

Introduction to CTE - Health Science

Standard 7: Student will examine workplace tasks and concepts in Health Science.

Objective 3: Explore the relationship and impact of healthcare on technology.

Indicators:

- Demonstrate technical applications related to healthcare processes.
- Utilize creativity and problem solving to design and create equipment used for activities of daily living.
- Identify medical terminology used in healthcare.
- Demonstrate various methods of giving and obtaining medical information.
- Explore related career Pathways leading to college and career options.

Activities of Daily Living (ADLs)

Building Background:

Activities of Daily Living (ADLs) is a term used in healthcare to refer to basic, routine tasks, within an individual's place of residence, in outdoor environments or both, mostly referring to daily self-care activities. Such task may include bathing, dressing, eating and using the toilet; activities that most people are able to perform on a daily basis without assistance. Other tasks that may be complex and require a certain amount of physical dexterity, sound judgment and organizational skills are also classified as an ADL.

One's ability, or inability, to adequately perform both groups of activities is usually reflective of that person's ability to live safely and independently. Younger children often require help from adults to perform ADLs, as they have not yet developed the skills necessary to perform them independently.

Health professionals routinely refer to the ability or inability to perform ADLs as a measurement of the functional status of a person, particularly in regards to people with disabilities and the elderly. ADLs are best defined as; *"The things we normally do...such as feeding ourselves, bathing, dressing, grooming, work, homemaking, and leisure."* While basic categories of ADLs have been suggested, what specifically constitutes a particular ADL in a particular environment for a particular person may vary.

Basic Activities of Daily Living

- **Bathing:** includes grooming activities such as shaving, and brushing teeth and hair
- **Dressing:** choosing appropriate garments and being able to dress and undress, having no trouble with buttons, zippers or other fasteners
- **Eating:** being able to feed oneself
- **Toileting:** being able to use the toilet; being able to control one's bowels and bladder.
- **Transferring:** being able to walk, or, if not ambulatory, being able to transfer oneself from bed to wheelchair and back

More complex or Instrumental Activities of Daily Living

- **Using the telephone:** being able to dial numbers, look up numbers, etc.
- **Managing medications:** taking the appropriate medications and correct dosages on time
- **Preparing meals:** making appropriate food choices and preparing meals safely
- **Maintaining the home:** doing or arranging for housekeeping and laundry
- **Managing finances:** budgeting, paying mortgage/rent and bills on time, etc.
- **Shopping:** being able to shop for groceries and other small necessities, and transport purchases from store to home
- **Using transportation:** being able to drive or use public transportation for appointments, shopping, etc.

Occupational Therapists are often the medical professional that evaluates, educates and assists patients with ADLs and special needs. Whether the patient is able to perform all of the Activities of Daily Living independently, needs help with just a few or needs help with most of them, the Occupational Therapist will help tailor the care plan to meet these needs. Over time, periodic assessments can be equally valuable, by showing patterns, predicting future needs and measuring either progress or decline. Sometimes special tools or modified objects can be used to ease the complexity of daily tasks.

When activities of daily living (ADL) become difficult, finding the right solution can require some investigation. Your task is to create and design a product that will make every day activities easier and more convenient. From bath safety/hygiene to dressing aids to eating utensils or even reading and writing aids, you will need to identify the functional need and use of your design to ensure that your patient has the right tool every time.

Additional Ideas:

Use the following website research and demonstrate some of the current products available today.

- North Coast Medical - https://www.ncmedical.com/categories/Aids-for-Daily-Living_4.html
- Advantage Medical - <http://www.advantagemedical.com/shop-by-department/adl-products/>

Use the checklist of Activities of Daily Living (ADL) found at - <http://www.pbs.org/caringforyourparents>

Use the Activities of Daily Living (ADL) Product Design worksheet.