

## **Aging Simulation**

### **Sensitizing People to the Process of Aging**

The following activities were developed to help people experience some of the sensory changes that older adults may experience. These may be used with small or large groups. With a large group, divide into small groups and provide each group with a different simulation. Each group can then share their feelings with the total group. Use the corresponding “Sensory Change” handouts after each activity. To set this program up as “learning stations,” use the “table tents” that identify the different activities at each station.

#### **Becoming Sensitive to Changes in Sight**

1. Obtain a set of swimmer’s goggles:
  - a. Paste yellow transparent plastic paper on the lenses to represent the yellowing of the lens of the eye.
  - b. Paste strips of black paper in a circle around each eye to depict tunnel vision.

Have participants copy a list of words from a chart.

*Chronic Care Challenges Simulation Glasses* may be obtained from eNasco Online Catalog (<http://www.enasco.com/product/SB24999G>). These glasses help the wearer experience cataracts, glaucoma, macular degeneration, retinopathy, hemianopsia and detached retina.

*Changes in Vision Related to Medical Conditions* –

<http://fcs.tamu.edu/families/aging/vision/index.php>

2. Vary the light intensity of the room slowly and dramatically to illustrate the circumstances of light and dark adaptation. Ask participants to read the first word on the chart.
3. Use totally blackened goggles to represent blindness.

#### **Becoming Sensitive to Changes in Hearing**

1. Use a set of swimmer’s ear plugs, ear muffs or stocking hat to dull the sound of people talking. Give the person directions on how to accomplish a simple task such as separating an egg. Time the people to illustrate how hearing loss may affect how fast a person accomplishes a given assignment.
2. Use speech itself as a training tool.
  - a. Have two or three people give instructions to a person at the same time. Ask the person to repeat the instructions given.
  - b. Have different people with different voice levels read aloud the same passage from behind a screen.
  - c. Have people speak at differing speeds.

3. Do not forget the interrelation of vision and hearing. Have a blindfolded person listen to instructions which are given at a fast pace. This will illustrate how often we depend upon seeing someone talk to hear what they are saying.

### **Becoming Sensitive to Changes in Touch**

1. Plastic Gloves: Through the use of plastic gloves, the person can simulate difficulties in distinguishing water temperatures and in grasping small objects. Ask participant to pick up a small square of paper from the table.
2. Numz-It: This liquid material used on babies' teeth desensitizes the fingers for a short period of time.
3. Have the person wear a pair of thick gloves and then have him tie his shoe or do any other similar intricate task—button a shirt or buckle a belt.

### **Becoming Sensitive to Changes in Dexterity**

1. One-handed exercises will demonstrate the difficulty encountered by a person who is missing a limb or who has lost the use of a limb. Have participants try to write their names using their left hand.
2. Take masking tape and place it around several fingers and/or joints to represent a missing finger or stiffened joint. Have participants unscrew a jar lid, or open a can.
3. Use elastic bandages to totally or partially disrupt the functioning of one limb, such as a leg or a knee joint.

### **Becoming Sensitive to Changes in Taste**

1. Block out the visual and smelling capacities of the person by use of a blindfold and cotton in the nose and have him identify:
  - a. An apple versus a potato (food with similar textures)
  - b. A potato chip versus a corn chip
2. Blindfold participants and get them to identify substances such as lemons, beef, or pudding that has been pureed in a blender. Texture no longer aids in identification.
3. Use mouthwash to clean the mouth and eliminate taste of foods.

### **Becoming Sensitive to Changes in Smell**

1. Use nose plugs or pieces of cotton to block the nostrils. Have subjects describe what it is they smell or taste. Use a range of foods—apples, oranges, peanut butter and chocolate.
2. Blindfold participants and present them with a variety of odors which they have to identify. Be certain to use a range of odors.
3. Use on strong odor, such as musk oil, to mask other odors. Then have the participants try to tell you what the other odors are.

## **Becoming Sensitive to Changes in Mobility and Balance**

1. Have people attempt to carry a set of packages in their hand while trying to use a walker or a cane. Note how few women have pockets in which to carry possessions when they have to use a walker.
2. Set a person in a desk chair and spin him around a few times. Then ask him to walk in a straight line. A person who is having a mobility problem will have a similar kind of dizziness.
3. Paste heavy sponge rubber on the bottom of a pair of shoes or put the right shoe on the left foot, etc. and have the person walk in them. Be certain to use ill-fitting shoes since many people, particularly older people, do not have adequate foot wear.

Adapted from *Sensitizing People to the Processes of Aging: The In-Service Educator's Guide* by Marvin Ernst and Herbert Shore, Dallas Geriatric Research Institute, 1977. Distributed by: Judith L. Warren, Ph.D., Associate Director for Human Sciences, Texas A&M AgriLife Extension Service, The Texas A&M System, College Station, Texas. 2007

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**Handouts**

## **Changes in Vision: A Fact Sheet on Aging**

### **Vision Changes:**

- Farsightedness – inability to see close objects clearly; loss of elasticity of lens
- Sensitivity to light and glare – “night blindness”
- Visual activity or clarity – lose gradually with age
- Color vision – changes in filtering
- Cataracts – 95 percent of all cataract surgery is successful
- Blindness – glaucoma, arteriosclerosis, hypertension, diabetes

### **Vision difficulties may produce these behaviors:**

- Coordination difficulties (buttoning, finding food on a plate)
- Tunnel vision (positioning of objects seemingly ignored)
- Visual hallucinations – rapidly move at edge of vision field
- Squinting
- Color selection – bright over dull colored objects
- Uncontrolled eye movement
- Depth perception – spilling food or drink
- Inability to copy
- Difficulty distinguishing an object from its background

### **Actions you may take:**

- Position objects **in** vision field
- Position objects consistently
- Label objects
- Simplify visual field
- Use bright colors
- Give verbal indication of actions
- Provide compensators – taste, smell, etc.

## Changes in Hearing: A Fact Sheet on Aging

### Hearing Changes:

- Impact may be greater than other losses
- Source of loss
- Auditory nerve
- Structure of ear
- Deterioration of brain
- Decreased ability to hear **intensity** or **volume** of sound
- Decreased ability to hear **pitch** of sound—especially high pitched sounds. Shouting (increased intensity and pitch) does not aid **hearing**.
- Decreased ability to discriminate between similar words.

### Hearing difficulties may produce these behaviors:

- Increased volume of speaking, shouting
- Tipping head or moving position to facilitate hearing
- Asking for things to be repeated or confusing words
- Blank looks, disorientation, inappropriate responses—“yes” or nods when not really understanding
- Isolation – withdrawal from social participation
- Not reacting – slammed door, loud noise
- Emotional upset – hyperactivity, frustration and anger. It is a typical and normal reaction not to admit but to lash out.

### Actions you may take:

- Stand in front of person you are speaking to (give opportunity to read lips)
- Make sure is aware that you are addressing him; touch the person slowly to assure attention
- Use gestures or objects to illustrate message, point in direction
- Use short sentences
- Attempt to speak to “good” ear

## Changes in Touch: A Fact Sheet on Aging

### Tactile Changes:

- Reduced tactile sensation – touch messages don't get sent to brain; can't tie shoes if can't feel shoe laces; can't respond to heat (hand on hot object—iron or stove) if can't feel heat; e.g. bruise – don't know it; children and others can react – “Oh Mother, you **are** so careless (blaming)”
- Textures, temperatures, other discriminations are difficult cause:
  - Parkinson's disease
  - Small cardiovascular accidents unnoticed cause sensory difficulties
  - Lack of **blood flow** to hands – due to **swelling**
  - Arthritis
  - Decline in use of limbs/muscles resulting from continual sitting or being **bedridden**

### Tactile difficulties may produce these behaviors:

- Avoidance – withdrawal from sewing, touching other people, touching unfamiliar objects
- Extremes in recognizing pain – cannot detect; overreacts
- Oral exploration – place object in mouth to determine what it is
- Not responding to pressure
- Grasping objects tightly (overreacting)

### Actions you may take:

- Talk – give an explanation of what you are doing
- Assure grip before release
- Touch – increase pressure just enough for person to feel your touch but not enough to hurt

## **Changes in Dexterity: A Fact Sheet on Aging**

### **Strength/Dexterity Changes:**

- In the young adult, 43 percent of body weight is muscle. With age (above 70), lean body mass declines about 25 percent of body weight.
- There is an increase in fat cells—to 1/3 body weight by age 70. There is also a decline in nerve activity.
- Both endurance and reaction time are decreased.

### **Dexterity difficulties may produce these behaviors:**

- Discontinue handwriting—letters, etc.
- Difficulties in such daily activities as grasping, opening heavy doors, manipulating buttons and zippers, lacing shoes
- Spilling

### **Actions you may take:**

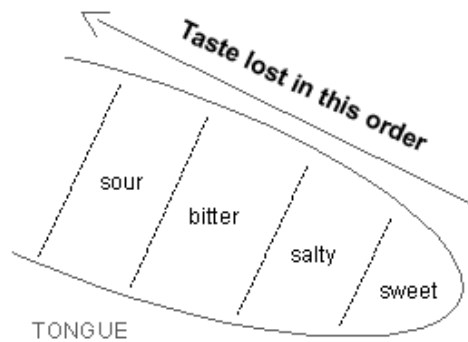
- Position items for ease in reaching or use magnetic latches or take cabinet doors off. Change door knobs to handles.
- Allow/encourage more time
- Encourage independence



## Changes in Taste: A Fact Sheet on Aging

### Taste Changes:

- Taste buds decline with age – flavor identification
- Taste buds decline to 1/6 of 20 year old by late 70's
- Gum disease – poor teeth; periodontal disease reduce appetite



### Taste difficulties may produce these behaviors:

- **Loss/increased** appetite – stop because no taste; increase to achieve **some taste**; weight gain/loss
- Statements about food – complaints about bitter or sour flavors
- Questions – mistaken identity of foods
- Tongue coating
- Excessive seasoning – increase sugar and salt

### Actions you may take:

- Attractive food presentation increases person's willingness to eat
- Separate food rather than mixing food on plate
- Vary texture
- Good dental care
- Taste parties – to teach using vision and smell to identify foods; to increase social enjoyment associated with food

## Changes in Smell: A Fact Sheet on Aging

### Smell Changes:

- By age 80, about 40 percent of people have difficulty in identifying common substances by smell

### Smelling difficulties may produce these behaviors:

- Not reacting to unpleasant odors
- Nasal congestion
- Comments – “Can’t smell the flowers”
- Increased body odor – or over use of fragrance

### Actions you may take:

- Encourage smelling before feeding
- Explain what foods are and encourage **thinking** of smell
- Label items that look alike

## **Changes in Balance: A Fact Sheet on Aging**

### **Balance Changes:**

- Slowing of body movements
- Dizziness may occur
- Stiffening of body joints
- Medication

### **Balance difficulties may produce these behaviors:**

- Poor posture – tilt forward
- Dizziness
- Holding to immobile objects or wall when walking
- Shuffling gait

### **Actions you may take:**

- Support on side which needs support
- Assist in standing – use body as lever
- Teach person to grasp you for support
- Check for hazards – carpet edges, lamps, cords, etc.
- Provide handrails on walls, etc.
- Patience

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**Table Tents**

## Mobility & Balance

Put your shoes on the wrong feet and walk down the tape line.

## Sight

Put on the glasses and walk around the building. Look for fire alarm. Read the instructions.

## Mobility & Balance

Use the walker and carry the “groceries” down the hall - open a door and walk through.

## Mobility & Balance

Turn around until you're dizzy. Then walk the tape line.

## Mobility & Balance

Use the wheelchair, find the bathroom and enter. Wash your hands.

## Mobility & Balance

Using the wheelchair, find the bathroom and enter. Enter a stall.

## Dexterity

Have your partner tape several fingers together to represent a stiffening joint. Go to the bathroom and turn on the water.

## Dexterity

Have your partner tape several fingers together to represent a stiffening joint. Try to unzip and zip the zipper.

## Dexterity

Have your partner tape several fingers together to represent a stiffening joint. Try to button or unbutton a coat.

## Dexterity

Have your partner tape several fingers together to represent a stiffening joint. Try to thread the needle.

## Dexterity

Have your partner tape several fingers together to represent a stiffening joint. Try to open the medicine bottle.

## Touch

Put on the plastic gloves. Try to thread a needle and make stitches through the square of cloth.



Touch

Put on the plastic gloves. Try to pick up the buttons, pins, and paper.

Touch

Put on the cotton gloves. Try to thread the needle.

Smell

Hold your nose and close your eyes. Smell the items in the bags.

# Mobility & Balance

Use the cane and walk the line.