

Assistive equipment around the home: Tools for daily living

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In today's society, people are heavily dependent upon devices to help them manage their lives effectively. There is a vast array of labour-saving devices available on the high street that disabled people can use and many specialist disability equipment outlets.

It can be difficult to keep up to date with new developments. However, therapists need a general knowledge of the range of equipment that exists and the most appropriate type of equipment to meet specific needs. In addition, therapists have the opportunity to work with product suppliers to ensure that new products meet the needs of disabled people.

This article provides guidance on resources and explains the criteria by which local councils determine who may be eligible for a particular service.

Key words: assistive equipment, disability, occupational therapists, activities of daily living

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Assistive devices are not new; for centuries mankind has used tools, equipment and gadgets to assist with everyday life. Items were initially made from natural materials and progress accelerated in the industrial age with the development of metal devices and mass production. Major leaps forward occurred with the introduction of plastics and more recently, with the development of the microchip.

Many societies use gadgets and electrical labour-saving devices within the home, such as can openers, blenders, vacuum cleaners and dishwashers. Most people are highly dependent on tools to make tasks easier and quicker. Manufacturers constantly adapt their stock range and widen product choice for specific functional needs. For some disabled people, merely purchasing items carefully is sufficient; for example, choosing telephones with big buttons and touch controls on microwaves. For others with more specialist needs, specifically made equipment is needed to save time or make life easier.

Equipment should increase quality of life for the elderly and disabled and improve the working environment for carers. *Table 1* gives some examples of products designed for people with disabilities.

STRIKING THE RIGHT BALANCE

It is important for therapists to establish the correct balance between helping people to do a task and allowing people to do activities for themselves. Providing too much help can impede the development of independence in functional ability; conversely, helping insufficiently can mean individuals struggling unnecessarily.

Many people can be helped by equipment specifically designed to make daily living activities easier, even if only on a short-term basis. However, for some disabled people the provision of assistive equipment is essential to enable them to cope with the basic practicalities of life and overcome impairments of function. Disabilities are not confined to obvious physical ones, but include the problems of sensory impairment such as partial hearing and sight or cognitive and perceptual problems.

TABLE 1.
Some specifically made equipment for people with disabilities

Equipment	Products and further information
Bariatric equipment:	Nightingale Care Beds (www.nightingalebeds.co.uk) supplies equipment for both hire and sale. Equipment includes beds, patient hoists, slings, static/rise and recline chairs, commodes, wheelchairs and walking frames (<i>Figure 1</i>). Call 01978 661699. Arjo (www.arjo.co.uk) and Pegasus Ltd (www.pegasus-uk.com) also supply bariatric products.
Bathroom solutions/lifting and handling:	Arjo's product range covers bath, shower and hygiene solutions (<i>Figure 2</i>). Arjo also provides equipment for lifting and transferring and bedpan washers (call 08702 430 430). Pegasus Ltd supply mattresses for the treatment and prevention of pressure sores.
Specialized seating:	Kirton is a provider of specialist seating and contract furniture for children and adults. Kirton has a range tailored specifically for people with neurological problems, such as the Omega (<i>Figure 3</i>). Visit www.kirton-healthcare.co.uk or call 0800 212709.
Telecare:	Telecare products help to support older people to live safely and securely at home, helping to reduce avoidable admissions to residential care and hospital by using community alarms. Funding in the form of the Preventative Technology Grant (PTG) and the Partnerships for Older People Projects has backed the development of preventative strategies. £80 million will be allocated to fund PTG projects over a 1–2-year timescale from April 2006. Tunstall Group manufacture and provide telecare solutions and response centre systems. Visit www.tunstall.co.uk or call 01977 661234.



Figure 1. A selection of bariatric equipment supplied by Nightingale Care Beds (www.nightingalebeds.co.uk), all suitable for patients up to 318 kg in weight: (a) The ProAxis Plus bed by Nightingale; (b) the UltraTwin FreeSpan hoist and (c) Viking XL hoist from Liko (www.liko.com).

SOURCES OF EQUIPMENT

Decades ago, before development of the assistive equipment market, occupational therapy (OT) departments made many pieces of equipment. Stocking gutters were made from plastic buckets and bread-buttering boards from small squares of wood with raised edges on two sides. Today, there are many suppliers of equipment and several retailers have mail-order outlets, such as Chestercare (linked to Homecraft Ability One), Keep Able (www.keepable.co.uk) and Ways and Means (Nottingham Rehab Supplies).

Many pharmacists display independent living catalogues containing a selection of equipment. Several retailers sell 'kits', such as the hip/knee equipment packages, at a discount. Supermarkets sell household items that can be used by people with disabilities, such as long-handled dustpan and brush sets and swivel-bladed potato peelers.

People can search for and view many assistive devices on the internet. Useful websites are:

- ASM Medicare (www.asmmedicare.com)
- Mountway (www.mountway.co.uk)
- Nottingham Rehab Supplies (www.nrs-uk.co.uk)
- OT Stores (www.otstores.co.uk)
- Westons (www.westons.com).

Most sites offer online secure trading and some offer

online tracking of purchases. The internet is a useful source for the location of unusual items, such as a long handled poop-scoop for dog owners with bending or balance problems or for wheelchair users.

Used equipment, from shower chairs to cars, can be bought and sold online, for example at Equip For Life (www.equipforlife.org.uk), a non-profit organization. This was established with National Lottery funding to allow people to post classified equipment adverts online.

SOURCES OF INFORMATION

Although the internet is a useful tool for researching, it can be time consuming. The Disabled Living Foundation (DLF) helps people to locate items and provides impartial information on a wide range of equipment. DLF factsheets, such as *Choosing Household Equipment* (2003), provide many ideas on different techniques and assistive equipment and are available electronically (www.dlf.org.uk/factsheets/).

There are over 50 disabled living centres in the UK that offer solutions to practical difficulties in daily living. They have a wide range of demonstration products and are normally staffed by occupational therapists. Often, there is multiple choice and demonstration centres offer people the chance to



Figure 2. (a) Encore standing/raising aid; (b) Parker bath; (c) Carendo multipurpose hygiene chair, all from Arjo (www.arjo.co.uk).



Figure 3. Omega neurological seating from Kirton (www.kirton-healthcare.co.uk).

try out different products. Details of local centres in the UK are available electronically at www.dlcc.co.uk/centres.

Many exhibitions, such as Naidex and Independent Living, take place throughout the world to give opportunities to therapists, purchasers, carers and people with disabilities to get up to date with the bewildering range of equipment and to compare products.

The Medical and Healthcare products Regulatory Agency (MHRA) interactive online education programme is aimed at health-care staff to increase their knowledge of regulations and the safe use of devices (www.mhra.gov.uk/learningcentre/usingmedicaldevicessafely). In September 2005, independent and objective evaluation of medical devices previously under the MHRA was passed to the Centre for Evidence-based Purchasing. All evaluation reports published since 2002 are available electronically at www.pasa.nhs.uk/evaluation/publications/ater/equip_daily_living.asp.

ONE-OFF PIECES OF EQUIPMENT

Additional to 'off-the-shelf' products, specialized one-off items may need to be made by manufacturers if a person's needs cannot be met by the existing range of equipment. The Remap organization provides individually made items for specific problem areas. Remap has over 100 groups in the UK and welcomes new volunteers, particularly with skills in areas of design, manufacture and medical fields.

Local schools or colleges will probably welcome the chance to have 'live' design projects. An example of this is a specialized telephone holder made by a school for attachment to a stand-up bed. The London Metropolitan University has an MA course

in Design Research for Disability. Several of the students' innovative technologies and products are on the BBC new website at <http://news.bbc.co.uk/2/hi/technology/4272516.stm>. Examples of projects are:

- Postural seating to support disabled children after spinal or hip surgery
- Floor-to-ceiling bedroom draw units on a revolving chain mechanism so that they can be reached from standing or a seated position
- User-friendly central heating timers with LEDs (light emitting diodes) that have better colour-contrast showing various on and off times on separate displays
- Telephones that dial automatically when a card is placed into a card/photo holder and the photo or holder is tapped.

FUNDING FOR EQUIPMENT

In the UK, under the Chronically Sick & Disabled Persons Act (1970), social services have a duty to provide a variety of services including equipment for disabled people. The *Fair Access to Care Services (FACS)* (Department of Health, 2003) provides guidance on eligibility criteria based on the degree of risk an individual might face. These risks have been placed into four main categories: critical, substantial, moderate and low (*Box 1*).

Individual councils set their own level of eligibility for services based upon the FACS criteria. Most do not meet the needs of individuals who fall within the 'low' banding, although they will generally offer advice and guidance. In these circumstances, individuals will be responsible for accessing their own equipment and would be best advised to seek guidance if they are not certain what is available.

Although the source of funding for equipment varies throughout the world, there is an increase in consumer independence. This has encouraged diversity of providers in the marketplace for services and for the retail of equipment. Particularly with the ease of ordering on the internet, people can search and order products worldwide.

THE FUTURE

Some retailers and manufacturers of equipment are actively looking for therapists' help to develop their products and to advise on any gaps in the market. This is a valuable opportunity for therapists to become involved in the design of new products. Technological advances have introduced a new era of hi-tech products for people with disabilities that will make huge differences. For example:

- Clothing could contain a computerized patch that will monitor body systems, provide feedback or give simple prompts.



■ Telecare has been piloted in some sheltered housing schemes and consists of two components: either specific sensors or a lifestyle package. Specific sensors that detect movement can be set to detect occupancy of a chair and/or a bed. Other examples are a flood detector, extreme temperature sensor, fall detector, automatic lights when getting out of bed, epilepsy sensor, a wandering alert and a lifestyle monitoring package. A lifestyle package consists of movement detectors on items that are in daily use, such as doors (on fridge, food cupboard) and electricals (kettle, toaster, television). This will enable monitoring of an individual's daily living routine to note any changes. This is of particular use for older people with dementia or cognitive problems, people who are at risk of falling or recent hospital discharges. Apart from the technological advances, the trend in policy terms has been to develop a consumerist approach to care and equipment provision. Since the UK Prime Minister's Strategy Unit report, *Improving the Life Chances of Disabled People* (NHS Purchasing and Supply Agency, 2005), the government proposes to increase the take-up of direct payments and to test other forms of individual budgets for people using local authority services, so that they can buy in the services they need. These include respite care, carers and technology to assist in independent living (Box 2).

Recommendations of the green paper include the development of new responsive models of care, including extra care housing and telecare, and a shift to more preventative services. The report says that 'independent living is about providing disabled people with choice, empowerment and freedom'. This will mean that the power of spending will shift more to individual purchasers of assistive equipment.

The Disability Rights Commission (2002) defines independent living as referring to:

'...All disabled people having the same choice, control and freedom as any other citizen...This does not necessarily mean disabled people "doing everything for themselves", but it does mean that any practical assistance people need should be based on their own choices and aspirations.'

CONCLUSION

There are an increasing number of assistive devices that can enable people to be self-sufficient or undertake activities more easily. Many items available on the high street can be used to improve quality of life. However, it is important to try to do tasks in a different manner first rather than rely on a mechanical aid.

One of the aims of therapeutic intervention is to facilitate independence. With advances in products

BOX 1. DEPARTMENT OF HEALTH ELIGIBILITY FRAMEWORK: FOUR BANDS

- **Critical:** When life is, or will be, threatened; and/or significant health problems have developed or will develop; and/or there is, or will be, little or no choice and control over vital aspects of the immediate environment; and/or serious abuse or neglect has occurred or will occur; and/or there is, or will be, an inability to carry out vital personal care or domestic routines; and/or vital involvement in work, education or learning cannot or will not be sustained; and/or vital social support systems and relationships cannot or will not be sustained; and/or vital family and other social roles and responsibilities cannot or will not be undertaken.
- **Substantial:** When there is, or will be, only partial choice and control over the immediate environment; and/or abuse or neglect has occurred or will occur; and/or there is, or will be, an inability to carry out the majority of personal care or domestic routines; and/or involvement in many aspects of work, education or learning cannot or will not be sustained; and/or the majority of social support systems and relationships cannot or will not be sustained; and/or the majority of family and other social roles and responsibilities cannot or will not be undertaken.
- **Moderate:** When there is, or will be, an inability to carry out several personal care or domestic routines; and/or involvement in several aspects of work, education or learning cannot or will not be sustained; and/or several social support systems and relationships cannot or will not be sustained; and/or several family and other social roles and responsibilities cannot or will not be undertaken.
- **Low:** When there is, or will be, an inability to carry out one or two personal care or domestic routines; and/or involvement in one or two aspects of work, education or learning cannot or will not be sustained; and/or one or two social support systems and relationships cannot or will not be sustained; and/or one or two family and other social roles and responsibilities cannot or will not be undertaken.

BOX 2. RECOMMENDATION 4.4: SUPPORTING INDEPENDENT LIVING

Government departments 'should – by 2012 – work towards a new approach to supporting independent living, which delivers support, equipment and/or adaptations in a way that:

- Addresses all aspects of needs for support and/or equipment or adaptations
- Is personalized according to individual need and circumstances
- Is underpinned by the principle of listening to disabled people and acknowledging their expertise in how to meet their needs
- Maximizes the choice and control that people have over how their additional requirements are met
- Provides people with security and certainty about what level of support is available
- Wherever possible, minimizes the disincentive to seek paid employment or to move from one locality to another
- Uses existing resources to maximize social inclusion.'

(NHS Purchasing and Supply Agency, 2005)

and direct payments for people and children with disabilities, therapists have a useful role to play in assisting disabled people and children to obtain equipment. Therapists have a vital role to help people find the right assistive devices to ensure that individuals are functioning at their maximum level of abilities and to maintain optimal quality of life. **IJTR**

Department of Health (2003) *Fair Access to Care Services: Guidance on Eligibility Criteria for Adult Social Care*. DH, London

Disability Rights Commission (2002) *Policy Statement on Social Care and Independent Living*. DRC, Stratford Upon Avon

Disabled Living Foundation (2003) *Choosing Household Equipment*. Disabled Living Foundation, London

NHS Purchasing and Supply Agency (2005) *Improving the Life Chances of Disabled People*. DH, London