**PEOPLE WITH SPECIAL NEEDS**

**Definition of Disability**

A disability is a physical, emotional or mental injury or illness that is severe or permanent, that interferes with an individual’s normal growth, development or ability to learn or work.

According to WHO, the sequence of events leading to disability and handicapped conditions are as follows:

Injury or disease Impairement Disability Handicap.

**Impairement**

It is defined as any loss or abnormality of psychological, physiological or anatomical structure or function. Eg: loss of vision, hearing.In life anything that stops a part of your body from functioning fully is known as impairment. There are many different types of impairments such as motor, sensory, and emotional or intellectual impairment.

**Disability**

It develops as the consequence of impairement. Eg: loss of limbs result in inability to walk. Disability is the inability to carry out certain activities which are considered as normal for the age and sex.

**Handicap**

It develops as the consequence of the disability. It is defined as a disadvantage for a given individual resulting from an impairement or a disability, that limits and prevents the fulfilment of a role which is normal for that individual, depending on age, sex, social and cultural factors.

Primary handicap condition leads to secondary handicap condition. Eg: blindness leads to economical handicapped situation, i.e, poverty. The child may have single or multiple handicap condition.

Most disabilities start at birth or in childhood. Those that start later in life are often as a result of accidental injury. In many cases the loss of a function due to disability need not make a person useless. Often disabled people have other faculties which they can put into good use and therefore be able to earn a living for themselves and their family.

The following are types of common disabilities:  
  
**Physical Disabilities**  
this is a type of disability that restricts/limits any kind of mobility/ physical function of one or more limbs, or gross body ability in an individual. Physically challenged people can be grouped according to the affected part of the body.

* Orthopedically handicapped: congenital birth defect ( club foot), amputation due to accidental injury, bony defects following ricket, fracture, arthritis, leprosy, etc.
* Sensory handicapped:
* Visual problems: partial or complete blindness, refractory errors
* Auditory problems: partial hearing loss, deaf and dumb
* Speech problems: stammering, dysphonia
* Neurologically handicapped: cerebral palsy, mental retardation, convulsive disorders, hydrocephalus, spina bifida, post – meningitic, or post- encephalitic sequel, post-polio- residual paralysis, degenerative diseases of CNS, learning disabilities.
* Handicapped condition due to chronic systemic disease: heart disease, bronchial asthma, diabetes mellitus, muscular dystrophy, etc.
* Multiple physically handicapped children: having combination of orthopedically, sensory and

**Mental Disability**A mental illness is defined as a disorder with psychological or behavioural manifestations and/or impairment of functioning due to a social, psychological, genetic, physical, chemical or biological disturbance.A mentally ill person may have at least one of the following characteristics:

* Being dissatisfied with one’s abilities and accomplishments
* Having ineffective or unsatisfying interpersonal relationships
* Dissatisfaction with one’s place in the world
* Having ineffective coping/adaptation mechanisms and lacking personal growth

**Causes of disabilities**

There are many social, environmental and physical causes of disabilities, although forsome a definitive cause may never be determined. Common factors causing:

* Poliomyelitis & other communicable diseases
* perinatal conditions e.g infection, malnutrition etc
* accidental injury,
* socio- cultural factors
* developmental disabilitiesinclude:
* Brain injury or infection before, during or after birth
* Growth or nutrition problems
* Abnormalities of chromosomes and genes
* Babies born long before the expected birth date - also called extreme prematurity
* Poor diet and health care
* Drug misuse during pregnancy, including excessive alcohol intake and smoking.
* Child abuse can also have a severe effect on the development of a child, specifically the

socio-emotional development.

Two associated issues:

1. **Mental health issues (dual diagnoses)**

Mental health issues, and psychiatric illnesses, are more likely to occur in people with developmentaldisabilities than in the general population. A number of factors are attributed to:

* the high likelihood of encountering traumatic events throughout their lifetime (such as abandonment by loved ones, abuse, bullying and harassment)
* biological factors (such as brain injury, epilepsy, illicit and prescribed drug and alcohol misuse)
* inability of those around to allow/ understand expressions of grief and other human emotions)

1. **Abuse and vulnerability**

Abuse is a significant issue for people with developmental disabilities, and as a group they are regardedas vulnerable people in most jurisdictions. Common types of abuse include:

* Physical abuse (withholding food, hitting, punching, pushing, etc.)
* Neglect (withholding help when required, e.g., assistance with personal hygiene)
* Sexual abuse
* Psychological or emotional abuse (verbal abuse, shaming and belittling)
* Constraint and restrictive practices (turning off an electric wheelchair so a person cannot move)
* Financial abuse (charging unnecessary fees, holding onto pensions, wages, etc.)
* Legal or civil abuse (restricted access to services)
* Systemic abuse (denied access to an appropriate service due to perceived support needs)
* Passive neglect (a caregiver’s failure to provide adequate food, shelter)
* Lack of education, lack of self-esteem and self-advocacy skills, lack of understanding of social norms and appropriate behavior and communication difficulties are strong contributing factors to the high incidence of abuse among this population.
* In addition to abuse from people in positions of power, peer abuse is recognized as a significant, if misunderstood, problem.

**SPECIAL POPULATIONS**

1. Widows and widowers
2. Prisoners
3. Displaced people; internally & refugees
4. Elderly

**WIDOWS/WIDOWERS**

The death of a spouse makes one to become a widow or widower and you have many of them in your community. Some of the leading causes of death today in Kenya include diseases and road traffic accidents. The following diseases are a major cause of morbidity and mortality in Kenya:  HIV/AIDS, Malaria, Hypertension, Typhoid, Diabetes mellitus, Heart diseases, Diarrhoeal diseases, Obstetric complications, such as pregnancy induced hypertension, ante partum haemorrhage and postpartum haemorrhage.

Apart from disease, the second most common cause of death in Kenya is road traffic accidents.   
The factors that contribute to road traffic accidents include: Unroadworthy vehicles, Careless driving, usually under the influence of substance abuse, Poor enforcement of traffic regulations by the concerned authorities, unskilled drivers and Poor roads.

When a spouse dies the effect of the loss affects the entire family. They not only lose the love and care from that parent or spouse, but sometimes also the financial support. Therefore widows/widowers require a lot of support, empathy, understanding, love and care. They need to surround themselves with people who they can trust and rely on.

This tends to be people who have been close, understanding and supportive to the family. They are people whom the family has shared important aspects of their life with, and are referred to as significant others. They include members of the extended family, friends, colleagues, church members, and so on. They help the family to cope with feelings of loss.  
  
As a community health nurse, your role is mainly to counsel the widow or widower, and to support them as they go through the grieving process.

**Needs of Widows**

* Psychological effects following the death of the husband, such as loneliness, and cultural practices not allowing the widow to re-marry.
* Poverty, due to not having the right to inherit property or have their right enforced, being evicted from their property, no support from family or relatives.
* Basic needs such as food and shelter cannot be met due to poverty, resulting from unemployment and illiteracy.
* Support to care for the left children. Children especially girls are in an extremely vulnerable position, due to early marriage and child labour.
* Vulnerable to violence, sexual abuse and rape.
* Exploitation at work place due to homelessness, illiteracy and poverty.
* Love and belonging. Some may be rejected by the family.
* Health needs for the whole family or the left spouse. This is especially so if she was sick, as in the case of AIDS or if both were involved in an accident, which killed one and left   
  the other injured.
* Marriage, especially where men are culturally supposed to marry when their spouses die.
* Intense loneliness due to lack of previously established relationship. This may result in hurried replacement of the wife.
* Severely affected health and well-being because widowers are not able to care for themselves since most of the care was provided by the wife.
* Immense feelings which may result in physical and psychological symptoms such as sexual fear due to loss of a loved one, social isolation.

**Services Available for Widows and Widowers**In developed countries there are well established systems in place for helping widows or widowers. However in Kenya there are no formal systems, although within many communities there are various support systems which can be mobilised to assist a widow or widower.

**The Extended Family Members**

* + In many communities, the traditional support system for a widow or widower is the extended family.
  + They support the widow during the grieving period and sometimes take the responsibility of caring for the family.
  + They also identify ways of assisting the widow or widower and in many cases conduct fund raisings or 'harambees' to help them meet expenses such as hospital bills or school fees for the children.

**Clan**

* + In certain communities, clans play a very big role in the care of a widow.
  + The clan takes the responsibilities of the children’s education, and may even assign individual members of the family, the responsibility over the children, in order to ensure that the burden is well shared out.

**Support Groups**

* + Support groups for widows and widowers are common and exist in most of our communities.
  + They come together to share their problems and help each other in solving them.
  + They also contribute money, and sometimes look for donors to help them establish income-generating activities.
  + A good example is the group known as Widows and Orphans of AIDS Kenya (WOFAK).
  + As a community health nurse you should find out about these groups, so that you can advise and encourage widows and widowers to join them for support.

**Institutions**

* + In Kenya there are no established institutions designed to take care of widow and widowers.
  + The government has established a system known as the widow and widowers pension scheme.
  + This scheme pays a pension to the widow or widower as well as allowances for the children.
  + The widow and widower pension scheme only covers those who are employed by the government.
  + For the unemployed the family and community takes the responsibility.

**PRISONERS**

For a prisoner's first reception into custody, an initial assessment of the healthcare needs of all newly received prisoners is undertaken within 24 hours of first reception by an appropriately trained member of the healthcare team to identify any existing problems and to plan any subsequent care. A health screen is done to primarily detect:

* immediate physical health problems
* immediate mental health problems
* significant drug or alcohol abuse
* risk of suicide and/or self-harm

In the week following first reception, every prisoner must be offered a general health assessment. Such assessments are not standardised, however the general health assessment should act as an opportunity for:

* gathering further medical information
* checking how the prisoner is settling in
* health education
* providing information
* health promotion

Gather the following information:

* Inmate details including age, offence, date of sentence and tariff
* Short medical history – including past medical history, current health issues, current treatment
* Summary of relevant specialist opinion
* Current health needs – medical/nursing/social care
* Prison issues relevant to health – e.g. mobility, behaviour, risk of self-harm
* Any other factors affecting allocation – e.g. dangerousness, requirement for offending behaviour courses
* Assessment of future health needs
* Concise summary of health needs.
* Any risk of self-harm information/care plan

**DISPLACED PERSONS**

These are people who have been displaced from their communities or even countries. The displacement of people can be caused by a number of factors, the most common being armed conflict. Natural disasters, famine, political reasons and economic changes are some of   
the others.The problems experienced by displaced persons include:

* Housing
* Sanitation
* Water supply
* Lack of inadequate nutrition which may result in malnutrition
* Security risk and human rights violation
* Overcrowding which may cause rapid spread of diseases
* Lack of education opportunities
* Lack of health services
* Emotional needs
* Poverty

Displaced persons tend to develop health problems due to poor living conditions, as well as psychological and physical trauma caused by displacement.Some displaced persons are separated from their families and relatives and have lost homes, jobs and schools for their children.

Some may develop antisocial behaviour as a defence mechanism, as they are unhappy with the displacement. It is important that some measures be taken to help them. Apart from the above problems, people who have been displaced may bring new diseases, such as diarrhoeal diseases, typhoid, measles, meningitis, sexually transmitted diseases, and HIV/AIDS.Even their animals can bring in diseases such as rabies, anthrax, foot and mouth and brucellosis. So as you can see, they can also pose as a health risk to the community where they settle.

They can be divided into two categories:**Internally displaced persons**and **Externally displaced persons**

**Internally Displaced Persons**

These are people who have been displaced within their country, following ethnic clashes or disasters such as floods and earthquakes. They get help from local organisations, churches and individuals. The government has the main responsibility of settling internally displaced persons.

**Externally Displaced Persons**These are people who have run away from their country as a result of civil war orpolitical persecution. They are also known as refugees. For example in Kenya there are many refugees from neighbouring countries such as Sudan and Somalia.The government works closely with the United Nations High Commission for Refugees (UNHCR) to settle all externally displaced persons.

**Effects of Displacement of People**

Often leads to changes in the family structure and gender roles, relations and identities.In conflict situations, many women are suddenly thrust into the role of head of the household because the men are recruited to combat, they stay behind to maintain land, or migrate in search of work.There is also:Escalation in the level of poverty, Reduction in the level of foreign aid, Demographic consequences, Religious effect, Conflicts between the host community and thedisplaced group and Political effects.

**ELIMINATION DISORDERS**

**Urinary incontinence**

**Urinary incontinence** is any involuntary leakage of [urine](http://en.wikipedia.org/wiki/Urine). Urinary incontinence almost always results from an underlying treatable medical condition but is under-reported to medical practitioners. Urinary incontinence is a multifactorial syndrome produced by a combination of genitourinarypathology, age-related changes, and comorbid conditions that impair normal micturition or the functionalability to toilet oneself, or both.

**Causes**

* [Polyuria](http://en.wikipedia.org/wiki/Polyuria) (excessive urine production) of which, in turn, the most frequent causes are: uncontrolled [diabetes mellitus](http://en.wikipedia.org/wiki/Diabetes_mellitus), [primary polydipsia](http://en.wikipedia.org/wiki/Primary_polydipsia) (excessive fluid [drinking](http://en.wikipedia.org/wiki/Drinking)), [central diabetes insipidus](http://en.wikipedia.org/wiki/Central_diabetes_insipidus) and [nephrogenic diabetes insipidus](http://en.wikipedia.org/wiki/Nephrogenic_diabetes_insipidus). Polyuria generally causes [urinary urgency](http://en.wikipedia.org/wiki/Urinary_urgency) and [frequency](http://en.wikipedia.org/wiki/Urinary_frequency), but doesn't necessarily lead to incontinence.
* [Caffeine](http://en.wikipedia.org/wiki/Caffeine) or [cola](http://en.wikipedia.org/wiki/Cola) beverages also stimulate the bladder.
* Enlarged [prostate](http://en.wikipedia.org/wiki/Prostate) is the most common case of incontinence in men after the age of 40; sometimes prostate cancer may also be associated with urinary incontinence. Moreover drugs or radiation used to treat prostate cancer can also cause incontinence.
* Brain disorders like [multiple sclerosis](http://en.wikipedia.org/wiki/Multiple_sclerosis), [Parkinson's disease](http://en.wikipedia.org/wiki/Parkinson%27s_disease), [strokes](http://en.wikipedia.org/wiki/Stroke) and [spinal cord injury](http://en.wikipedia.org/wiki/Spinal_cord_injury) can all interfere with nerve function of the bladder.
* Trauma to pelvic floor muscles

**Types**

* Urge incontinence: involuntary elimination of urine associated with a strong perceived need to void
* Reflex (neurogenic) incontinence: associated with a spinal cord lesion that interrupts cerebral control, resulting in no sensory awareness of the need to void
* Stress incontinence: associated with weakened perineal muscles that permit leakage of urine when intraabdominal pressure is increased (eg, with coughing or sneezing)
* Functional incontinence: incontinence in patients with intact urinary physiology who experience mobility impairment, environmental barriers, or cognitive problems and cannot reach and use the toilet before soiling themselves. Occurs when a person recognizes the need to urinate, but cannot physically make it to the bathroom in time due to limited mobility. Causes of functional incontinence include confusion, dementia, poor eyesight, poor mobility, poor dexterity, unwillingness to toilet because of depression, anxiety or anger, drunkenness, or being in a situation in which it is impossible to reach a toilet. A person with Alzheimer's disease, for example, may not think well enough to plan a timely trip to a restroom. A person in a wheelchair may be blocked from getting to a toilet in time.
* Total incontinence: occurs in patients who cannot control excreta because of physiologic or psychological impairment; management of the excreta is an essential focus of nursing care.Total incontinence is the continuous and total loss of urinary control.One cause of total incontinence is neurogenic bladder, a neurological problem that prevents the bladder from emptying properly. Spinal cord injuries, multiple sclerosis, and other disorders that affect nerve function can also lead to total incontinence. Total incontinence in women can also be caused by a vesicovaginal fistula.

Other types include:

* [**Overflow incontinence**](http://en.wikipedia.org/wiki/Overflow_incontinence)**:** Sometimes people find that they cannot stop their bladders from constantly dribbling, or continuing to dribble for some time after they have passed urine. It is as if their bladders were like a constantly overflowing pan, hence the general name overflow incontinence.
* [**Structural incontinence**](http://en.wikipedia.org/w/index.php?title=Structural_incontinence&action=edit&redlink=1)**:** Rarely, structural problems can cause incontinence, usually diagnosed in childhood, for example an [ectopic ureter](http://en.wikipedia.org/wiki/Ectopic_ureter). Fistulas caused by obstetric and gynecologic trauma or injury can also lead to incontinence.
* [**Bedwetting**](http://en.wikipedia.org/wiki/Bedwetting) while asleep. It is normal in young children.
* [**Transient incontinence**](http://en.wikipedia.org/w/index.php?title=Transient_incontinence&action=edit&redlink=1) is a temporary version of incontinence. It can be triggered by medications, adrenal insufficiency, mental impairment, restricted mobility, and stool impaction (severe constipation), which can push against the urinary tract and obstruct outflow.

**Diagnosis**

* + A careful history taking is essential especially in the pattern of voiding and urine leakage as it suggests the type of incontinence faced.
  + Other important points include straining and discomfort, use of drugs, recent surgery, and illness.
  + P[hysical examination](http://en.wikipedia.org/wiki/Physical_examination) will focus on looking for signs of medical conditions causing incontinence, such as tumors that block the urinary tract, stool impaction, and poor reflexes or sensations, which may be evidence of a nerve-related cause.

Other tests include:

* [Stress test](http://en.wikipedia.org/wiki/Stress_test) – the patient relaxes, and then coughs vigorously as the doctor watches for loss of urine.
* [Urinalysis](http://en.wikipedia.org/wiki/Urinalysis) – urine is tested for evidence of infection, urinary stones, or other contributing causes.
* [Blood tests](http://en.wikipedia.org/wiki/Blood_test) – blood is taken, sent to a laboratory, and examined for substances related to causes of incontinence.
* [Ultrasound](http://en.wikipedia.org/wiki/Ultrasound) – to visualize the kidneys, ureters, bladder, and urethra.
* [Cystoscopy](http://en.wikipedia.org/wiki/Cystoscopy) – a thin tube with a tiny camera is inserted in the urethra and used to see the inside of the urethra and bladder.

Patients are often asked to keep a diary for a day or more, up to a week, to record the pattern of voiding, noting times and the amounts of urine produced.

**Treatment**

* Use of absorbent pads or undergarments that accommodate absorbent pads
* Diapers
* Linen protectors for bedridden patient
* External collection devices such as male external catheters and female external catheters
* Indwelling catheters
* Intermittent catheterization
* Surgical procedures
* Electrical nerve stimulators
* Pharmacotherapeutic agents
  + Patients need information on drugs used to treat urinary incontinence as well as those used for other problems that may precipitate or worsen incontinence.
* Drugs that may precipitate or worsen incontinence: diuretics, sedatives, hypnotics, anticholinergics, and alcohol
* Drugs that may be used to treat urinary incontinence:
* alpha-blockers (increase bladder pressures and decrease outlet pressures)
* beta-blockers (increase outlet resistance)
* cholinergics(increase bladder pressures)
* anticholinergics (depresses smooth muscle activity in hypertonic bladder)
* and alpha-adrenergics(increase sphincter tone)

Health education

* **Provide information on odor control.** Vinegar and commercially prepared solutions are useful in neutralizing urinary odor.
* **Familiarize patient with potential risk of skin breakdown.**Urea contained in urine metabolizes*to ammonia within minutes and is responsible for "urine burns" or "scalding." Spray or wipe preparations, such as Skin Prep and Bard Barrier Film, protect skin from urine.*
* Teach patient or caregiver normal anatomy of genitourinary tract and factors that normally control micturition and maintain continence.
* Assist patient in recognizing that any episode(s) of incontinence that pose(s) a social or hygienic problem deserve(s) investigation so that appropriate therapy can be implemented.Many people accept urinary incontinence as an inevitable consequence of aging and may be unaware that therapeutic measures can improve incontinence.
* Inform patient of the high incidence of urinary incontinence.This information may decrease feelings of hopelessness and isolation that often accompany urinary incontinence.
* Assist patients, through careful interview to identify possible causes for urinary incontinence.
* Teach patients the necessity, purpose, and expected results of urodynamic diagnosticevaluation.Urodynamic studies evaluate bladder filling and sphincter activity and are particularly useful in differentiating stress and urge incontinence.
* Provide information regarding all available methods of managing urinary incontinenceso that patient can make an informed decision.

**Fecal incontinence**

**Fecal incontinence** is the loss of regular control of the [bowels](http://en.wikipedia.org/wiki/Bowels). Subjects relating to [defecation](http://en.wikipedia.org/wiki/Defecation) are often socially unacceptable, thus those affected may be beset by feelings of shame and humiliation. Some do not seek medical help and instead attempt to self-manage the problem. This can lead to social withdrawal and [isolation](http://en.wikipedia.org/wiki/Solitude), which can turn into cases of [agoraphobia](http://en.wikipedia.org/wiki/Agoraphobia). Such effects may be reduced by undergoing prescribed treatment, taking prescribed medicine and making dietary changes.

**Prevalence**

Fecal incontinence affects people of all ages, but is more common in older adults than in younger adults. It is not, however, a normal part of aging.

**Causes**

**Constipation**

Constipation is the most common cause of fecal incontinence. Constipation causes prolonged muscle stretching and leads to weakness of the intestinal muscles. After a certain point, the [rectum](http://en.wikipedia.org/wiki/Rectum) will no longer close tightly enough to prevent [stool](http://en.wikipedia.org/wiki/Human_feces) loss, resulting in incontinence.

**Muscle damage**

Fecal incontinence can be caused by injury to one or both of the ring-like muscles at the end of the rectum called the internal and external anal sphincters. During normal function, these sphincters help retain [stool](http://en.wikipedia.org/wiki/Human_feces). In women, damage can occur during [childbirth](http://en.wikipedia.org/wiki/Childbirth). The risk of injury is greatest when the [birth attendant](http://en.wikipedia.org/wiki/Birth_attendant) uses [forceps](http://en.wikipedia.org/wiki/Forceps_in_childbirth) to help the delivery or does an [episiotomy](http://en.wikipedia.org/wiki/Episiotomy).[Hemorrhoid](http://en.wikipedia.org/wiki/Hemorrhoid) surgery can damage the sphincters as well. A [pelvic tumor](http://en.wikipedia.org/wiki/Pelvic_tumor) that grows in or becomes attached to the [rectum](http://en.wikipedia.org/wiki/Rectum) or [anus](http://en.wikipedia.org/wiki/Anus) also can cause muscle damage, as can surgery to remove the tumor. Although [anal sex](http://en.wikipedia.org/wiki/Anal_sex) resulting in repeated injury to the internal anal sphincter can lead to incontinence, the threat is relatively small.

**Nerve damage**

Fecal incontinence can also be caused by damage to the nerves that control the anal sphincters or to the nerves that detect stool in the rectum. Damage to the nerves controlling the sphincter muscles may render the muscles unable to work effectively. If the sensory nerves are damaged, detection of stool in the rectum is disabled, and one will not feel the need to defecate until too late. Nerve damage can be caused by childbirth, long-term [constipation](http://en.wikipedia.org/wiki/Constipation), [stroke](http://en.wikipedia.org/wiki/Stroke), and diseases that cause [nerve](http://en.wikipedia.org/wiki/Nerve) degeneration, such as [diabetes](http://en.wikipedia.org/wiki/Diabetes) and [multiple sclerosis](http://en.wikipedia.org/wiki/Multiple_sclerosis).

**Loss of storage capacity**

Normally, the rectum stretches to hold stool until it is voluntarily released. But rectal surgery, [radiation](http://en.wikipedia.org/wiki/Radiation) treatment, and [inflammatory bowel disease](http://en.wikipedia.org/wiki/Inflammatory_bowel_disease) can cause scarring, which may result in the walls of the rectum becoming stiff and less elastic. The rectum walls are unable to stretch as much and are unable to accommodate as much stool. Inflammatory bowel disease also can make rectal walls very irritated and thereby unable to contain stool.

**Diarrhea**

[Diarrhea](http://en.wikipedia.org/wiki/Diarrhea), or loose stool, is more difficult to control than solid stool that is formed. Where diarrhea is caused by temporary problems such as mild infections or food reactions, incontinence tends to last for a period of days. Chronic conditions, such as [irritable bowel syndrome](http://en.wikipedia.org/wiki/Irritable_bowel_syndrome), or [Crohn's disease](http://en.wikipedia.org/wiki/Crohn%27s_disease) can cause severe diarrhea lasting for weeks or months until successful treatment can be found.

**Pelvic floor dysfunction**

Abnormalities of the [pelvic floor](http://en.wikipedia.org/wiki/Pelvic_floor) can lead to fecal incontinence. Examples of some abnormalities are decreased perception of rectal sensation, decreased anal canal pressures, decreased squeeze pressure of the anal canal, impaired anal sensation, a dropping down of the rectum ([rectal prolapse](http://en.wikipedia.org/wiki/Rectal_prolapse)), protrusion of the rectum through the vagina ([rectocele](http://en.wikipedia.org/wiki/Rectocele)), and generalized weakness and sagging of the pelvic floor.

**Assessment**

* **Assess patient's normal bowel elimination pattern.** There is a wide range of "normal" for bowel elimination; some patients have two bowel movements per day, whereas others may have a bowel movement as infrequently as every third or fourth day.
* **If there is current pathology that may affect bowel elimination, determine premorbid bowel** elimination pattern.*Most people feel the urge to defecate shortly after the first oral intake (i.e., coffee, breakfast) of the day; this is a result of the gastrocolic reflex.*
* **Determine cause of incontinence (i.e., review related factors).**
* **Perform manual check for fecal impaction.***When patient has a fecal impaction (hard, dry stool that cannot be expelled normally), liquid stool may leak past the impaction.*
* **Assess whether current medications or treatments may be contributing to bowel incontinence.** *Hyperosmolar tube feedings, bowel preparation agents, some chemotherapeutic agents, and certain antibiotic agents may cause explosive diarrhea that the patient cannot control.*
* **Assist in preparing patient for diagnostic measures.***To determine cause(s) of bowel incontinence. Tests include flexible sigmoidoscopy, barium enema, colonoscopy, and anal manometry (study to determine function of rectal sphincters).*
* **Assess degree to which patient's daily activities are altered by bowel incontinence.***Patients may restrict their own activity or become isolated from work, family, and friends because they fear odor and embarrassment.*
* **Assess use of diapers, sanitary napkins, incontinence briefs, fecal collection devices, and underpads.***Patients or caregivers may substitute familiar products (i.e., sanitary napkins) for more appropriate incontinence products out of ignorance or embarrassment.*
* **Assess perineal skin integrity.***Stool can cause chemical irritation to the skin, which may be exacerbated by the use of diapers, incontinence briefs, and underpads.*
* **Assess patient's ability to go to the bathroom independently.***Soiling accidents that occur as the result of the patient's inability to get to the bathroom may be solved by rearranging the environment, planning for trips to the bathroom, or providing a bedside commode.*
* **Assess patient's environment for availability of accessible toilet facility.**
* **Assess fluid and fiber intake.***Both are related to normal bowel evacuation.*

**Treatment**

Treatment depends on the cause and severity of fecal incontinence; it may include dietary changes, medication, bowel training, or surgery.

* Ensure fluid intake of at least 3000 ml per day, unless contraindicated. Moist stool moves through the bowel more easily than hard, dry stool and prevents impaction.
* Provide high-fiber diet under the direction of a dietitian, unless contraindicated.Fiber aids in bowel elimination because it is insoluble and absorbs fluid as the stool passes through the bowel; this creates bulk. Bulky stool stimulates peristalsis and expulsion of stool from the bowel.Also, avoidance of foods and drinks such as those containing caffeine, which relax the internal anal sphincter muscle.
* Manually remove fecal impaction, if present.
* Provide a bedside commode and assistive devices (cane, walker) or assistance in reaching the commode or toilet.
* Institute a bowel program.Facilitating regular time for bowel evacuation prevents the bowel from emptying sporadically (i.e., decreases incontinence).
* Medication consists primarily of [antipropulsive](http://en.wikipedia.org/wiki/Antipropulsive) drugs (antidiarrhoeal drugs e.g. loperamide).
* [Surgical](http://en.wikipedia.org/wiki/Surgery) procedures used to treat otherwise intractable fecal incontinence include:
* [Colostomy](http://en.wikipedia.org/wiki/Colostomy)
* Artificial anal sphincter (also known as "artificial bowel sphincter" and "neosphincter").
* Sacral nerve stimulation, the newest of these surgical procedures, involves implanting an electric device that may enable control of the anal sphincter and restore a patient's continence.
* **Kegel Exercises -** Appropriate exercise of the sphincter muscles ([Kegel exercise](http://en.wikipedia.org/wiki/Kegel_exercise)) can help restore muscle tone, and reduce or even eliminate anal incontinence.

**Health education**

* Teach patient/caregiver the causes of bowel incontinence.
* Teach patient/caregiver the importance of fluid and fiber in maintaining soft, bulky stool.
* Teach patient the importance of establishing a regular time for bowel evacuation.
* Teach caregiver use of fecal incontinence device, if appropriate.
* Teach patient the importance of a regular exercise program.

**COMMON PAIN SYNDROME**

Pain is an unpleasant sensation signaling actual or possible injury.Pain is the most common reason people visit their doctor. Pain may be sharp or dull, intermittent or constant, or throbbing or steady. Sometimes pain is very difficult to describe. Pain may be felt at a single site or over a large area. The intensity of pain can vary from mild to intolerable.

Effects of pain may be more serious for older people:

* Chronic pain can make them less able to function and more dependent on other people.
* They may lose sleep and become exhausted.
* They may lose their appetite, resulting in undernutrition.
* Pain may prevent people from interacting with others and from going out. As a result, they can become isolated and depressed.
* Pain can make people less active. Lack of activity can lead to loss of muscle strength and flexibility, making activity even more difficult and increasing the risk of falls.

1. **Neuropathic pain**

Neuropathic pain is caused by damage to or dysfunction of the nerves, spinal cord, or brain. Neuropathic pain may be felt as burning or tingling or as hypersensitivity to touch or cold. Causes include compression of a nerve (for example, by a tumor, by a ruptured intervertebral disk, or as occurs in carpal tunnel syndrome), nerve damage (for example, as occurs in a metabolic disorder such as diabetes mellitus), and abnormal or disrupted processing of pain signals by the brain and spinal cord. Processing of pain is abnormal in **phantom limb pain, post herpetic neuralgia, and complex regional pain syndrome**.

1. **Phantom Limb Pain:** Pain felt in an amputated part of the body, usually a limb. Usually, the pain seems to be in the toes, ankle, and foot of an amputated leg or in the fingers and hand of an amputated arm. It differs from phantom limb sensation—the feeling that the amputated part is still there—which is much more common.

* Phantom limb pain cannot be caused by a problem in the limb.
* Rather, it must be caused by a change in the nervous system above the site where the limb was amputated.
* But the brain misinterprets the nerve signals as coming from the amputated limb. The pain may resemble squeezing, burning, or crushing sensations, but it often differs from any sensation previously experienced.
* For some people, phantom limb pain occurs less frequently as time passes, but for others, it persists.
* Massage can sometimes help, but drug therapy is sometimes necessary.

1. **Post herpetic Neuralgia:** This disorder results from herpes zoster (shingles, which causes inflammation of nerve tissue), but occurs only after shingles resolves. The pain is felt as a constant deep aching or burning, as a sharp and intermittent pain, or as hypersensitivity to touch or cold. The pain may be debilitating. Pain relievers and other drugs may be required, but no treatment is routinely effective.
2. **Complex Regional Pain Syndrome:** is a chronic pain condition most often affecting one of the limbs (arms, legs, hands, or feet), usually after an injury or trauma to that limb. Characterized by prolonged or excessive pain and mild or dramatic changes in skin color, temperature, and/or swelling in the affected area. This syndrome typically occurs after an injury. There are two types:

* Type 1, results from injury to tissues other than nerve tissue, as when bone is crushed in an accident or when heart tissue is damaged in a heart attack.
* Type 2, results from injury to nerve tissue.

1. **Nociceptive pain**

Nociception is the sensory process that provides the signals that lead to pain. This occurs through nociceptors, primary sensory neurons that are activated by stimuli that cause tissue damage. Nociceptive pain is caused by an injury to body tissues.

* The injury may be a cut, bruise, bone fracture, crush injury, burn, or anything that damages tissues.
* This type of pain is typically aching, sharp, or throbbing.
* Pain receptors for tissue injury (nociceptors) are located mostly in the skin or in internal organs.
* The pain almost universally experienced after surgery is nociceptive pain.
* The pain may be constant or intermittent, often worsening when a person moves, coughs, laughs, or breathes deeply or when the dressings over the surgical wound are changed.
* Most of the pain due to cancer is nociceptive.
* When a tumor invades bones and organs, it may cause mild discomfort or severe, unrelenting pain.
* Some cancer treatments, such as surgery and radiation therapy, can also cause nociceptive pain.
* Pain relievers (analgesics), including opioids, are usually effective.

1. **Psychogenic pain**

Psychogenic pain is pain that is mostly related to psychologic factors.

* When people have persistent pain with evidence of psychologic disturbances and without evidence of a disorder that could account for the pain or its severity, the pain may be described as psychogenic.
* Psychologic factors often contribute to chronic pain and may contribute to pain-related disability.
* The fact that pain is caused or worsened by psychologic factors does not mean that it is not real.
* Most people who report pain are really experiencing it, even if a physical cause cannot be identified.
* Pain complicated by psychologic factors requires treatment, often by a team that includes a psychologist or psychiatrist.

Management: -

* Opioid analgesics
* Non opioid analgesics – NSAIDS
* Placebo/ adjuvant analgesics
* Non drug pain treatment
* Psychotheraphy
* Diversional theraphy

**SLEEP DISORDERS**

Sleep disorders are disturbances that affect the ability to fall asleep, stay asleep, or stay awake or that cause abnormal behaviors during sleep, such as night terrors or sleepwalking.

* Sleep can be disturbed by many factors, including irregular bed times, activities before bed, stress, diet, disorders, and drugs.
* Lack of sleep makes people feel sleepy, tired, and irritable during the day and interferes with functioning.
* Less often, a sleep disorder makes people unable to resist falling asleep during the day.
* A detailed description of the problem, sometimes with information from a sleep log, usually indicates the diagnosis, but sometimes testing in a sleep laboratory is needed.

Sleep is necessary for survival and good health, but why sleep is needed and exactly how it benefits people are not fully understood. Individual requirements for sleep vary widely: usually from 6 to 10 hours every day.

**Insomnia**

Insomnia is difficulty falling asleep or staying asleep or a disturbance in sleep quality that makes sleep seem inadequate or unrefreshing.Insomnia is usually a symptom that can have many different causes:

* An irregular sleep-wake schedule
* Poor sleep habits (for example, drinking a caffeinated beverage in the afternoon or evening or exercising late at night)
* Physical disorders (such as those that cause pain or make people urinate more often)
* Use or withdrawal of a drug
* Drinking large amounts of alcohol in the evening
* Emotional problems, anxiety, and stress

There are several types of insomnia:

* **Difficulty falling asleep (sleep-onset insomnia):** Commonly, people have difficulty falling asleep when they cannot let their minds relax and they continue to think and worry. Sometimes the body is not ready for sleep at what is considered a usual time for sleep. That is, the body's internal clock is out of sync with the earth's cycle of light and dark. This problem (a type of circadian rhythm sleep disorder) is common among adolescents and young adults.
* **Difficulty staying asleep (sleep maintenance insomnia):**Older people are more likely to have difficulty staying asleep than are younger people. People with this type of insomnia fall asleep normally but wake up several hours later and cannot fall asleep again easily. Sometimes they drift in and out of a restless, unsatisfactory sleep.
* **Early morning awakening:** This type may be a sign of depression in people of any age.

**Symptoms and Diagnosis**

Symptoms include irritability, fatigue during the day, and problems concentrating or performing under stress.

**Management**

The management of insomnia depends on its cause and severity.

* If insomnia results from another disorder, treatment of that disorder may improve sleep.
* Instruct patient to follow as consistent a daily schedule for retiring and arising as possible.This promotes regulation of the circadian rhythm, and reduces the energy required for adaptation to changes.
* Instruct to avoid heavy meals, alcohol, caffeine, or smoking before retiring. Though hunger can also keep one awake, gastric digestion and stimulation from caffeine and nicotine can disturb sleep.
* Instruct to avoid large fluid intake before bedtime.For patients may need to void during the night.
* Increase daytime physical activities as indicated
* To reduce stress and promote sleep.
* Instruct to avoid strenuous activity before bedtime.Overfatigue may cause insomnia.
* Discourage pattern of daytime naps unless deemed necessary to meet sleep requirements or if part of one's usual pattern.Napping can disrupt normal sleep patterns. However the elderly do better with frequent naps during the day to counter their shorter nighttime sleep schedule.
* Recommend an environment conducive to sleep or rest (e.g., quiet, comfortable temperature, ventilation, darkness, closed door). Suggest use of earplugs or eye shades as appropriate.
* Suggest engaging in a relaxing activity before retiring, such as warm bath, calm music, reading an enjoyable book, relaxation exercises.
* Explain the need to avoid concentrating on the next day's activities or on one's problems at bedtime. Obviously, this will interfere with inducing a restful state. Planning a designated time during the next day to address these concerns may provide permission to "let go" of the worries at bedtime.
* Suggest using hypnotics or sedatives as ordered; evaluate effectiveness.Use of hypnotic medications should be thoughtfully considered and avoided if less aggressive means are effective because of their potential for cumulative effects and generally limited period of benefit. Different drugs are prescribed depending on whether the patient has trouble falling asleep or staying asleep. Medications that suppress REM sleep should be avoided.
* If unable to fall asleep after about 30 to 45 minutes, suggest getting out of bed and engaging in a relaxing activity.The bed should not be associated with wakefulness.
* For patients who are hospitalized Organize nursing care:
* To promote minimal interruption in sleep or rest.
* Eliminate nonessential nursing activities.
* Prepare patient for necessary anticipated interruptions/disruptions.

**Hypersomnia**

Hypersomnia is a substantial increase in total sleeping time. Excessive daytime sleepiness is the inability to stay awake and alert during the day, resulting in unintended lapses into drowsiness or sleep. Hypersomnia may indicate a serious disorder, such as the following:

* A brain or nerve (neurologic) disorder, including encephalitis, meningitis, and brain tumor.
* Narcolepsy - a condition characterized by frequent, brief, and uncontrollable bouts of deep sleep, sometimes accompanied by hallucinations and an inability to move.
* Severe anxiety
* Depression, especially in people with bipolar disorder
* A disorder of the nerves that affect the muscles of legs or arms, which disrupts the refreshing quality of sleep.

Chronic hypersomnia that begins during adolescence may be a symptom of narcolepsy. Hypersomnia may also result from overuse of sleep aids and other drugs that cause drowsiness.

**Treatment**

The treatment of hypersomnia with or without Excessive daytime sleepiness depends on the underlying diagnosis.

* Recommend proper sleep habits and regular naps.
* In more severe cases, stimulant drugs, such as modafinil and sometimes amphetamine are used to help reduce the sleepiness.
* If EDS and hypersomnia are caused by another condition, such as sleep apnea syndrome, or depression, that condition is treated.

**Narcolepsy**

Narcolepsy is a sleep disorder marked by excessive sleepiness during the day or recurring, uncontrollable episodes of sleep during normal waking hours, plus sudden episodes of muscle weakness (cataplexy).

**Parasomnia**

Parasomnias are unusual behaviors that occur during sleep. Various unconscious and largely unremembered behaviors can occur during sleep in children and adults.

**Night terrors**are frightening episodes which result in sitting up, screaming, and flailing about. The individual won't be fully awake during these episodes and will have no memory of their behaviour the next morning. Treatment with certain benzodiazepines, such as clonazepamor tricyclic antidepressants, such as imipramine, may help. Adults may benefit from psychotherapy or drug treatment.

**Nightmares** are vivid, frightening dreams, followed by sudden awakening. Children and adults may have nightmares. They may wake up from the nightmare and, depending on their age, may be able to remember and describe the bad dream to you. Treatment, if necessary, focuses on the underlying problem.

**Sleepwalking (somnambulism),** most common in late childhood and adolescence, is walking in a semiconscious manner without being consciously aware of it. It occurs during the deepest stages of sleep. People do not dream while sleepwalking—in fact, brain activity during sleepwalking, although abnormal, is more like that of a wakeful state than of a sleeping one. Sleepwalkers may mumble repetitiously and can hurt themselves by walking into obstacles. Most sleepwalkers have no memory of sleepwalking.No specific treatment is available, but the sleepwalker can be gently led back to bed. Leaving a light on in the bedroom or adjacent hall sometimes reduces the tendency to sleepwalk.

**Rapid eye movement behavior disorder** involves speaking (often profanely) and sometimes making violent movements during REM sleep, usually in response to a dream. Unlike night terrors, people with rapid eye movement behavior disorder are sometimes aware of having dreamed vividly during these episodes when they wake up the next day.

**BEDSORE OR PRESSURE ULCERS OR DECUBITUS ULCERS**

Pressure ulcers are localized areas of necrotic soft tissuethat occur when pressure applied to the skin over time isgreater than normal capillary closure pressure, which isabout 32 mm Hg.Lesions caused by many factors such as: unrelieved pressure; friction; humidity; shearing forces; temperature; age; continence and medication; to any part of the body, especially portions over bony or cartilaginous areas such as sacrum, elbows, knees, and ankles.

**Stage I**

* Area of erythema
* Erythema does not blanch with pressure
* Skin temperature elevated
* Tissue swollen and congested
* Patient complains of discomfort
* Erythema progresses to dusky blue-gray

**Stage II**

* Skin breaks
* Abrasion, blister, or shallow crater
* Edema persists
* Ulcer drains
* Infection may develop
* Partial-thickness wound

**Stage III**

* Ulcer extends into subcutaneous tissue
* Necrosis and drainage continue
* Infection develops
* Full-thickness wound

**Stage IV**

* Ulcer extends to underlying muscle and bone
* Deep pockets of infection develop
* Necrosis and drainage continue
* Full-thickness wound

**Risk factors**

* Extremes of age
* Immobility
* Poor nutrition
* Mechanical forces (pressure, shear, friction)
* Pronounced bony prominences
* Poor circulation
* Altered sensation
* Incontinence
* Edema
* Environmental moisture
* History of radiation
* Hyperthermia or hypothermia
* Acquired immunodeficiency syndrome (AIDS)

**Interventions to Prevent Pressure Ulcer Formation**

* **Relieving pressure**- Frequent changes of position are needed to relieve and redistribute the pressure on the patient’s skin and to prevent prolonged reduced blood flow to the skin and subcutaneous tissues.Encourage implementation and posting of a turning schedule, restricting time in one position to 2 hours or less and customizing the schedule to patient's routine and caregiver's needs.
* **Positioning patient** - patient should be positioned laterally, prone, and dorsally in sequence unless a position is not tolerated or is contraindicated. There should be small shifts of body weight, such as repositioning of an ankle, elbow, or shoulder. The skin is inspected at each position change and assessed for temperature elevation. If redness or heat is noted or if the patient complains of discomfort, pressure on the area must be relieved. Another way to relieve pressure over bony prominences is through the correct positioning of pillows. The body is supported by pillows to allow for space between bony prominences and the mattress. A pillow or commercial heel protector may be used to support the heels off the bed when the patient is supine. Placing pillows superior and inferior to the sacrum relieves sacral pressure.
* **Limit chair sitting to 2 hours at any one time**. Pressure over sacrum may exceed 100 mm Hg pressure during sitting. The pressure necessary to close skin capillaries is around 32 mm Hg; any pressure greater than 32 mm Hg results in skin ischemia.
* **Using pressure-relieving devices** - For low-risk patients: good-quality (dense, at least 5 inches thick) foam mattress overlay. For moderate risk patients: water mattress, static or dynamic air mattress. For high-risk patients or those with existing stage III or IV pressure sores (or with stage II pressure sores and multiple risk factors): low-air-loss beds or air-fluidized therapy.Low-air-loss beds are constructed to allow elevated head of bed (HOB) and patient transfer. These should be used when pulmonary concerns necessitate elevating HOB or when getting patient up is feasible. "Air-fluidized" therapy supports patient's weight at well below capillary closing pressure but restricts getting patient out of bed easily.
* **ImprovingMobility** - Encourage ambulation if patient is able.
* **Sensory perception** - Strategies to improve cognition and sensory perception may include stimulating the patient to increase awareness of self in the environment, encouraging the patient to participate in self-care, or supporting the patient’s efforts toward active compensation for loss of sensation
* **Tissue perfusion** - Exercise and repositioning improve tissue perfusion. Massage of erythematous areas is avoided because damage to the capillaries and deep tissue may occur
* **Nutritional status** - A high-protein diet with protein supplements may be helpful. Iron preparations may be necessary to raise the hemoglobin concentration so that tissue oxygen levels can be maintained within acceptable limits. Ascorbic acid (vitamin C) is necessary for tissue healing. Other nutrients associated with healthy skin include vitamin A, B vitamins, zinc, and sulfur. With balanced nutrition and hydration, the skin is able to remain healthy, and damaged tissues can be repaired.
* **Reducing friction, shear** - Shear occurs when the patient is pulled. Encourage use of lift sheets to move patient in bed. Raising the head of the bed by even a few centimeters increases the shearing force over the sacral area; therefore, the semi reclining position is avoided in patients at risk. Discourage patient or caregiver from elevating Head OfBed repeatedly.Proper positioning with adequate support is also important when a patient is sitting in a chair.
* **Minimizing irritating moisture -**Clean, dry, and moisturize skin, especially over bony prominences, twice daily or as indicated by incontinence or sweating. Topical barrier ointments (e.g. petroleum jelly) may be helpful in protecting the skin of patients who are incontinent.

**Care and Treatment of Pressure Ulcers**

**Deep tissue injury-** Immediate pressure relief to affected area

**Stage I:**

* Remove pressure
* Prevent moisture, shear, friction
* Promote proper nutrition, hydration

**Stage II:**

* Clean with sterile saline
* Semipermeable occlusive dressings, hydrocolloid dressings, or wet saline dressings provide moist healing environment

**Stage III and Stage IV:**

* Debridement to remove infected, necrotic tissues
* Wet-to-damp dressing
* Enzyme preparations
* Surgical debridement
* Topical treatment to promote granulation of tissue
* Surgical interventions may be required
* Bone resection
* Skin grafting

**CARE OF THE ELDERLY**

* Geriatrics- study of old age including physiology, pathology, dx., & treatment of diseases of old adults
* Gerontology- broader, the study of the aging process including biological, psychological, & sociological.
* Gerontological/geriatric nursing: field of nursing that relates to assessment, nursing diagnosis, planning, implementation, evaluation of older adults in all environments, including acute, intermediate, skilled care as well as within community
* Society indicates the age 65 years as beginning of old age.
* young-old- 65-74
* middle-old- 75-84
* old-old- 85 & up

**Leading Causes of Death in Older Adults**

1. Heart diseases
2. Malignant neoplasms
3. Cerebrovascular diseases
4. Chronic obstructive pulmonary diseases, allied conditions
5. Alzheimer’s disease
6. Diabetes mellitus
7. Pneumonia, influenza
8. Nephritis, nephrotic syndrome/nephrosis, acute & chronic kidney failure
9. Accidents (unintentional injuries)
10. Septicemia

**Normal aging changes**

* Integumentary
* skin thinner
* less subcutaneous tissue
* wrinkles
* gray hair
* skin drier & more susceptible to irritation
* change in pigmentation
* nails- thick & brittle

**Nervous**

* Reduced speed in nerve conduction - slowed reactions
* Increased confusion with physical illness, loss of environmental cues
* Reduced cerebral circulation (becomes faint, loses balance)
* altered sleep cycle
* short term memory loss
* impaired senses

**Special senses**

* Vision: diminished ability to focus on close objects; inability to tolerate glare; difficulty adjusting to changes of light intensity; decreased ability to distinguish colors. Presbyopia: decrease in visual accommodation that occurs with advancing age.
* Hearing: decreased ability to hear high-frequency sounds; tympanic membrane thinning, loss of resiliency. Presbycusis: decreased ability to hear high-pitched tones that naturally begins in midlife as result of irreversible inner ear changes
* Taste and smell: decreased ability to taste, smell

**Respiratory**

* decreased gas exchange & cough efficiency
* decreased activity tolerance
* more vulnerable to infection

**Reproductive**

* Female: Vaginal narrowing, decreased elasticity; decreased vaginal secretions; menopause
* Male: Less firm testes,penis & testes decrease in size; decreased sperm production
* Male and female: slower sexual response;decreased hormone production

**Musculoskeletal**

* Declining muscle mass and endurance with age, although deconditioning may be an associated factor.
* Decreased bone density, less so in men than in women.
* Decreased thickness and resiliency of cartilage, with a resulting increase in the stiffness of joints.
* Bone resorption exceeds bone formation, resulting in a decline in bone density.
* Injuries to the cartilage accumulate with age.

**Cardiovascular**

* Heart disease leading cause of death
* Decreased cardiac output
* Diminished ability to respond to stress
* Heart rate, stroke volume do not increase with maximum demand
* Slower heart recovery rate
* Increased blood pressure
* heart valves-thicker & stiffer
* arteries lose elasticity & accumulate deposits

**Gastrointestinal**

* Decreased sense of thirst, smell, taste
* Decreased salivation
* Difficulty swallowing food
* Delayed esophageal, gastric emptying
* Reduced gastrointestinal motility
* decreased teeth and ill-fitting dentures
* constipation due to:
* lack of bulk
* prolonged use of laxatives
* ignore urge to defecate
* drug side effects
* emotional problems
* inactivity
* insufficient fluid

**Genitourinary**

* decreased nephron activity
* lose of muscle tone results in more frequent voiding
* Male: Benign prostatic hyperplasia; urine retention, frequency, urgency, & incontinence common
* Female: Relaxed perineal muscles, detrusor instability (urge incontinence), urethral dysfunction (stress urinary incontinence)

**Endocrine**

* change in hormones
* decreased basal metabolic rate (BMR)
* Decrased utilization of insulin
* Cessatiomn of progesterone
* Decreased then plateau of estrogen
* Gradual decline in testosterone
* Reduced BMR

**Immunity**

* more susceptible to infection & disease
* Reduced humoral and cellular immunocompetence
* Slowed, less efficient, response to antigens increases susceptibility to infections

**Altered response to medication**

Adults over age 65 consume 30% to 40% of all prescription drugs and an even higher proportion of the over-the-counter drugs consumed. Age-related changes predispose older adults to problems with medication adverse effects.

Pathophysiology and Etiology

* Drug absorption is affected by such age-related changes as:
  + Decreased gastric acid.
  + Decreased GI motility.
  + Decreased gastric blood flow.
  + Changes in GI villi.
  + Decreased blood flow and body temperature in rectum.
* Drug distribution is affected by:
  + Decreased body size.
  + Decreased water content in the body.
  + Increased total body fat.
  + Drugs distributed in water have a higher concentration in elderly patients (eg, gentamicin [Garamycin]).
  + Drugs distributed in fat have a wider distribution and less intense but prolonged effect (eg, phenobarbital).
* Drug metabolism in the older adult:
  + Is altered by a decrease in liver size, blood flow, enzyme activity, and protein synthesis.
  + Requires more time than in younger adults. Therefore, there is increased drug activity time in drugs that are metabolized in the liver (eg, propranolol, theophylline).
* Excretion of drugs is altered in older adults due to the following renal changes:
  + Decreased renal tubular function and blood flow.
  + This causes a decrease in renal filtration and an increase in blood levels of drugs that are excreted through the kidneys (eg, cimetidine).

**Mental Health Problems in the Older Adult**

1. Depression: most common affective disorder of old age; results from changes in reuptake of neurochemical serotonin in response to chronic illness, emotional stresses related to physical, social changes associated with aging process
2. Delirium: acute, confused state that begins with disorientation. If not immediately evaluated and treated, can progress to changes in level of consciousness, irreversible brain damage, sometimes death.
3. Aggressive behavior

* abnormal anger, rage, or hostility
* result of anxiety, stress, guilt, insecurity, forced dependence

1. Dementia - Broad term for syndrome characterized by general decline in higher brain functioning (reasoning) with pattern of eventual decline in ability to perform even basic activities of daily living (toileting, eating)
   * Alzheimer’s disease
   * Vascular Dementia
2. other- regression, paranoid behavior