sensors detect possible smoke, gas, flood or fire, they sound an audible alarm as well as alerting a carer, keyholder or a 24-hour monitoring service.

Sensors can be used to detect:

- Floods - These detectors can be fitted on skirting boards or floors in the kitchen and bathroom. If the taps have been left running they shut off the water and raise the alarm.
- Extreme temperatures - This device will send a warning signal if the temperature is very low, very high, or if there is a rapid rise in temperature. This can be useful in the kitchen to detect a pan that has boiled dry, for example.
- Scalding baths - A temperature-regulated plug replaces the standard bath plug and changes colour from blue to bright pink at high temperatures.
- Carbon monoxide - This alerts carers to high levels of carbon monoxide, due to a faulty boiler or gas fire.
- Gas - If someone forgets to turn the gas off, this device will automatically shut off the gas and raise the alarm.
- Falls - Sensors worn on the wrist can detect the impact of a person falling.
- Absence from a bed or chair - If a person gets up from their bed or chair and doesn't return for an unusual period of time, or if they don't get up in the morning, this device raises an alarm.
- Getting up in the night - A pressure mat sensor is placed by the bed and a sensor activates an alarm when the person gets up in the night, so that their carer can help them get to the toilet.

More complex sensor technology can be used for a range of other situations:

- Nightlights - Sensors can be set to automatically switch lights on as a person enters or leaves a room. This is useful if someone gets up in the night but doesn't need to be helped by a carer.
- 'Wandering' sensors - If someone likes to come and go inside and outside the house, these sensors, based on passive infra-red technology used in burglar alarms, can help retain their independence. If they don't return to bed safely because they might have fallen, if they don't return home within a pre-determined period of time, or if they are moving around the house outside their normal patterns (such as at night), the sensor will be activated and help sought.
- Tracking and tagging devices - Tracking devices use satellite technology to help trace someone who has got lost. They have their limitations; they are accurate to within 400m or 9km, depending on the geographical area. Tagging devices trigger an alarm if the wearer strays outside a defined area. This is controversial as some people consider tagging to be an infringement of a person's civil liberties.

Memory aids

Reminder messages

When a person enters or leaves their home, these gadgets activate a voice telling them to pick up their keys or lock the front door etc. The messages can be recorded so that the voice is of someone they know, such as a family member. Messages can also be recorded to remind the person of their daily appointments, to tell them not to go out at night, or to provide reassurance, such as 'Go back to bed, Mum - it's night time.' Door reminders can remind people not to trust bogus callers. This can be useful as people with dementia are often vulnerable to burglary.

Clocks and calendars

Automatic calendar clocks can be helpful for people who forget which day it is. Try to find one that shows the date and day of the week too. Clocks that show whether it is evening or morning can help prevent disorientation, particularly in the dark winter months.

Medication aids

Dosset boxes are simple boxes for pills, with compartments for particular days of the week and times of day. They help people remember to take their medication at the right time. Simple versions are available from the local chemist. Automatic pill dispensers are also available. When the medication needs to be taken, the dispenser beeps and a small opening allows access to the particular pill at the right time.

Locator devices

These devices can be attached with a keyring or Velcro to items that are often mislaid. If a person wants to find a particular item, they press a colour-coded button on a radio transmitter and the device with the corresponding colour will beep until the item is picked up.

Mobility aids

Other problems associated with dementia include mobility problems, incontinence and difficulties with sight or hearing. For information about mobility aids, continence devices and pressure relief mattresses and cushions, see the Society's information sheets *Equipment to help with disability* and *Adaptations, improvements and repairs to the home*.

Things to think about

Is assistive technology for you?

Assistive technology can make a huge difference to the lives of people with dementia and their carers. But it is not always the answer. Some people might find that the very presence of the equipment reminds them about their memory problems, which can cause distress. Some technological solutions may be unnecessarily complex or expensive, and small changes in daily activities may be enough to overcome a problem. Finally, it goes without saying that assistive technology can only be effective when combined with good care.

Fit for the job

Dementia can sometimes make people wary of trying new things, adapting to changing situations or learning new skills, so it's important to find a product that really suits their situation, and their likes and dislikes. To overcome this difficulty, aim to find solutions that can be integrated into the person's normal routine without being noticed, or with the minimum disruption. Involve the person in decisions about which product or solution to use, and take their opinions on board. There is a higher chance of success if you can introduce assistive technology when the dementia is still at an early stage, so that the person can gradually get used to the new way of doing things.

Technology for tomorrow

There is extensive research into new advances in this area. Projects underway include:

- Devices for helping people who have difficulty communicating, including touch-screen computer programmes

- Multimedia software to evoke memories and stimulate positive conversation, by incorporating photographs of film stars and songs familiar to older people, and videos about how life used to be
- Lifestyle monitoring packages - complex systems that help a carer to check a sudden change from the person's normal routine. The system might include movement detectors, door usage detectors (on fridges, and food and tablewarecupboards), and monitoring of electrical usage (on the kettle, toaster and television).

Useful contacts

Before ordering anything, contact your local social services to see if they can source the items on your behalf. Please note that the Alzheimer's Society cannot recommend any specific suppliers or products.

Assist UK

Redbank House
4 St Chad's Street
Manchester
M8 8QA

Telephone: 0870 770 2866
Email: general.info@assist-uk.org
Website: <http://www.assist-uk.org/>

Provides a network of centres throughout the UK that aim to improve disabled and older people's access to accurate, reliable and impartial information and advice about products and equipment for easier living.

The Disabled Living Foundation

380-384 Harrow Road
London
W9 2HU

Telephone: 0845 130 9177 (10am-4pm Monday to Friday) Website:
www.dlf.org.uk/links/suppliers.html

Provides information about finding some simple solutions, such as mobility aids.

The Foundation for Assistive Technology (FAST)

12 City Forum
250 City Road
London
EC1 8AF

Telephone: 020 7253 3303
Email: info@fastuk.org
Website: <http://www.fastuk.org/>

The Foundation for Assistive Technology (FAST) works with the assistive technology community to get well designed, useful inventions onto the market faster. FAST has an online database of assistive technology research, events and contacts.

Help the Aged

207-221 Pentonville Road
London
N1 9UZ

Telephone: 020 7278 1114
Telephone (catalogue enquiries): 0870 770 0441
Email: info@helptheaged.org.uk
Website: www.helptheaged.org.uk/acatalog

Produces a catalogue of items aimed at older people, including some assistive technology devices.

Leicestershire social services

Contact:
Ann Boam
Adaptations and Building Services Team
Rothley House
Coalville
Leicester
LE67 3NR

Telephone: 01530 513781

Leicestershire social services has produced a very useful catalogue of assistive technology products, called *Signal*.

Supporting People

Helpline: 020 7944 2556

Email: supporting.people@communities.gsi.gov.uk

Website: <http://www.spkweb.org.uk/>

The Supporting People programme offers vulnerable people the opportunity to improve their quality of life by providing a stable environment which enables greater independence. May be able to offer funding.

Online shopping

The following online shopping website has a section on assistive technology:

http://www.excite.co.uk/directory/shopping/health/disabilities/assistive_technology

Further reading

We can provide a list of further reading on request. Please contact the librarian at the Alzheimer's Society national office on library@alzheimers.org.uk.

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