Home Safety Self Assessment Tool (HSSAT)

Created by: Occupational Therapy Geriatric Group
Department of Rehabilitation Science
University at Buffalo

Falls Prevention™
Step Up To Stop Falls

Supported by a grant from the Community Health Foundation of Western and Central New York.
HOME SAFETY SELF ASSESSMENT TOOL (HSSAT)

In the United States one in every three seniors over the age of 65 years fall each year. And falls are the leading cause of injury, disability, nursing home placement, and death. In order to prevent falls at home, the Occupational Therapy Geriatric Group at the University at Buffalo created the Home Safety Self Assessment Tool as a part of combined effort with the Community Health Foundation of Western and Central New York to disseminate information regarding how to prevent falls in Erie County, NY. The HSSAT has been found to be useful in reducing the occurrence of falls at home. This has been confirmed by a fall prevention study that was conducted in Erie County. An online version of this tool is available at www.agingresearch.buffalo.edu.

The HSSAT consists of three sections:
- home safety self assessment checklist,
- home modification services, and
- other local resources.

The Home Safety Self Assessment Checklist:
Is described on page 3.

Home Modification Services:
Lists service providers in Erie County who perform home modifications such as installing grab bars and railings or widening the doorway of a bathroom. These service providers responded to our request to develop this list. They are insured and have experience in home modification and remodeling and are willing to perform a small job at your home.

Other Local Resources:
Provides you other services related to home modification.

Occupational Therapy Geriatric Group
Department of Rehabilitation Science
University at Buffalo

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INSTRUCTIONS

HOW TO USE HSSAT CHECKLIST TO IDENTIFY HOME HAZARDS TO PREVENT FALLS

Use the checklist to find and correct/fix the hazards for every room/area in your home that could cause you to trip/fall.

**Steps to use the checklist**

**Step 1:**
Go to each room/area of your home with this checklist; look for the hazards/items that are listed below the picture on each page (Some items may not relate to your home).

**Step 2:**
If the problem is present in your room/area, check off in the appropriate box. After checking all the problems add them and write the total in the big box. (Each item that gets a checkmark is a potential hazard).

**Step 3:**
Then go through the solutions and take the necessary action to fix those problems which are a potential hazard.

**Step 4:**
Add the total number of hazards in all the rooms/areas to get a grand total.

**Step 5:**
Write down what action you are going to take to prevent falls in the Action Log for your records.
The list identifies all the potential home hazards that may cause a fall. If the item applies to your home place a check in the box. Then add the total number of checks and enter it in the box below.

- Lack of railings
- Unsafe steps (too steep/cracked)
- Unmarked or raised threshold
- Lack of lighting at night
- Lack of a ramp for a wheelchair
- Uneven/cracked pavement
- Ice or snow on driveway/walkway
- Lack of a hand holder

Other __________________________________________________________

Total number of problems ____________________________

* The numbers correspond to the hazard in the picture and solutions on the following page
SOLUTIONS FOR THE PROBLEMS
IN ENTRANCE TO FRONT DOOR AND FRONT YARD

1. Lack of railings
   Add at least one railing, ideally one on each wall.

2. Unsafe steps (too steep, cracked, chipped, etc.)
   Have damaged or broken steps repaired.

3. Unmarked or raised threshold
   Mark end of steps or thresholds with contrasting tape or paint color to increase awareness of change in height.

4. Lack of lighting at night
   Add an outdoor light fixture if not present.
   Add a sensor light that automatically turns on and off.

5. Lack of a ramp for a wheelchair
   Have a remodeler or home contractor construct a ramp that will allow wheelchair access in and out of the home.

6. Unsafe pavement (uneven or cracked)
   Have uneven or cracked pavement repaired.
   Avoid these areas if possible when walking to and from the home.
   Contact local government for repair if it is a sidewalk or driveway end.

7. Ice or snow on driveway or walkway
   Use snow melter.
   Have snow/ice removed by a neighbor or service.

8. Lack of a hand holder
   Add one hand holder next to the door.
The list identifies all the potential home hazards that may cause a fall. If the item applies to your home place a check in the box. Then add the total number of checks and enter it in the box below.

1. Lack of railings
2. Unsafe steps (too steep/cracked/chipped)
3. Unmarked or raised threshold
4. Lack of lighting at night
5. Lack of a ramp for a wheelchair
6. Uneven/cracked pavement
7. Ice or snow walkway
8. Lack of a hand holder

Other: __________________________________________________________

Total number of problems: __________________________

* The numbers correspond to the hazard in the picture and solutions on the following page.
SOLUTIONS FOR THE PROBLEMS IN ENTRANCE TO BACK/SIDE DOOR

1. Lack of railings
   Add at least one railing, ideally one on each wall.

2. Unsafe steps (too steep, cracked, chipped, etc.)
   Have damaged or broken steps repaired.

3. Unmarked or raised threshold
   Mark end of steps or thresholds with contrasting tape or paint color to increase awareness of change in height.

4. Lack of lighting at night
   Add an outdoor light fixture if not present.
   Add a sensor light that automatically turns on and off.

5. Lack of a ramp for a wheelchair
   Have a remodeler or home contractor construct a ramp that will allow wheelchair access in and out of the home.

6. Unsafe pavement (uneven or cracked)
   Have uneven or cracked pavement repaired.
   Avoid these areas if possible when walking to and from the home.
   Contact local government for repair if it is a sidewalk or driveway end.

7. Ice or snow on walkway
   Use snow melter.
   Have snow/ice removed by a neighbor or service.

8. Lack of a hand holder
   Add one hand holder next to the door.
The list identifies all the potential home hazards that may cause a fall. If the item applies to your home place a check in the box. Then add the total number of checks and enter it in the box below.

- [ ] 1. Uneven or slippery flooring
- [ ] 2. Cluttered area
- [ ] 3. Dark or poor lighting
- [ ] 4. Lack of access to ceiling light

Other_______________________________________________________

Total number of problems

* The numbers correspond to the hazard in the picture and solutions on the following page
1. Unsafe flooring (slippery, uneven carpeting, etc.)

   Make sure floor surfaces are dry.
   Have carpet stretched or removed to eliminate wrinkles or bumps.
   Add a carpet runner to hallway or foyer.

2. Cluttered area

   Eliminate clutter on floors by removing and/or organizing items.
   Example: shoe tray, hooks for umbrella.

3. Dark or poor lighting

   Increase wattage to allowable limits in lights.
   Add additional overhead or wall lighting.

4. Lack of access to ceiling light

   Ask another person to change the light.
   Add removable wall lights to poorly lit areas.
LIVING ROOM

The list identifies all the potential home hazards that may cause a fall. If the item applies to your home place a check in the box. Then add the total number of checks and enter it in the box below.

☐ 1. Presence of throw or scatter rug ☐ 5. Presence of unstable furniture

☐ 2. Presence of clutter ☐ 6. Presence of unstable chair

☐ 3. Presence of electric cords across the floor ☐ 7. Difficult to access light switches

☐ 4. Poor lighting ☐ 8. Not enough space to move around

Other_______________________________________________________

Total number of problems

* The numbers correspond to the hazard in the picture and solutions on the following page
SOLUTIONS FOR THE PROBLEMS  
IN LIVING ROOM

1. Presence of throw or scatter rug

Remove scatter rug.

2. Presence of clutter

Eliminate clutter on floor surfaces by placing items on shelves or storage.  
Consider donating or throwing out the items you no longer use.

3. Presence of electric cords across the floor

Run your cords behind furnishings. Use extension cords to accomplish this.  
Rearrange items that must be plugged in to areas near an outlet.

4. Poor lighting

Increase wattage to allowable limits in lamps/lights. 
Add additional lamps or wall/overhead lights.

5. Presence of unstable furniture (chair, table, etc.)

Place a block under the shorter leg. 
If the chair or table is broken, have it repaired or replaced.

6. Presence of unsafe chair (too low, too high, without arms)

If the chair is too low, add a cushion or pillow to raise the height. 
A chair that is too high or without arms should not be used, as it will not provide 
you with sufficient stability to get in and out of the chair.

7. Difficult to access light switches

Add “clapper” light switch control to lamps. 
Rearrange furnishings to allow quick access to wall switch or lamps.

8. Not enough space to move around

Remove clutter or excess furniture that prevents you from moving around the 
room easily. 
Some items may be rearranged, but you may need to donate or throw out 
other items you don’t really need or use.
The list identifies all the potential home hazards that may cause a fall. If the item applies to your home place a check in the box. Then add the total number of checks and enter it in the box below.

- 1. Cabinet too high or low
- 2. Not enough counter space
- 3. Using a stool or a chair to reach things
- 4. Not enough room to maneuver
- 5. Presence of throw/scatter rug
- 6. Presence of slippery floor
- 7. Poor lighting
- 8. Presence of a pet underfoot when preparing meals

Other

Total number of problems

* The numbers correspond to the hazard in the picture and solutions on the following page.
SOLUTIONS FOR THE PROBLEMS IN KITCHEN

1. Cabinet too high or too low

Move items to the shelves closest to the counter.
Add hooks to the wall for pots and pans you use frequently.

2. Not enough counter space

Make sure available counter space is cleared of clutter.
Move kitchen table closer to counter for additional work space.
Use a rolling cart for added work space.

3. Using a stool to a chair to reach things

Move items to lower shelves.
Replace the stool with a sturdy step ladder.

4. Not enough room to maneuver

Eliminate clutter or excessive furniture (extra kitchen chairs, etc.) to add space.
Remove a leaf from the table and push it closer to the wall.

5. Presence of a throw/scatter rug

Remove scatter rug.

6. Presence of slippery floor

Do not walk on a wet floor.
Wear shoes or socks with a non-skid sole.
Change flooring surface to one that is less slippery.

7. Poor lighting

Increase wattage of bulbs to allowable level.
Add under counter lighting.
Add additional overhead lighting.

8. Presence of a pet underfoot when preparing meals

Remove the pet from the room while working in the kitchen and add a pet gate to the entry ways of the kitchen.
Put the pet outside or in a crate.
The list identifies all the potential home hazards that may cause a fall. If the item applies to your home place a check in the box. Then add the total number of checks and enter it in the box below.

1. Presence of clutter
2. Presence of electric cords across the floor
3. Unsafe carpet (uneven, torn, curled up)
4. Presence of throw/scatter rug
5. Height of bed

Other _________________________________________________________

6. Lack of a telephone near the bed
7. Lack of nightlight
8. Arrangement that causes difficulty to reach items (TV remote, lamp)
9. Lack of device to get in/out of bed

Total number of problems ________________________________

* The numbers correspond to the hazard in the picture and solutions on the following page
SOLUTIONS FOR THE PROBLEMS IN BEDROOM

1. Presence of clutter

   Eliminate clutter on floor surfaces by placing items on shelves or storage. Consider donating or throwing out the items you no longer use.

2. Presence of electric cords across the floor

   Run your cords behind furnishings. Use extension cords to accomplish this. Rearrange items that must be plugged in to areas near an outlet.

3. Unsafe carpet (uneven, torn, curled up, etc.)

   Have carpet stretched or removed to eliminate wrinkles or bumps.

4. Presence of throw/scatter rug

   Remove all scatter and throw rugs.

5. Height of bed (too high or low)

   Too low: Add blocks below bed frame to raise height.
   Too high: Remove bed frame or use a lower profile mattress or box spring.

6. Lack of a telephone near the bed

   Place a cordless type or cell phone next to your bed at night or during naps.

7. Lack of a nightlight

   Place at least two nightlights in the bedroom to illuminate the room at night. Add additional nightlights along the hall or path to the bathroom. Also add one in the bathroom.

8. Arrangement that causes difficulty to reach commonly used items such as a TV remote, medications, lamp, glasses, magnifier, etc. at night

   Place these items on your bedside table. If you don’t have a table, you may put a rolling cart or shelving unit next to the bed.

9. Lack of a device to help get in and out the bed

   Purchase a half bedrail that can slide between mattress and box spring.
The list identifies all the potential home hazards that may cause a fall. If the item applies to your home place a check in the box. Then add the total number of checks and enter it in the box below.

- 1. Presence of bath rugs
- 2. Lack of grab bars in the tub
- 3. Lack of grab bars in the shower area
- 4. Lack of grab bars near the toilet
- 5. Toilet is too high or low
- 6. Slippery tub (lack of bath mat, etc)
- 7. Claw foot/tub that is high to get into
- 8. Lack of bath chair in the shower area
- 9. Clutter
- 10. Incorrect placement of grab bars

Other ____________________________________________________________

Total number of problems

* The numbers correspond to the hazard in the picture and solutions on the following page.
1. Presence of bath rugs.

   Remove bath rugs that do not have non-skid bottoms.

2. Lack of grab bars in the tub

   Add a clamp-on bath grab bar to the side of the tub.

3. Lack of grab bars in the shower area

   Add grab bars to the wall near the tub and on the wall where the bath faucets are.

4. Lack of grab bars near the toilet

   Add a grab bar next to the toilet wall or toilet safety grab bars that attach at the toilet seat screws.

5. Toilet is too high or too low

   Add a raised toilet seat for seats that are too low.
   Consider a lower profile toilet if it is too high.

6. Slippery tub (lack of bath mat, etc.)

   Add a rubber bath mat or adhesive non-skid decals to the bottom of the tub.

7. Claw foot or other type of tub that is too high to get into easily

   Add a tub transfer bench to slide into the tub area or replace with a lower tub.

8. Lack of bath chair in the tub or shower area or tub transfer bench

   Add a bath chair along with grab bars to the tub or shower area. A tub transfer bench is helpful if you have difficulty stepping into the tub area, because you can sit and slide over into the tub area.

9. Clutter

   Remove clutter from all floor areas to drawers or closets. Inexpensive plastic cabinets or rolling units can be purchased to store bath items.

10. Incorrect placement of grab bars

    If permanently installed, hire a qualified professional to change the grab bars to the correct location and angle.
The list identifies all the potential home hazards that may cause a fall. If the item applies to your home place a check in the box. Then add the total number of checks and enter it in the box below.

- 1. Poor or lack of lighting
- 2. Lack of railings
- 3. Clutter
- 4. Steps too steep
- 5. Slippery steps without tread/ carpet

Other_____________________________________________________________________________________

Total number of problems ____________________________

* The numbers correspond to the hazard in the picture and solutions on the following page.
1. Poor or lack of lighting

   Increase wattage to allowable limits in lights.
   Add additional overhead or wall lighting.

2. Lack of railings

   Add at least one railing the entire length of the wall, ideally one on each side.

3. Clutter

   Eliminate clutter on floors by removing and/or organizing items in areas near the stairs.

4. Steps too steep

   Use railings for stability.
   Walk slowly up and down stairs with lights on.
   Have others carry heavy or large items up or down the stairs.
   Reduce daily use of stairs to reduce risk of falls.

5. Slippery steps without tread or carpet

   Add adhesive stair treads or carpet runner.
The list identifies all the potential home hazards that may cause a fall. If the item applies to your home place a check in the box. Then add the total number of checks and enter it in the box below.

- 1. Poor or lack of lighting
- 2. Lack of railings
- 3. Clutter
- 4. Steps too steep
- 5. Slippery steps without carpet /luminous light
- 6. Presence of cords across the floor
- 7. Same colored floor at bottom of stairs

Other ____________________________________________

Total number of problems

* The numbers correspond to the hazard in the picture and solutions on the following page.
1. Poor or lack of lighting

   Increase wattage to allowable limits in lights.
   Add additional overhead or wall lighting.

2. Lack of railings

   Add at least one railing the entire length of the wall, ideally one on each side.

3. Clutter

   Eliminate clutter on floors by removing and/or organizing items in areas near the stairs.

4. Steps too steep

   Use railings for stability.
   Walk slowly up and down stairs with lights on.
   Have others carry heavy or large items up or down the stairs.
   Reduce daily use of stairs to reduce risk of falls.

5. Slippery steps without tread or carpet or luminous light

   Add adhesive stair treads or carpet runner.

6. Presence of cords across the floor

   Run your cords behind furnishings. Use extension cords to accomplish this.
   Rearrange items that must be plugged in to areas near an outlet.

7. Same colored floor at bottom of stairs

   Have the bottom of the stairs painted a different color so that you aware of the last step.
Total Number of Home Hazards

Transfer all the total scores of each room/area from pages 4-21 to the appropriate boxes and add all the scores to get a grand total.

Entrance to Front Door and Front Yard

Entrance to Back/Side Door

Hallway or Foyer

Living Room

Kitchen

Bedroom

Bathroom

Staircases

Laundry Room/Basement

Grand Total

*To fix any problems at home, you can contact the listed home modification service providers found on pages 23 and 24. To obtain free services for home modification, refer to pages 25 and 26.
Home Modification Service Providers in Erie County

The following service providers were selected from among those who responded to our request to reply to create this list, and who are insured, had experience in residential home modification to prevent falls, are willing to do a job under $1,000. They have completed the workshop offered by us regarding the Americans with Disabilities Act and issues related to home modifications for fall prevention.

<table>
<thead>
<tr>
<th>NAME AND ADDRESS</th>
<th>TELEPHONE NUMBER</th>
<th>EMAIL ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Accessibility Construction</td>
<td>716-833-3220 Ext 1</td>
<td></td>
</tr>
<tr>
<td>16 Canterbury Ct, Amherst NY 14226</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specialized in grab bars, railings, shower equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dennis Voytovich, Acemen Services, 11 Vincent Ave, Buffalo, NY 14225</td>
<td>716-472-6094</td>
<td></td>
</tr>
<tr>
<td>Specialized in grab bars, railings, shower equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empire Renovations, 220 Wendel Ave, Buffalo, NY 14223</td>
<td>716-573-2006 716-693-5251</td>
<td><a href="http://www.empirerenovations.com">www.empirerenovations.com</a></td>
</tr>
<tr>
<td>Specialized in full service and general contracting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surianello General Concrete Contractors Inc. 635 Wyoming Ave, Buffalo, NY 14215</td>
<td>716-837-7710 <a href="mailto:surianello@aol.com">surianello@aol.com</a></td>
<td></td>
</tr>
<tr>
<td>Specialized in full service and general contracting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jim Peron Center for Assistive Technology, 18 Kimball Tower University at Buffalo, 3435 Main Street, Buffalo, NY 14214</td>
<td>716-829-6711 <a href="mailto:jimperon@buffalo.edu">jimperon@buffalo.edu</a></td>
<td></td>
</tr>
<tr>
<td>Specialized in grab bars, railings, shower equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Munro Products, 9150 Clarence Center Road, Clarence Center, NY 14032</td>
<td>716-741-9450 <a href="http://www.munroproducts.com">www.munroproducts.com</a></td>
<td></td>
</tr>
<tr>
<td>Specialized in full service and general contracting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nolon General Contracting, 6769 Tuscany Lane, East Amherst, NY 14051</td>
<td>716-741-8167 <a href="http://www.NolonContracting.com">www.NolonContracting.com</a></td>
<td></td>
</tr>
<tr>
<td>Specialized in full service and general contracting</td>
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</tbody>
</table>
Dodge Enterprises LLC.,
136 Elm St, **East Aurora**, NY 14052
*Specialized in full service and general contracting*
716-652-4910
652-4961 (Fax)
www.dodgeenterprises.com

Richard Lent
Lent Builders Inc.
2416 White Haven Rd, **Grand Island**, NY 14072
*Specialized in full service and general contracting*
716-876-7816
www.lentbuilders.com

Burke Homes
5540 Southwestern Blvd # B, **Hamburg**, NY 14075
*Specialized in full service and general contracting*
716 646-0047

David J. Palmeri,
Palmeri Builders Inc.
79 Victoria Blvd, **Kenmore**, NY 14217
*Specialized in full service and general contracting*
716-873-5418 (Off.)
716-602-8694 (Mob.)

Skubis brothers Construction,
12 Parkside Drive, **Lancaster**, NY 14086
*Specialized in full service and general contracting and concrete work*
716-683-7232
716-432-6263

Michael Tucker
Sharp General Contracting Inc.  **CAPS provider**
558 Oliver St, North **Tonawanda**, NY 14120
*Specialized in full service and general contracting*
716-743-2050
www.sharpgeneralcontracting.com

Lakestone Development Inc,
17 Limestone Rd #2, **Williamsville**, NY 14221
*Specialized in full service and general contracting*
716-631-1905
ORGANIZATIONS THAT PROVIDE FREE SERVICES

Center for Assistive Technology

CAT provides equipment on loan (free of charge) to individuals who can’t afford to buy their own. They loan out equipment for about six to eight weeks (that is the usual length of time).

If interested, please contact:

Sumana Silverheels
Phone no: 716-836-1168
Email: ssheels@buffalo.edu

Center for Assistive Technology Client Service,
WNY Independent Living, Inc.
3108 Main Street
Buffalo, NY 14214

Erie County Department of Senior Services

Erie County Senior Services helps people find the best care in the home. They provide funding for minor home repairs and assist with all sorts of other problems.

If interested, please contact:

Phone: 716-858-8526
Email: seniorinfo@erie.gov
www.erie.gov/depts/seniorservices

Lions Blind & Charity Fund, Inc

Lions Club provides assistive devices such as eyeglasses, hearing aids, etc to citizens in their respective communities, and maintains loan closets for equipment such as wheelchairs and crutches.

If interested, please contact:

Phone: 716-694-4710

Lions Blind & Charity Fund, Inc.
P.O. Box 2011
Buffalo, NY 14226

Independence Foundation Loan Closet

Independence Foundation Loan Closet provides services for individuals and families with disabilities. Items that are provided include ramps, wheelchairs, hospital beds, etc. Individuals must arrange for personal pick up of the items.

If interested, please contact:

Christine Muller
Phone: 716-685-3976
www.theindependencefoundation.org

Independence Foundation Loan Closet
2220 Hall Road,
Elma, NY 14059
Hamburg Loan Closet (American Red Cross Hamburg Loan Closet)

Hamburg Loan Closet offers medical equipment to members of the community at no cost for a short period of time. The individual is responsible for pickup and return of equipment. This program is coordinated completely by Red Cross volunteers.

If interested, please contact:

Ken Walker
Phone: 716-648-4400
Hamburg Loan Closet
5161 Camp Road
Hamburg NY 14075

MDA/ALS Society Loan Closet

MDA loan closets lend durable medical equipment to those unable to obtain prescribed equipment through alternate sources. Depending on availability, the loan closets offer, at no cost, hospital beds, patient lifts, wheelchairs, walkers, shower benches, transfer boards and communication devices.

If interested, please contact:

Johnita Hairston,
Health Care Services Coordinator
Phone: 716-626-0035
jhairston@mdausa.org
MDA/ALS Society Loan Closet
500 Main Street # 343
Buffalo, NY 14221

Maria M. Love Convalescent Fund

Maria M. Love Convalescent Fund provides interim financial assistance in order to promote independence and enhance the quality of life of Erie County residents with medical-related conditions. The Maria M. Love Convalescent Fund provides convalescent care aids and adaptive equipment.

If interested, please contact:

Suzy Sears, Executive Director
Phone: 716-984-9194
marialovefund@msn.com
Maria M. Love Convalescent Fund
P.O. Box 29
Buffalo, NY 14213

Used-Low-Cost Equipment

Contact: Nick Pusatari
Phone: 716-837-7545
Instruction for Home Modifications to Prevent Falls: ADA Guidelines

By Dean Carroll OTR/L

Americans with Disabilities Act of 1990 (ADA) established guidelines for wheelchair users and individuals with disabilities in the community. ADA guidelines are designed to meet the needs of the majority of users, no matter what their ability or disability level is. Although it does not specially apply to residential homes, it is important to keep the ADA guidelines in mind when modifying homes for an individual’s need.

ADA guidelines have already been proven to be effective for most people. Many homes in Erie County were built prior to 1976 and before the current, more standardized building codes. Those homes were not built for wheelchair use, walker access, and older adults. For these homes, home modification may be necessary using ADA guidelines.

Most commonly needed modifications are:

- bathroom grab bars near the toilet and in the shower or the tub;
- railings on both sides of a stairway, if possible;
- widening of door frames for greater access to common areas such as bathrooms kitchens, and bedrooms; and
- repair and removal of structural barriers such as inadequate flooring, uneven transitions between flooring surface, and other non-structural barriers such as furniture.

Structural issues and barriers to meeting ADA guidelines are:

- limited floor space,
- limited wall space for installing grab bars,
- wall studs that are generally 16 inches on center,
- unknown barriers within walls, and
- financial limitations.

Common devices and features for consideration are:

- smooth versus textured grab bars,
- one stair railing versus two stair railings,
- height of grab bars in comparison to the user, and
- minimum width of door frames for walker and wheelchair access.

The following pages are figures for: toilet grab bars, shower access, grab bar spacing, wheelchair ramps, and wheelchair turning space from Department of Justice, Code of Federal Regulations, ADA Standards for Accessible Design and they are available from http://www.ada.gov/adastd94.pdf
Toilet Grab Bars

Fig. 28
Clear Floor Space at Water Closets

Fig. 29
Grab Bars at Water Closets

Shower Access

Fig. 33
Clear Floor Space at Bathtubs

SYMBOL KEY:
- Shower controls
- Shower head
- Drain

(a) With Seat in Tub
(b) With Seat at Head of Tub

Shower Access Continued

(a) With Seat in Tub

(b) With Seat at Head of Tub

Fig. 34
Grab Bars at Bathtubs

Grab Bar Spacing

Fig. 39
Size and Spacing of Handrails and Grab Bars

Wheelchair Ramps

![Diagram of a ramp showing level landings, rise, and horizontal projection or run.]

<table>
<thead>
<tr>
<th>Slope</th>
<th>Maximum Rise</th>
<th>Maximum Horizontal Projection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:12 to &lt; 1:16</td>
<td>30 in (760 mm)</td>
<td>30 ft (9 m)</td>
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<tr>
<td>1:16 to &lt; 1:20</td>
<td>30 in (760 mm)</td>
<td>40 ft (12 m)</td>
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**Fig. 16**
**Components of a Single Ramp Run and Sample Ramp Dimensions**

Wheelchair Turning Space

(a) 60-in (1525-mm)-Diameter Space

(b) T-Shaped Space for 180° Turns

Fig. 3
Wheelchair Turning Space

**ACTION LOG:**
**ACTION TAKEN TO PREVENT FALLS AT MY HOME**

<table>
<thead>
<tr>
<th>The Problem/Hazard:</th>
<th>I will do:</th>
<th>I have done:</th>
<th>Date when changes made (mm/dd/yyyy)</th>
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### ACTION LOG:

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<th>I have done:</th>
<th>Date when changes made (mm/dd/yyyy)</th>
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