

Feeding aids

M J Connolly, A S Wilson

Although problems with eating and drinking are not confined to elderly people, 3% of those over 65 living at home have difficulties and 2.4% of those over 85 cannot feed independently.¹ Independent feeding or drinking, or both, may prove difficult for many reasons (box).

Some general points are worthy of emphasis. Firstly, disabled people often eat slowly; food must be hot to begin with to remain appetising. Secondly, a table and chair of correct height are vital for maximum comfort and efficiency^{2,3}; and thirdly, the type of food is as important as the utensils—for example, soups are difficult for those with tremor and hand held foods such as sandwiches are easy for hemiplegics or blind people.³

Of all aids for disabled people feeding aids are among those prescribed least often⁴ and perhaps least often used.⁵ Aids may maintain independence and dignity,⁶ but patients often develop other ways of coping and aids are not always beneficial, especially if patients regard them as unattractive (“ugly mugs”) or as drawing attention to their disability. Furthermore, patients often buy (perhaps expensive) aids commercially to find them of little benefit.³ Before aids are tried it is wise to confirm that the patient’s inability to manage conventional equipment is caused by his or her disability and not by defective conventional utensils (Is the knife sharp enough?). Three basic guidelines for providing feeding (or any) aids are firstly, obtain professional assessment from an occupational therapist; secondly, provide aids only when other ways of coping fail; and, thirdly, supply aids that are simple and look as normal and attractive as possible.

Feeding aids for specific disabilities

LOSS OF USE OF ONE ARM

The main feeding difficulties for people who have lost an arm are maintaining a stable base (plate or dish), cutting up food, and getting food off the plate. Non-slip mats anchor the plate or cup to the table or tray. Only about a third of non-slip mats used in hospital stroke rehabilitation, however, are taken home on discharge.⁵ Plates with basal suction pads serve the same purpose. Suction egg cups anchor to both table and egg (fig 1), and rocker knives eliminate the need to stabilise food with the other hand (fig 2). Several varieties of combination knife and fork (with or without spoon) are marketed, but if these are deemed appropriate care is needed to choose one in which the cutting edge is not put in the mouth. Some of these devices can cut the angle of the mouth when used as a

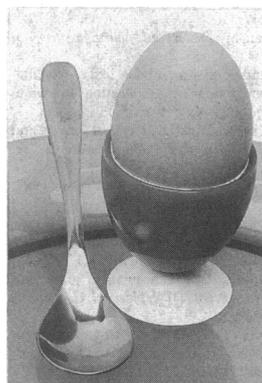


FIG 1—Suction egg cup

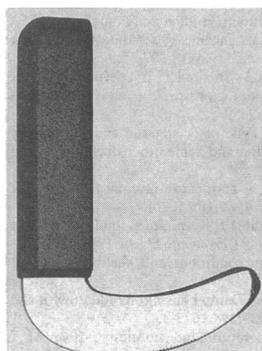


FIG 2—Amefa rocking knife

Department of Medicine for the Elderly, St James’s University Hospital, Leeds LS9 7TF

M J Connolly, MRCP, senior registrar
A S Wilson, DIPCOT, senior occupational therapist

Series edited by:
Professor Graham Mulley.

Br Med J 1990;301:378-9

Common causes of feeding difficulties in adults

Impairment	Examples of cause
Impaired body posture	Tetraplegia, hemiplegia
Lost use of one arm	Hemiplegia, amputation
Impairment of use of both arms (due to pain, weakness, sensory changes, stiffness, tremor)	Tetraplegia, bilateral stroke, rheumatoid arthritis, neuropathies, parkinsonism
Swallowing difficulties	Facial, bulbar, and pseudobulbar palsy
Cognitive impairment	Alzheimer’s disease, cerebrovascular dementia

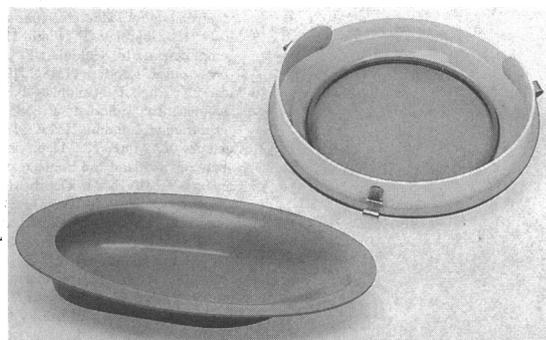


FIG 3—Steep sided plate (left) and plastic plate guard (right)

fork or spoon. In practice, however, many hemiplegic patients abandon trying to cut up food, choosing instead food that requires minimal or no cutting, or leave the task of cutting up food to the carer. To minimise “pea chasing,” plastic plate guards, which clip to the plate rim, are useful, though unsightly. An increasing variety of attractive, deep, steep sided plates serve the same purpose (fig 3).³

IMPAIRED USE OF BOTH ARMS

Poor grip due to weakness, pain, or stiffness is helped by lightweight utensils with large handles.² Lightweight insulated mugs prevent burns to the hands in patients with sensory impairment or in those with weak grip who tend to steady the cup with the knuckles when gripping the handle. Mugs with two handles also help poor grip (fig 4)³ as does the Manoy beaker, which is held between the thumb and index finger (fig 5), thus obviating the need for thumb opposition. The Doidy cup (fig 5) has an angled base and lip to help those who have difficulty with pronation (such as in parkinsonism). Unfortunately, many lightweight mugs are both unattractive and uninsulated.

Cutlery with large diameter lightweight handles is provided by several manufacturers (fig 6). A cheaper, though unattractive alternative, is to attach lightweight foam rubber plastazote tubing (various diameters are available commercially) over the handles of conventional cutlery. When finger flexion is particularly weak but elbow movement is retained leather handstraps may be used to hold cutlery. A versatile alternative (Sunflower Selectagrip) provides multiple shapes and diameters of detachable handles that clip to a plastic handstrap. Some users, however, find the strap difficult to adjust.² Severe tremor, especially on intention, is particularly frustrating. Weighted wrist straps are said to minimise tremor, but we do not find these helpful and know of no objective evidence of their value. Capped cups, commonly with spouts, eliminate spillage, but patients are often embarrassed by what they perceive as baby cups (see fig 4). A simple alternative is to only half fill a large conventional mug. Cups with concave anti-splash lids (with holes not spouts) or flexible plastic “bendistraws” may also be more acceptable.

UNILATERAL FACIAL PALSY

Unless mild, unilateral facial palsy causes dribbling of liquids and pouching of solids in the paralysed cheek

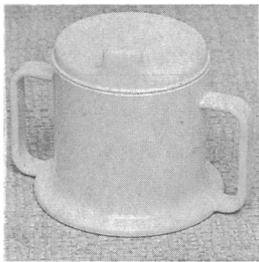


FIG 4—Two handled spouted feeding cup

(potentially dangerous as food may be aspirated when asleep). Cups with spouts (capped or not) may prevent dribbling. Conventional straws are less appropriate as the patient's ability to suck is usually impaired, but straws with a non-return valve (Pat Saunders straw) often solve the problem. Pouching is controlled simply by awareness of the phenomenon and inspection of the cheek pouch after meals and at bedtime.

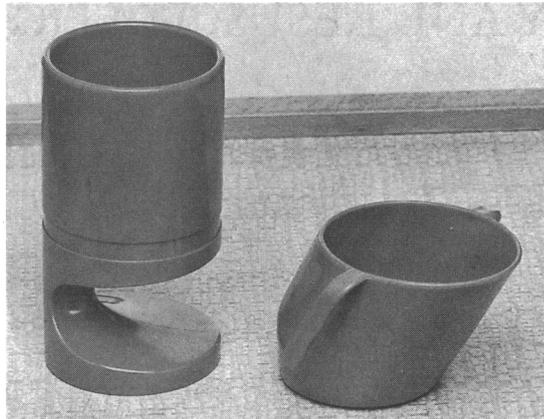


FIG 5—Manoy beaker (left) and Doidy cup (right)

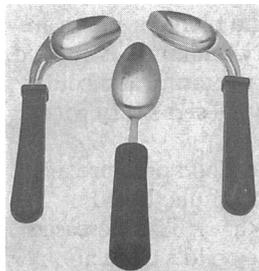


FIG 6—Angled spoons with large diameter handles on either side of ordinary spoon with foam rubber handle. Angled spoons require less wrist movement and are easier to place in mouth

VISUAL IMPAIRMENT

Large utensils of contrasting colours are sometimes valuable for people with visual impairment. Sectored plates are usually unnecessary,³ provided food is arranged in a preset pattern. Deep plates or plate guards may, however, prevent food spillage, an otherwise common problem.³

COGNITIVE IMPAIRMENT

Independent feeding is sometimes impossible in demented subjects. More commonly feeding is either messy as use of more complicated equipment (such as knife fork coordination) proves difficult. Carer frustration can be lessened simply by serving food that may be eaten with a spoon. Much of the equipment already discussed may also be helpful, but complex aids should be avoided. Cognitive impairment may reduce coordination of pronation as utensils are

brought to the mouth. Indeed carers often say "she uses a spoon like a baby." This may be helped by the use of angled utensils (particularly spoons), which are available for right and left handed use (see fig 6).

Conclusion

The above guidelines are neither exhaustive nor universally applicable. Conversely some aids described for one disability may be helpful for those with different problems (such as angled utensils for patients with parkinsonism). Advice on specific feeding problems can be provided by hospital and community based occupational therapists and by disabled living centres. Feeding aids should be attractive and normal to appeal to patients. Some manufacturers have recently recognised this, and perhaps newer and better designed feeding aids will enjoy wider use. Although many feeding aids are available, there has been little objective study of their value and current recommendations are based mainly upon empirical observation. Further research is needed to expand our knowledge and to increase the interest of health professionals.

Appendix

RECOMMENDED READING FOR PATIENTS

- Nichols P, Haworth R, Hopkins J. *Disabled: an illustrated manual of help and self-help*. Newton Abbot, Devon: David and Charles, 1981.
- Multiple Sclerosis Society. *Helpful hints around the home for the multiple sclerosis patient*. London: Multiple Sclerosis Society, 1980.
- Arthritis and Rheumatism Council. *Your home and your rheumatism; aids and gadgets in the home*. London: Arthritis and Rheumatism Council, 1985.
- Hunt A. *The elderly at home. A study of people aged sixty five and over living in the community in England in 1976*. London: OPCS, HMSO, 1978.
 - Moy A. *Aids assessment programme. Assessment of adult cutlery*. London: Department of Health and Social Security, 1985.
 - Wainwright H. Feeding problems in elderly disabled patients. *Nursing Times* 1978;74:542-3.
 - Mackenzie L, Aitken CA. Help in the home. Needs of disabled people. *British Journal of Occupational Therapy* 1982;45:293-4.
 - Smith ME, Walton MS, Garraway WM. Use of aids and adaptations in a study of stroke rehabilitation. *Health Bull (Edinb)* 1981;39:97-106.
 - Saunders J. The consumers' viewpoint. 1. Rheumatoid arthritis. *British Journal of Occupational Therapy* 1981;44:352.

ANY QUESTIONS

After surgery under a general anaesthetic a few elderly people become mentally disturbed and suffer progressive mental deterioration. Is this a recognised syndrome, and if so what is the cause and possible treatment?

This relation was first detailed in 1955 by Bedford, who showed that the mental state of almost 10% of those aged over 65 was adversely affected by operations under general anaesthesia and that one quarter of these developed "extreme dementia."¹ This drew attention to the importance of the proper perioperative management of the elderly. Six years later Simpson *et al*, studying a selected group of patients and against the background of interest prompted by Bedford's paper, showed that elective operations for elderly people under general anaesthesia were safe.² As recently as 1988, however, Gustafson *et al* showed that 61% of 111 consecutive patients operated on for fractured neck of femur developed an acute confusional state postoperatively.³ In this investigation the predicting factors were old age; pre-existing dementia, depression, and stroke; and the use of drugs with an anticholinergic effect (this last had also been observed by Bedford). Moreover, 92% of the patients of Gustafson *et al* who had experienced perioperative falls in blood pressure developed acute confusional states (a factor also considered by Bedford).³ To prevent these complications careful, experienced perioperative management of elderly people is essential. These observations are of particular importance in orthopaedic wards, where in the United Kingdom 20% of beds are occupied by elderly women with fractured hips.—BRIAN LIVESLEY, professor in the care of the elderly, London

- Bedford PD. Adverse cerebral effects of anaesthesia in old people. *Lancet* 1955;iii:259-63.
- Simpson BR, Williams M, Scott JF, Smith AC. The effects of anaesthesia and elective surgery on old people. *Lancet* 1961;ii:887-93.
- Gustafson Y, Berggren D, Brännström B, *et al*. Acute confusional states in elderly patients treated for femoral neck fracture. *J Am Geriatr Soc* 1988;36:525-30.

What treatment is advised for a man in his 70s suffering from gout? Would he be wise to abstain from alcohol?

My personal choice for the treatment of acute gout in a 70 year old man would be colchicine 500 µg four times a day until the symptoms have settled. Alternatively he could be treated with a non-steroidal anti-inflammatory drug, but this is more likely to cause problems in the elderly—for example, patients may develop diarrhoea. If the diagnosis of gout is confirmed by hyperuricaemia and the presence of crystals of uric acid in the joint aspirate and he has had several such attacks I would suggest that he should be prescribed allopurinol indefinitely. This should be started at a low dose, 100 mg daily, working up to the full dose of 300 mg daily over three to four weeks and under the cover of colchicine taken regularly or a non-steroidal anti-inflammatory drug. This treatment should be continued indefinitely, and allopurinol would be expected to abolish the attacks usually within a year. It is a wise precaution, however, to recheck the uric acid concentration when the patient is taking allopurinol in case a larger dose is needed. In elderly patients with impaired renal function a smaller dose may be necessary. It remains controversial whether alcohol provokes attacks, and if the patient is taking regular allopurinol I see no reason for stopping or restricting its consumption.—P W BULL, consultant rheumatologist, Ashford