## FDA CONSUMER THE MAGAZINE OF THE U.S. FOOD AND DRUG ADMINISTRATION





# Older Adults Examine





of Oz," Dorothy clicks the heels of her ruby slippers together and repeats, "There's no place like home" until she magically returns to the safe haven of her bedroom in Kansas.

Like Dorothy, many ailing older adults feel there's no place like home.

Surveys reveal that most older adults would rather be cared for in the comfort of their own homes than in a nursing home. Some studies have shown that people heal more quickly at home than in an institution and that home care often is the less expensive alternative. These factors, combined with the swelling ranks of the graying sector, have made home health care a growing concern in this country. The number of elderly receiving home health care in 1988 was more than double that in 1977, according to the National Association for Home Care.

Fortunately, various agencies are rising to meet the burgeoning need for home-based care of senior citizens, and thanks to technological advances in portable medical equipment, many treatments previously possible only in a hospital (such as kidney dialysis and intravenous feeding) can now be given at home. The Food and Drug Administration is responsible for ensuring that the new home medical devices used for these treatments are safe and effective.

In addition, emergency response devices such as "Lifeline" provide instant access to emergency care if necessary. The development of specialized gadgets, such as grab bars and stove mirrors, have also made the home environment safer and more accommodating for older people.

Health-Care

by Margie Patlak

**Home Improvements** 

A number of health impairments that often accompany old age—such as limited mobility and strength, and vision or hearing loss—make modifications to the home imperative. Often, simple devices such as loop handles instead of doorknobs on cabinets can spell the difference between dependent and independent living for an older person.

A number of changes may also be necessary to improve the safety of the home. Falls are the most common cause of fatal injury for older people. In 1982 alone, more that 2,500 people 65 and older were treated in hospital emergency rooms for injuries that resulted from trip-

ping over rugs. Double-faced adhesive carpet tape or rubber matting applied to the backs of rugs can help prevent these accidents. Changes in floor levels should also be clearly marked with white or reflecting tape, and stairways should be well-lit.

Wet, soapy tile or porcelain surfaces are slippery, making the bathroom a hazardous area for the older adult. Textured strips applied to bathroom floors and to the bottoms of tubs and showers can help prevent falls. Many elders find grab bars on the wall adjacent to the toilet and in the tub or shower helpful. Tub seats are good for people in wheelchairs or those with loss of strength who have difficulty lowering themselves to the floor of the tub.

Knob-type faucet or tub hardware should be replaced with single-lever faucets, which can be easily operated by arthritic hands. To avoid burns, anti-scald temperature controls can be installed to prevent the water temperature from rising above an established limit. Settings can also be lowered on hot water heaters.

Narrow doorways can pose a problem for senior citizens who use walkers or wheelchairs. Removal of a door can often provide the needed clearance. If this isn't feasible, "swing-clear" hinges can enlarge a door opening nearly two inches. Lever latches instead of standard doorknobs alleviate the problem arthritics have with gripping or twisting. Likewise, slide bolts are easier to operate than deadbolts and provide nearly the same security.

As people age, they generally find that background noises interfere with their ability to hear and participate in conversations. Carpeted floors and curtained windows can reduce noise levels and distracting echoes.

Because it takes older people longer to focus vision when moving between light and dark areas, light levels should be kept consistent in bedrooms and hallways, and night lights should be used.

The kitchen can pose particular problems for senior citizens. For those with impaired hand dexterity, simple devices can aid food preparation. Cutting boards with spikes, for example, hold foods such as vegetables in place for cutting, and boards with indentations hold mixing bowls in place.

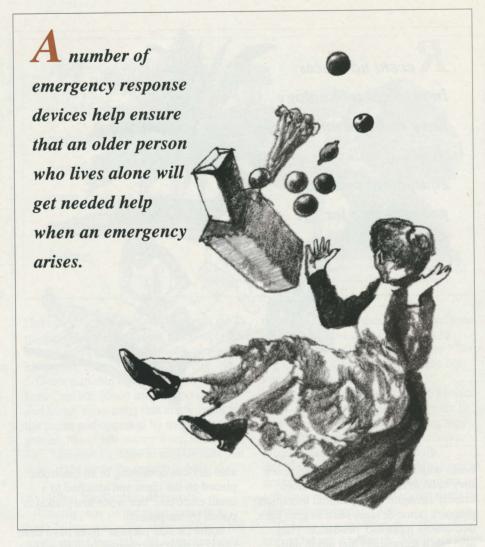
A mirror above the stove allows a person in a wheelchair to see what's cooking in pots, and sling belts attached to the counter can support someone unable to stand for long periods. Items can be moved safely between the kitchen and serving area on wheeled storage carts.

To avoid fires, store flammable items such as potholders, dish towels, or plastic utensils away from the range. Roll up long, loose sleeves securely before cooking. The Consumer Product Safety Commission estimates that nearly three-quarters of all people who die from clothing fires are over 65. Many of these fires start when long sleeves ignite while the person is working over the stove.

Because some older people have lowered immunity, they need to be especially careful about exposure to foodborne microorganisms that can cause serious-even fatal-infections. (See "Food Safety Crucial for People with Lowered Immunity" in the July-August 1990 FDA Consumer.) Senior citizens, therefore, should avoid unpasteurized milk or raw or undercooked eggs, poultry, fish, shellfish, or meat. Hands, utensils, counters, and cutting surfaces should be washed with hot soapy water between preparation of different foods, particularly after handling raw eggs, meat, poultry, or fish. Plastic or glass cutting boards should be used, rather than wooden ones, which are difficult or impossible to clean adequately. When handling raw meat, poultry, or fish, cover any cuts or open sores on the hands with a plastic sealing bandage or plastic gloves. (For more information on food safety, see page 18 of this issue.)

### **Emergency Response Devices**

A number of emergency response devices help ensure that an older person who lives alone will get needed help when an emergency arises, whether it's an inability to get out of the tub or a



heart attack. These small devices, available at local hospitals, are worn around the neck. The wearer simply pushes a button and is connected to an experienced operator. This operator, who has access to the caller's medical history and numbers of people to contact in an emergency, summons help.

### **Home-Care Helpers**

Some senior citizens require home care to live comfortably and safely. When friends and family are unable to provide that help, professionals can often meet those needs, which vary considerably from person to person.

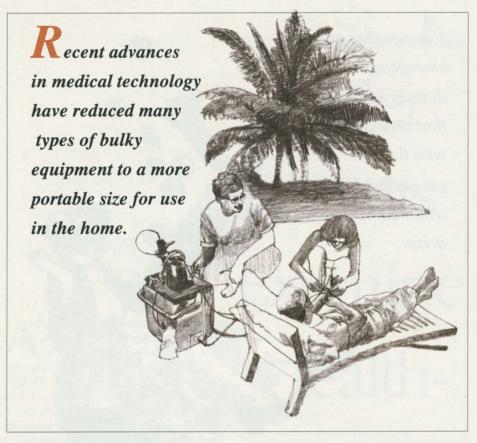
A man or woman severely disabled by arthritis, for example, can hire a part-time homemaker to shop and clean. Meals on Wheels, a service available in most communities, can provide hot meals. Someone recovering from a stroke or other illness may temporarily need physical, occupational or speech therapy as well as a home health aide to assist with personal care.

The mainstays of home care are nurses, homemakers or health aides, social workers, therapists, and physicians. Visiting nurses provide hands-on care such as changing bandages and checking blood pressure, heart rate, and other vital signs. Nurses also teach patients or family members how to do some of the medical tasks, such as giving injections. In most home health-care situations, the nurse also identifies any additional services a client may need, such as physical therapy.

Homemakers shop, cook and clean for their clients. Home health aides provide additional help such as bathing, walking, dressing, and administering oral medications. Sometimes, all that's needed to avoid a nursing home is help with bathing and dressing.

Social workers help geriatric patients and their families find the services and agencies they need. They also help patients and their families cope with the stresses of illness and disability.

Physical therapists provide home pa-



tients with exercise and other therapies they need to relieve pain and restore muscle strength. Occupational therapists pinpoint home devices such as grab bars that enable more independence. They also teach techniques that aid in daily living activities, such as how to dress with the use of just one hand. Speech pathologists teach hearing-impaired individuals how to read lips and help stroke patients and other speech-impaired individuals recover their ability to talk.

Physicians authorize the home healthcare plan. They periodically review the effectiveness of home-care services and recommend any necessary changes.

Some home health-care services are covered under Medicare or private insurance policies. Your local Social Security office can tell you what services are covered by Medicare.

### **High Tech at Home**

Recent advances in technology have reduced many types of bulky medical equipment to a more portable size, enabling many patients to leave the hospital more quickly following a major illness. For those afflicted with chronic ailments, home medical equipment can also prevent a hospital stay.

Cardiac patients' heart rhythms can be monitored at home, for example, by portable devices consisting of an electrode placed on the chest and attached to a small electronic box worn in a pocket or pouch by the patient.

Some cardiac patients' lives have been saved in their own homes by a telephone defibrillator system. If the patient has symptoms such as chest pain, palpitations, or shortness of breath, the patient or caregiver places a defibrillator pad containing electrodes on the patient's chest. The electrodes detect the patient's heartbeat pattern, and an electrocardiogram (EKG) is sent to a base station through the telephone lines. Medical personnel at the base station evaluate the EKG and, if necessary, activate the defibrillator on the patient's chest so that it gives brief electric shocks. These shocks can help stabilize or restore a patient's heartbeat until emergency medical personnel arrive on the scene.

There are a number of portable oxygen systems that help ease the chronic shortness of breath characteristic of emphysema and chronic bronchitis. These chronic obstructive pulmonary diseases are second only to heart disease as a cause of disability, according to the Social Security Administration.

Usually people with these respiratory conditions receive oxygen from large tanks or a device that concentrates the

oxygen in room air. Oxygen is delivered to the patient through a tube that is either placed in the nose or surgically inserted into the neck. When they need to leave their homes, people can also sling a handbag-like sack of oxygen over their shoulders. This convenient oxygen container is filled from a tank of oxygen kept at home.

After initial training, many people can administer their own supplemental oxygen without supervision. The frequency of administration varies with the severity of the disability.

"Some people need oxygen constantly," says FDA's Marcia Withiam-Wilson, M.S.N., a nurse consultant to FDA, "whereas other people just need it whenever they exert themselves—when they walk some distance, for example, but not when they are sitting in a chair."

Intravenous (IV) care equipment is also available for home use. Some people can receive cancer chemotherapy intravenously in their own homes with the instruction and supervision of a home nurse. IV equipment can also be used in the home to give antibiotics to people with infections such as pneumonia or osteomyelitis, a bone infection common in the elderly. Home use of IV antibiotics can allow an earlier hospital discharge of some patients with pneumonia, for example.

A number of ailments that commonly afflict the elderly require tube feeding, which often can be done at home. Some people receiving chemotherapy, for example, may need to supplement their meals with a nutritional solution given in a tube inserted through the nose and into the stomach or surgically inserted directly into the stomach or small intestine. Stroke patients having difficulty swallowing may also need such tube feeding, as may some patients with oral cancers or various gastrointestinal diseases. Health practitioners can teach patients and their caregivers how to administer tube feedings at home, and how to record intake, output, and the patients' weight so their nutritional status can be assessed.

Some people receiving radiation therapy, which can impede the gut's ability to digest or absorb food, and others with certain disorders need to be fed a nutritional solution via a catheter inserted surgically in a vein near the collar bone. This type of intravenous feeding, too, can be done at home after initial training by a health professional. Products used for intravenous feedings at home are

called home total parenteral nutrition. FDA, which regulates these products as drugs, ensures their safety and effective-

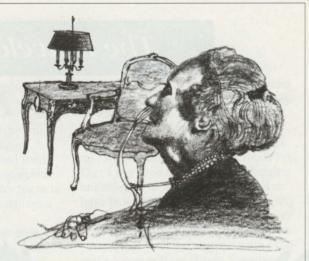
Kidney failure afflicts many older adults, particularly those with high blood pressure or diabetes. Patients with kidney failure can be treated in the home with peritoneal dialysis, in which the patient's blood is purified by a solution (dialysate) inserted into the abdominal cavity through a surgically inserted catheter. (See "Kidney Disease-When Those Fabulous Filters Are Foiled" in the March 1990 FDA Consumer.)

A process known as continuous ambulatory peritoneal dialysis allows the patient to go about normal activities during the day. Peritoneal dialysis is usually continued at night with the aid of a machine that allows dialysis to be performed while the patient sleeps. Home peritoneal dialysis is not difficult and can be done without supervision after initial training by health personnel at a dialysis center, according to Ruth Hubbard, R.N., a scientific reviewer at FDA.

Some patients with kidney failure are also treated at home with hemodialysis, in which their blood is channeled through a device that removes impurities and excess fluids. This procedure takes about three or four hours and is usually done about three times a week. In addition, hemodialysis at home requires the assistance of a trained partner to help the patient set up the equipment and monitor progress during treatment.

Both hemodialysis and peritoneal dialysis can be done in the hospital, but "the advantage of home dialysis," says

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Hubbard, "is that it doesn't restrain the patient to a strict schedule and people are able to participate in their own care and have more control."

Other portable equipment used in the home include blood transfusion devices and home x-ray units that are brought to the home and operated by trained personnel. Many laboratory tests, in addition, can now be done in mobile labs that drive right up to the patient's door.

### **Avoiding Medication Hazards**

Usually, one of the most important parts of home care for older people is the medications they take on a regular basis. The various ailments to which senior citizens succumb often require them to take several medications simultaneously. Mixing medications can have serious consequences, and older adults may be especially prone to side effects from

medications. New guidelines developed by FDA request drug companies to study drugs in older patients. (See "Testing Drugs in Older People" in the November 1990 FDA Consumer.)

To avoid harmful reactions to medications, people over 65 should be sure to let their doctors know every drug they are taking, including over-the-counter drugs. Pharmacists can also help trouble-shoot damaging combinations of drugs. Senior citizens should be alert to any drug side effects and report them to their doctors immediately.

The key to a medication's effectiveness is taking it properly. Medications should be taken as instructed-at the proper time and according to other instructions, such as only taking the drug on an empty stomach or with meals. A medication schedule that indicates, in a chart-like fashion, which medications should be taken and when can help ensure that medicines are taken properly. The schedule should be posted where it can be consulted often and where the patient can easily mark off drug doses as they are taken.

Many older people find the childproof caps on drug bottles difficult, if not impossible, to open. You can ask your pharmacist to give you regular caps, but be sure to keep the medication away from children.

By being conscientious about taking their medications, and seeking out the devices and personal services they need, older people can live long and comfortable lives in the familiar surroundings of their own homes.

## Home-Care Resources The following publications or organizations can provide additional infor-

mation on home care for older people:

- · American Association of Retired Persons, 1909 K St., N.W., Washington, D.C. 20049, (202) 728-4355. This organization puts out a booklet called "The Do-able Renewable Home," which details how to adapt a home to fit special needs.
- · Area Agencies on Aging. The phone numbers for these agencies can be found under the local or county government listings in the phone book. They provide referrals to local organizations or services that cater to the elderly.
- National Association for Home Care, 519 C St., N.E., Washington, D.C. 20002, (202) 547-7424. This organization provides referrals to home-care agencies.

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