



# Fall Prevention in the Home: Changes for Healthy Living

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# Fall Prevention in the Home: Changes for Healthy Living

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**Goal:** Participants will increase knowledge and skills in recognizing hazardous situations which may lead to falls by older adults.

**Objectives:**

Participants will:

- | Gain knowledge about the demographics of the older adult population in Texas.
  - Statewide Demographics
- | Gain knowledge about the scope of the problem of falls among older adults.
  - Falls by Age and Gender
- | Gain knowledge about the leading cases of falls among older adults.
  - Environmental Hazards
  - Physical Attributes
  - Medication Management
- | Identify the potential hazards in their own living environment.
- | Identify potential measures to eliminate the safety hazards in their own living environment.
- | Identify steps they can take to help their communities reduce the number of falls in older adults.

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**Target Audience:** Older Adults

**Roll Call:** Describe one situation, that you know about, where an older person had an accident resulting in a fall.

# Fall Prevention in the Home: Changes for Healthy Living

## Teaching Points

1. The number of people over the age of 50 will increase over the next decade.
2. Falling is a serious public health problem among older adults because of its frequency, the morbidity associated with falls, and the cost of the necessary health care.
3. Falls are ranked as the number one cause of injury related death for those over the age of 65.
4. Falls occur most frequently among older women.
5. The emotional factors associated with falls may increase the risk of future falls.
6. There are harmful consequences when the older adults associate themselves with stereotypes of old age.
7. Physical risk factors associated with falls increase with age.
8. Medications may increase the risk of falls for the elderly.
9. Safety-proofing the living environment has been shown to decrease the risk of falls for older adults.

## Content

### 1. The number of people over the age of 50 will increase over the next decade.

It is a fact that every 7.5 seconds someone turns 50. Between 2010 and 2030, these “Baby Boomers” will reach age 65.

By 2030, it is predicted that there will be 70 million older Americans, twice the number as today.

Thirty-five million will be age 85 or older, 28 times greater than the current population over age 85.

In Texas there are more than two million older adults. This number is 10.2% of all ages in the state. The largest concentration of older adults in Texas live in Harris, Dallas, Bexar, Tarrant and El Paso counties (listed highest to lowest concentration levels) while the greatest proportion of older adults compared to younger adults live in rural, central Texas counties.

### 2. Falling is a serious public health problem among older adults because of its frequency, the morbidity associated with falls, and the cost of the necessary health care.

Falling and fear of falling can cause long-term health effects such as inactivity and physical decline.

Every year 200,000 hip fractures occur.

Show Overhead Transparency  
#1, **Every 7 Seconds**

Show Overhead Transparency  
#2, **New Year’s Baby 2030**

Show Overhead Transparency  
#3, **Population Increase**

Show Overhead Transparency  
#4, **2 Million Texans Over the Age of 65**

Show Overhead Transparency  
#5, **Consequences of Falls**

**3. Falls are ranked as the number one cause of injury related deaths for those over the age of 65.**

Estimates of the yearly costs for acute care associated with fall-related fractures have soared to more than 10 billion dollars.

The cost associated with falls includes 3 million hospital days per year for hip fractures. Long term care is required for half of hip fracture survivors.

The research has cited falls occurring in 32% of those ages 65-74, in 35% of those aged 75-84, and in 51% of those aged 85 and older.

Show Overhead Transparency  
#6, **\$10 Billion Yearly Costs**

**4. Falls occur most frequently among older women.**

42% of women aged 65-74, compared to 20% of men in the same age group.

Show Overhead Transparency  
#7, **Falls Increase With Age**

**5. The emotional factors associated with falls may increase the risk of future falls.**

The **emotional risk factors** associated with falls are twofold. The person who falls, lives in fear of falling again, so they become inactive.

The fear of falling is one of the best predictors of later functional decline.

Inactivity leads to weakened muscles in turn lead to more falls. Second, older adults often do not use assistive devices to help steady their gait because they fear others will feel sorry for them or they are in complete denial of the need to use the devices.

Show Overhead Transparency  
#8, **Gender Differences in Falls**

Show Overhead Transparency  
#9, **Disability Consequences of Falls**

## 6. There are harmful consequences when older adults associate themselves with stereotypes.

Older adults were raised in a generation where autonomy was of prime importance. The use of an assistive device was a sign of helplessness and impending death, a fearful period in their life. In an ageist society, those who look old are treated as old, in a stereotypic way.

A 92 year-old man once described this experience:

“I look like a cripple. I’m not a cripple mentally. I don’t feel that way. But I am physically. I hate it...You know, when I hear people, particularly gals and ladies, their heel hitting the pavement...I feel so lacking in assurance - why can’t I walk that way?...I have the same attitude now, toward life and living, as I did 30 years ago. That’s why this idea of not being able to walk along with other people - it hurts my ego. Because inside, that’s not really me.”

When older adults associate appearance and identity, or depend on the reactions of others to validate their self-concept, the realizations that they look like, or are treated like, an old person, may make them act and think like the stereotype of the elderly - with harmful consequences.

- # Depression
- # Isolation
- # Anger
- # Not using assistive devices
- # Suicide
- # Not seeking medical treatment

Show Overhead Transparency  
#10, Harmful Consequences of  
Stereotypes

## 7. The physical risk factors associated with falls increase with age.

Aging and disease are not synonymous. For most older adults, most of the time, health is good or excellent.

With aging, comes changes in the physical functioning of the body. The changes occur over several decades, however the pace of decline speeds up in later life.

For optimal functioning, all physical changes require adjustment, not merely passing acceptance. Evaluation of older adults is extremely important to reducing falls.

First:

### # Obtain a fall history

S-ymptoms  
P-revious falls  
L-ocation  
A-ctivity  
T-ime

Second:

### # Evaluate for age-related changes

- decreased vision
- increased reaction time
- decreased bone density
- decreased physical activity
- increased muscle atrophy

Show Overhead Transparency  
#11, Age-Related Changes

**Decreased Vision:** The lens of the eye steadily hardens through life and begins to cause problems in the early forties. By then the lens is too big for the eye muscles to focus properly on close objects. Eventually, this can cause cataracts for some people.

The amount of light reaching the retina steadily declines with age which means that a person will have trouble seeing in the dark and requires especially bright light to read.

**Decreased Reaction Time** because the brain takes longer to process information, make decisions, and dispatch signals back to the body parts.

**Decreased Bone Density:** Bones lose calcium with increasing age. That's bad for the bones and for the nearby blood vessels, where the lost calcium may accumulate and clog the circulatory system.

The bones become more brittle and slower to heal.

**Decreased Physical Activity** may lead to muscle atrophy which contributes to the risk of falls.

**Question:**

**What can you do to maintain your eye sight?**

- Regular vision check-ups.
- Wear your glasses.
- Follow recommendations of your eye doctor.

**Question:**

**What can you do to maintain bone density?**

- Increase weight bearing exercise if prescribed by your physician.
- Take calcium supplements prescribed by a physician.
- Eat calcium-rich foods.

**Question:**

**What can you do to maintain healthy, strong muscles?**

- Increase activity levels.
- Participate in an exercise program prescribed by your physician.
- Participate in physical therapy program prescribed by your physician.

**8. Medications may increase the risk of falls for the elderly.****Medications**

Drugs may play a role in falls. They can cause dizziness, drowsiness, unsteadiness, confusion, weakness, blurred vision, fatigue, and slowed reactions, all of which have the potential to cause a fall.

It is necessary to review medications with a doctor or pharmacist as well as discuss with him or her the effects of taking different types of medicines at the same time in order to evaluate possible interactions between the medicines.

Sharing medications, using expired medications, and not following prescriptions can have dangerous outcomes. Sedatives, anti-depressants, hypotensives, and diuretic drugs are all intrinsic risk factors that increase the hazard of loss of balance. (Healthwise for Life 1996, Epidemiology of Falls in Older Adults 1996) These medications lead to falls that are directly related to postural hypotension, sedation, decreased reaction time, and decreased cognitive abilities.

The risk of falling is greater for patients who are taking medications with extended half lives and increases with the number of medications used. Using a large number of medications from multiple categories, compounds the risk of falls. (The Changing Approach to Falls in the Elderly 1997.)

**Balance**

Internal and external factors combine to create a loss of balance. Internal factors are internal conditions that affect one's ability to maintain his or her balance while external factors are safety hazards within the environment that predispose one to slipping and tripping.

Since falls occur when balance is disrupted, it is beneficial to participate in balance training. This includes weight shifting and anticipation of necessary adjustments in response to disturbances.

Removing hazards and improving accessibility within the environment decreases the chance of a fall and promotes safety. (Epidemiology of Falls in Older Adults 1996, Etiology of Falls by Dr. Martha Hinman, UTMB)

**9. Safety-proofing the living environment has been shown to decrease the risk of falls for the elderly.**

Other hazards are shown in the video, (**VHS 2264**) **Fall Prevention in the Home: Changes for Healthy Living.**

**View hazardous situation #1 - Nighttime.**

**Stop the video.**

**Ask:** What hazards did you see in the video?

Write the list on the board or on a flip chart. Hang the list up for use in final review segment.

**View second half of Nighttime situation.**

**Ask:** What changes would you make?

\_\_\_\_\_

**View hazardous situation #2 - Living Room**

**Stop the video.**

**Ask:** What hazards did you see in the video?

Write the list on the board or on a flip chart. Hang the list up for use in final review segment.

## Script

## Actions

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**View second half of living room situation.**

**Ask:** What changes would you make?

Hand out Improving Independence in the Home Environment: Assessment and Intervention.

**Discussion Question:**

**What changes will you make in your home to help eliminate the risk of falls?**

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**View hazardous situation #3 - Medications**

**Stop the video.**

**Ask:** What hazards did you see in the video?

Make a list of hazards suggested by the audience. Hang the list up for use in the final review segment.

**View second half of medications situation.**

**Ask:** What changes would you make?

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**View hazardous situation #4 - Climbing**

**Stop the video.**

**Ask:** What hazards did you see in the video?

Make a list of the hazards suggested by the audience.

**View second half of climbing situation.**

**Ask:** What can you do in your home to reduce the risk of falls related to climbing?

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**View hazardous situation #5 - Bath Time.**

**Stop the video.**

**Ask:** What hazards did you see in the video?

Make a list of the hazards suggested by the audience. Hang the list up for use in the final review segment.

**View the second half of the bathroom situation.**

**Hand out Bathroom Safety for Older People** and discuss ways to reduce the risk of falls in the bathroom.

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**View hazardous situation #6 - Steps**

**Stop the video.**

**Ask:** What hazards did you see in the video?

Make a list of the hazards suggested by the audience. Hang the list up for use in the final review segment.

**View the second half of the steps situation.**

**Ask:** What changes would you make to reduce the risk of falls related to steps in your home?

**In Review -**

**Review all of the hazards identified on the board or flip chart pages.**

**Hand out the Evaluation Forms and collect.**

**Discussion questions:**

**What can you do in your community to help reduce the risk of falls for older adults?**

# Fall Prevention in the Home: Changes for Healthy Living

## *References*

1. Mettler, M., Kemper, D., and Stillwell, D. (1996). *Healthwise for Life: Medical Self-Care for Healthy Aging*. Second Edition. Healthwise, Inc. Boise, Idaho.
2. Rammel, Martha L. MHED, PT. (1996). "Epidemiology of Falls in Older Adults."
3. Steinweg, Kenneth, MD. (1997). "The Changing Approach to Falls in the Elderly." *American Family Physician*. 56(7).

# *Improving Independence in the Home Environment: Assessment and Intervention*

Area/Activity	Problem	Potential Intervention
Bathroom	Getting on/off toilet	Raised seat Side bars Grab bars
	Getting in/out of tub	Grab bars      Hand held shower nozzle Bath bench      Rubber mat Transfer bench      Hydraulic lift bath seat
	Slippery or wet floors	Non-skid rugs or mats
	Hot water burns	Check water temperature before bath Turn down thermostat to 120 degrees Check pipes under sink and insulate if necessary
	Doorway too narrow	Remove door and use curtain Leave wheelchair at door and use walker
	Dizziness standing at sink	Sit on stool
	Difficulty seeing	Adequate lighting Clear plastic shower curtain Toilet seat cover or seat that contrasts with walls and floor
Bedroom	Rolling beds	Remove wheels; block against wall
	Bed too low	Leg extensions Blocks Second mattress Adjustable height hospital bed
	Lighting	Bedside light Night light Flashlight (attaches to walker or cane) Remote controlled switches (radio/electronics store)
	Sliding rugs	Remove      Tack down Rubber back      Two sided tape (hardware store)
	Slippery floor	Non-skid wax No wax Rubber soled footwear

Area/Activity	Problem	Potential Intervention
Bedroom	Thick rug edge/threshold	Metal strip at edge Stripe to make change Remove threshold Tack or tape down edges
	Far from bathroom	Mobility aid next to bed Bedside commode Urinal
	Night-time calls	Bedside phone                      Intercom Cordless phone                      Buzzer Emergency response system
	Access clothes	Place clothes in easy to reach drawers, shelves, or hangers Lower rod in closet
	Can't see clock	Large faced clock radio Braille alarm clock Talking alarm clock
Medications	Difficulty reading label	Large print on prescription label Use magnifying glass Good lighting Bar code and scanner with voice input (AISI, Inc.)
	Memory loss	Automatic pill dispensers Organize in envelopes with time and date Houseclean all old medications
Kitchen	Open flames and burners	Microwave                      Electronic toaster oven Hot plates                      Crock pot Meals on wheels                      Frozen dinners Auto shut off                      Individual coffee maker
	Access items	Place commonly used items within easy reach Adjust height of counters, cupboards, drawers Lazy susans
	Hard to open refrigerator	Foot lever
	Carrying items	Slide across counter Use cart Walker basket or tray Bridge items surface to surface Eat at counter sitting on stool
	Difficulty seeing	Increase number of lights Contrasting colored china, placemats, napkins Utensils with brightly colored handles

Area/Activity	Problem	Potential Intervention
Living Room	Soft, low chair	Board under cushion Pillow or folded blanket to raise seat Blocks or platform under legs Automatic seat lift chair Good armrests to push up on Back and seat cushions
	Swivel and rocking chairs	Block motion
	Obstructing furniture	Relocate or remove to clear paths (especially glass top tables)
	Extension cords	Run along and anchor to baseboard Under sturdy furniture Eliminate unnecessary cords Use power strips with breakers if possible
	Accessing and seeing light switches	Touch sensitive switches Voice activated switches Remote control switches (radio/electronics store) Illuminated wall switches Use contrasting light switch plates
Telephone	Difficult to reach	Cordless phone Inform friends to give you 10 rings Clear path Headset cordless phone Answering machine and call back
	Difficult to hear ringing	Option ring sounds Volume control Blinking lights Vibration
	Difficult to hear other person	Volume control TDD Headset
	Difficult to hold receiver	Headset Speaker phone Adapted handles
	Difficulty dialing numbers	Preset numbers Large buttons and numbers Voice activated dialing

Area/Activity	Problem	Potential Intervention
Steps	Cannot negotiate	Stair glide Lift (Braun Corp.) Elevator Ramp (permanent, portable or removable) Steeper ramp with boat winch Able to bump up/down stairs on rear end in emergencies
	No handrails	Install at least one side (check stability)
	Loose rugs	Remove or nail down to wooden steps
	Difficult to see	Adequate lighting Mark edge of each step with bright colored tape
	Unable to use walker on stairs	Keep second walker or wheelchair at top or bottom of stairs
Home Management	Laundry	Easy to access (basement, stairs, etc) Sit on stool to access clothes in dryer Good lighting Fold laundry sitting at table Carry laundry in bag on stairs Use cart Use laundry service
	Mail	Easy to access mailbox Mail basket on door Ask carrier to place in a specific location (same with paper boy)
	Housekeeping	Assess safety and manageability No bend dust pan Lightweight all surface sweeper Provide with resources for assistance if needed
	Controlling thermostat	Mount in accessible location Large print numbers (available from gas company in some areas) Remote controlled thermostat (radio/electronics store)
Safety	Difficulty locking doors	Remote controlled door lock Door wedge Hook and clean locks
	Difficulty opening door and knowing who is there	Automatic door openers Lever door knob handles Intercom at door Video intercom (building supply store)
	Opening/closing windows and shades	Remote controlled windows and shades Lever and crank

Area/Activity	Problem	Potential Intervention
Safety	Can't hear alarms, smoke detectors, phone ringing, or doorbell	Blinking lights Vibrating surfaces
	Access to emergency exit	Must have alternative means of exiting home in case of emergency Fire blanket
	Lighting	Illumination 1-2 feet from object being viewed Change bulbs when dim, not burned out Adequate lighting in stairways and hallways Night-lights
	Glare	Light-colored sheer curtains on windows with direct sunlight Gradual decrease in illumination from foreground to background
Leisure	Can't hear television	Personal listening device with amplifier (several commercial brands and compatible with hearing aids) Closed captioning
	Complicated remote control	Simple remote with large buttons Universal remote control Voice activated remote control Clapper (department store, radio/electronics store)
	Can't see or shuffle cards	Large print cards Automatic shuffler Card holder
	Can't read small print	Magnifying glass Large print projector screen Scanner with electronic voice output
	Glare on reading material	Place light source to right or left Avoid glossy paper for reading material Black ink vs. blue or pencil

*Note: The interventions described in this assessment serve only as suggestions. A complete assessment of a person's individual needs should be conducted by a team of licensed and trained professionals. Any intervention or modification to a building must comply with local, state, and federal laws and building codes. In apartments or rental homes, written permission to make modifications should be obtained from the landlord, owner, or property manager. Architectural interventions should be assessed by a licensed architect and carried out by a licensed construction contractor.*

Reproduced from: *Assessment and Intervention of the Home Environment for Older Persons*, Center for Therapeutic Applications of Technology, University of Buffalo, 515 Kimball Tower, 3435 Main Street, Buffalo, New York, 14214-3079, phone (716) 829-3141, fax (716) 829-3217. <http://wings.buffalo.edu/academic/departments/hrp/ot/cat/>

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The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating

# Bathroom Safety for Older People

Home bathrooms often need adaptation if an elderly person wants to stay at home and remain independent. Ensuring bathroom access and safety may require room adaptations.

## Bath

### Bathtub

Falls often occur as people get in or out of the tub. Non-slip, suction mats (Fig. 1) or rubber silicone appliques (Fig. 2) in the tub will help prevent falls.

A non-skid, latex-coated bath mat on the floor beside the tub provides firm footing.

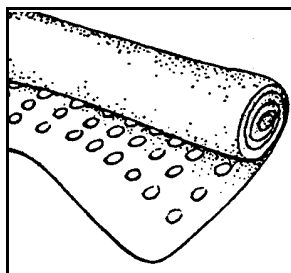


Fig. 1 Suction bathtub mat

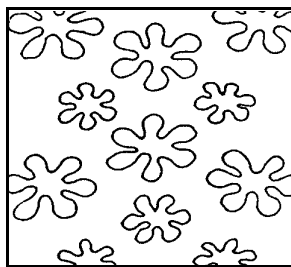


Fig. 2 Bathtub appliques

### Safety Bars

Grab bars around the bathtub are required for the safety of older persons. These bars should be institutional-grade stainless steel and installed according to the manufacturer's directions for firm, solid support. These bars are expensive, but under no circumstance should towel rods or improperly installed grab bars be used as bathtub aids. They will not support a person who loses balance.

Different types of bars and poles are available from plumbing supply companies. The type, number, and positioning of supports depend on:

- the wall space around the tub;
- the wall structure;
- the plumbing arrangements; and
- the disability, if any, of the person(s) using the tub.

Two types of grab bars usually are needed at the tub for the ambulant older person:

- for use in getting in and out of the tub from a *standing position*;
- for use when lowering or raising the body to or from a *seated position* in the tub.

“U” shaped bars are available in 12- to 14-inch lengths. They may be secured vertically or horizontally to a wall.

A vertically placed “U” bar, attached to the side wall at the foot of the tub, allows safe entry and exit. (The foot of the tub is the end where the water faucets and drain are located.) This vertical bar should be about 32-inches long, and placed near the outer tub edge.

Horizontally placed support bars (Fig. 3) are best for lowering or raising the body to or from the seated position in the tub. A 12- to 15- inch bar may be placed at the foot end of the tub and a longer one along the back wall.

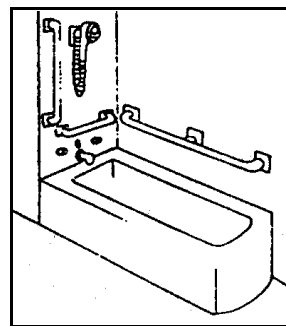


Fig. 3 Horizontal bars

Diagonally placed grab bars (Fig. 4) are not recommended because the hand may slide and if footing is not secure, falls are more likely.

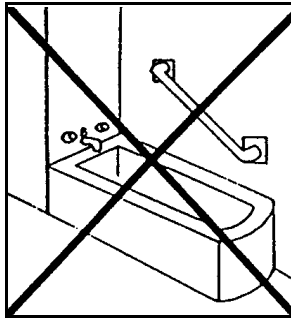


Fig. 4 Diagonal bars

If the tub is free-standing at both ends (as in many older homes) and the end wall is too far for grab bar placement, a vertically placed pole (Fig. 5) on the access side of the tub may be used. This pole should be about 1 ½ -inch diameter, and extend from floor to ceiling. Position it between 1-foot 3-inches to 1-foot 6 inches in from the end of the tub, and close enough to the access side to reach from a seated position. It also can be used to grasp with one hand while operating the water controls.

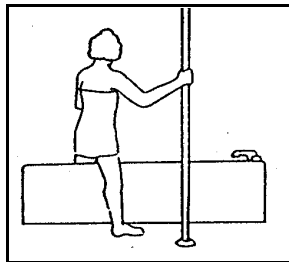


Fig. 5 Vertical bars

Angle bars (Fig. 6) from the back wall (behind the tub) to the floor, with wall posts, may be used when one or both tub ends are enclosed by a wall. This is useful for persons needing to use both hands to enter or exit the tub, or if other people with varying dysfunctions also use the tub.

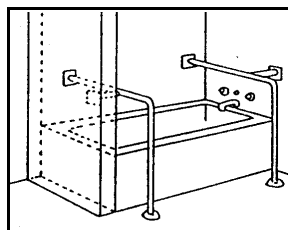


Fig. 6 Angle bars

## Tub Seats

A variety of portable seats, chairs, and benches are available, if sitting on the bathtub floor is difficult or impossible.

One seat has side flanges that adjust to fit any shape and size tub.

Inside-the-tub chairs (Fig. 7) with backs for greater comfort are available.

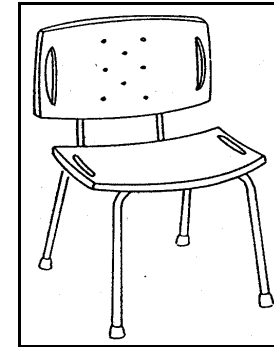


Fig. 7 Tub Chair

An inside/outside transfer bench (Fig. 8) with adjustable legs allows the bather to sit on the bench that extends outside the tub, then slide to the inside of the tub.

Any chair or bench must have non-slip rubber tips on the legs, and be safe and comfortable.

When using these seats in the tub, a hand-held shower head (Fig. 9) is almost a necessity to direct the water where needed.

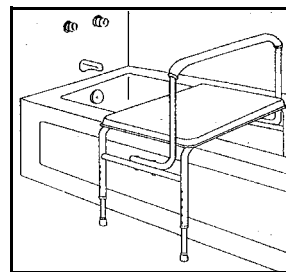
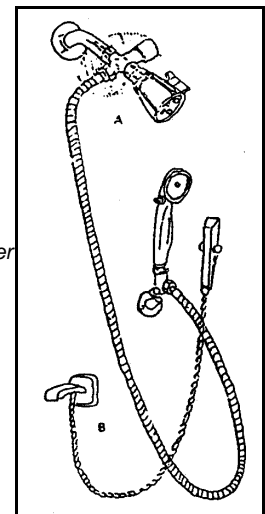


Fig. 8 Transfer bench

Fig. 9 Flexible shower arm



## Showers

An angle bar (Fig. 10) attached to two walls provides support while standing to shower, or as an aid to sitting and rising if using a bath bench or chair.

If the shower floor is slippery, nonslip suction mats or rubber silicone treads (Fig. 1, 2) should be used.

A non-skid bath mat on the floor outside the shower is a necessity.

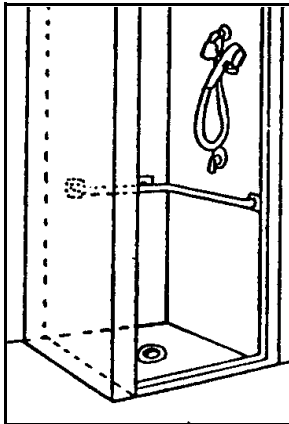


Fig. 10 Angle bar

## Toilets

### **Elevated**

The standard 15- to 17-inch height of toilet seats creates a problem for many people, especially those with arthritis, hip, knee, or back problems.

Elevating the seat 5 to 7 inches will give better leverage in regaining a standing position.

There are several types of removable and permanently fixed raised toilet seats that can be purchased from supply companies.

Two examples are:

- a molded plastic seat (Fig. 11) is the simplest way to increase seat height by about 4 inches.
- an adjustable seat (Fig. 12) will add 3 to 6 inches of height.

A more permanent way to raise the toilet is to have a plumber put the stool on a wooden platform made to fit the toilet bowl base (Fig. 13).

If building a new bathroom, consider a wall-hung toilet (Fig. 14) that can be hung at any height.

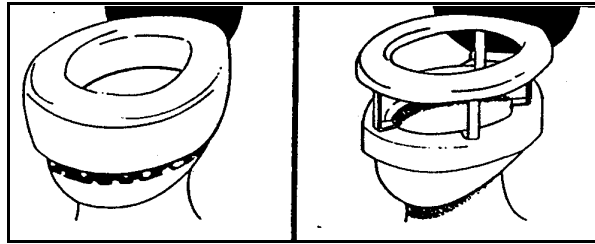


Fig. 11 Molded plastic seat

Fig. 12 Adjustable seat

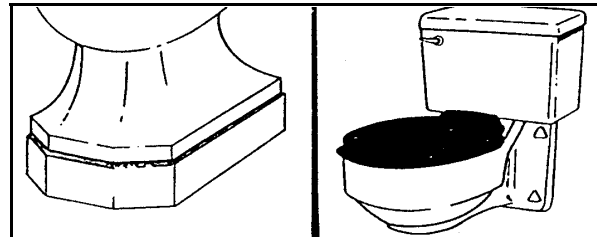


Fig. 13 Raised toilet seat

Fig. 14 Wall-hung toilet

### **Special Feature**

A special unit (portable bidet) for cleaning the perineal area without hands or paper may be attached to any standard toilet bowl (Fig. 15). It is an electrically powered unit with a mechanism for spray washing with warm water and drying with a flow of warm air. This promotes independence for persons with very limited hand/arm functions.

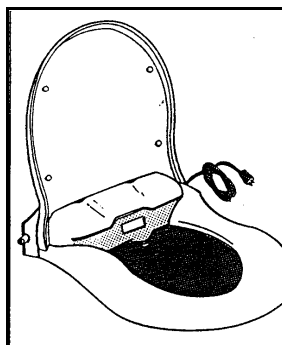


Fig. 15 Portable bidet

## Grab Bars

Grab bars around the toilets are for safety. Many types are available. The choice will depend on:

1. Available wall space near the toilet.
2. Nearness to other fixtures in the room.
3. Needs of people in the household.

Basic types of toilet support bars include:

- Wall mounted on a side wall (Fig. 6)
- Wall mounted on the back wall behind the toilet (Fig. 16)
- Wall/floor mounted (Fig. 17)
- Free standing (Fig. 18)
- Floor model (Fig. 19)
- Slip-over guard rails (Fig. 20)

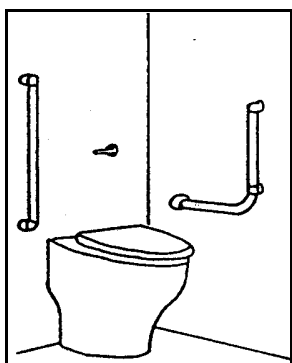


Fig. 16 Side and back mounted bars

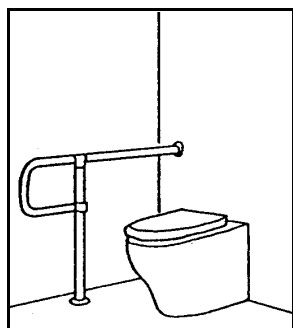


Fig. 17 Wall/floor mounted

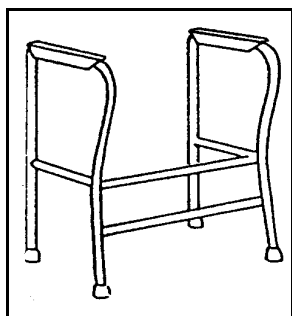


Fig. 18 Free standing

Fig. 19 Floor model

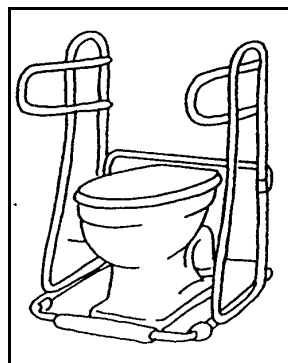
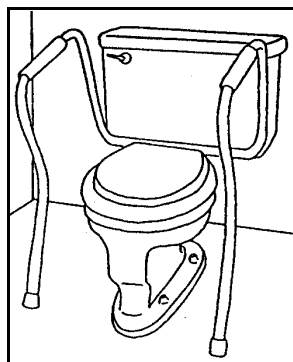


Fig. 20 Slip-over guard rails

## Other Safety Features

A single lever mixing faucet (Fig. 21) can control temperature and flow of water better than dual controls.

All hot water in the older person's home should be controlled thermostatically to a maximum temperature of 120 degrees to avoid burns.

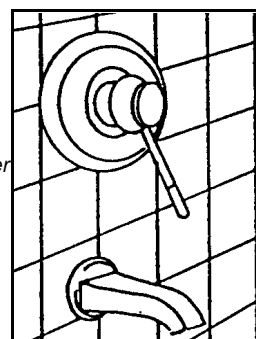


Fig. 21 Single lever faucet

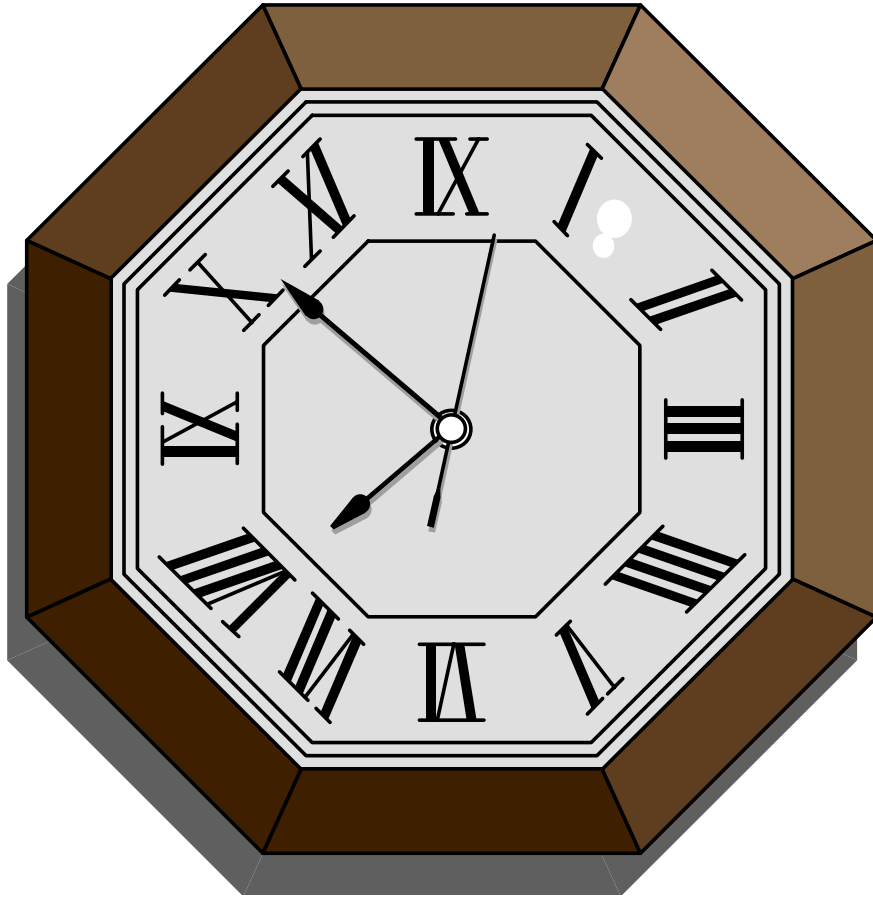
### Get Professional Help for Safety!

# If you have a physical limitation, weakness or unsteadiness, we recommend you consult a physical therapist or the Housing Specialist in your local Cooperative Extension Office to help you select and recommend placement of grab bars and other accessories for safety in the bathroom.

# If you are unsure of your wall structure or do not have proper tools or skills, we suggest you hire a carpenter to install and/or make the new adaptations.

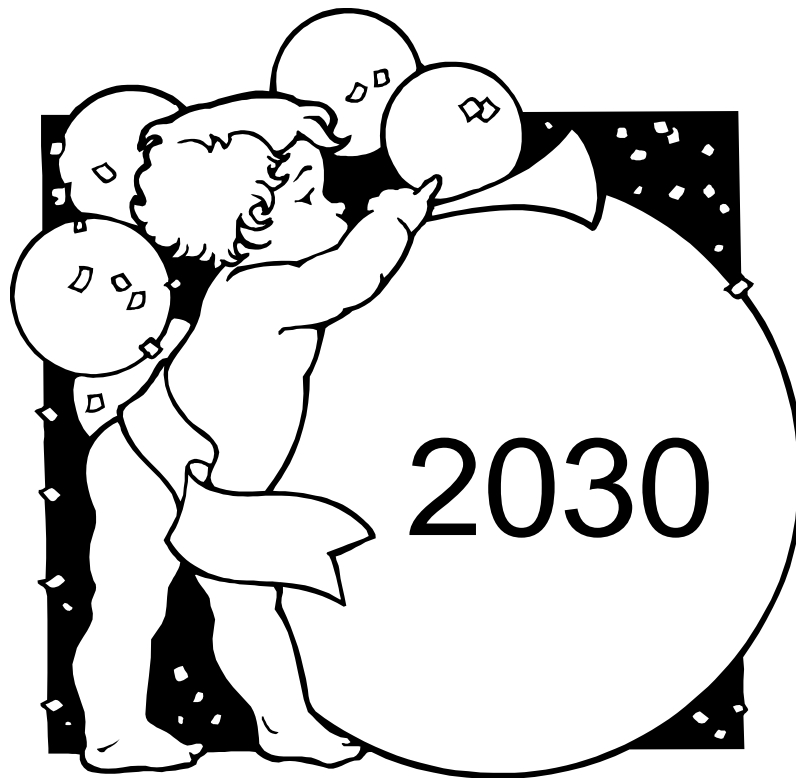
Source: University of Missouri Extension Guide #7060.

**Every 7 seconds**



**someone turns 50**

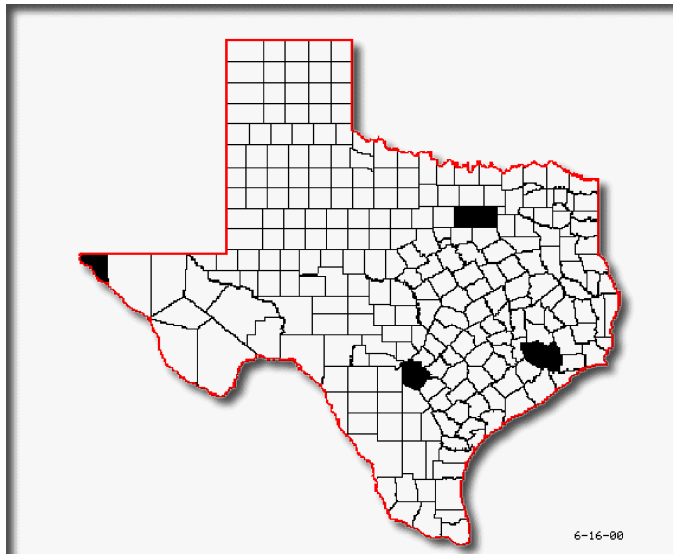
**70 million Americans  
will be over the age of  
65 in the year 2030**



# **35 million Americans 85+ in the year 2030**



# 2 million Texans over the Age of 65



live in the 5 counties of  
Bexar, El Paso, Dallas,  
Tarrant and Harris

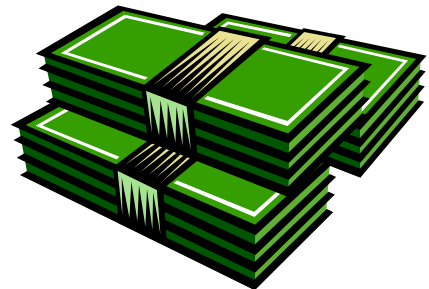
# Consequences of Falls

Mortality



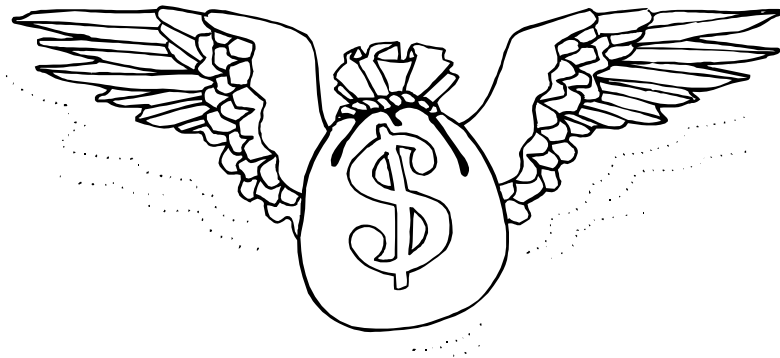
Injury and Disability

Health Care Costs



# **\$10 billion yearly costs for acute care associated with fall-related fractures**

(National Center for Injury Prevention and Control)



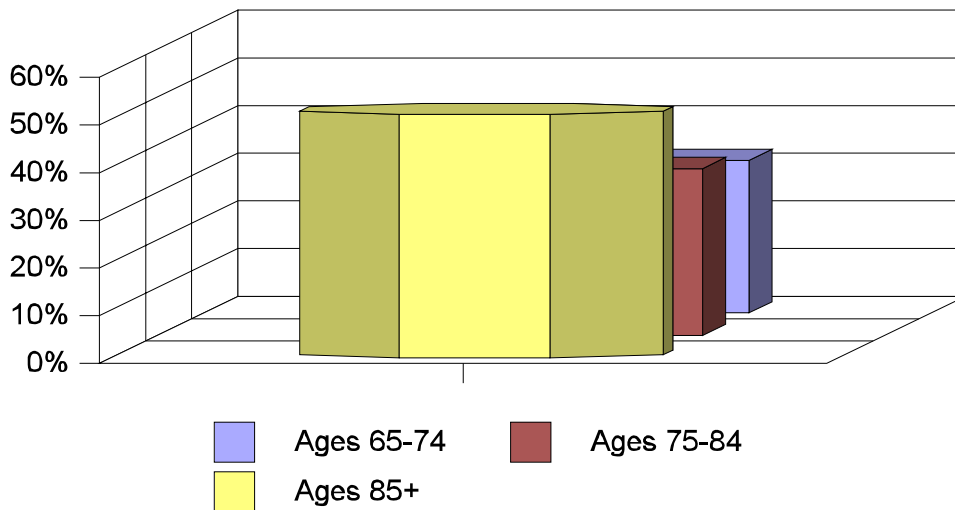
# Falls Increase with Age

32% Ages 65-74

35% Ages 75-84

51% Ages 85 & Older

## Falls Increase with Age



# Gender Differences in Falls

Ages 65-74



20 %

42%

# Disability Consequences of Falls

# Decline in activity level

# Decline in functional  
independence

# Increased fear and  
depression

# Increased social isolation



# Harmful Consequences of Stereotypes

- # Depression
- # Anger
- # Suicide
- # Isolation
- # Not using assistive devices
- # Not seeking medical treatment



# Age-Related Changes

- # decreased vision
- # increased reaction time
- # decreased bone density
- # decreased physical activity
- # increased muscle atrophy

