

# Supporting the health and well being of the person with IDD<sup>©</sup>

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Ramadan

## What you should know and do

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Nebraska Department of Health & Human Services,  
Division of Developmental Disabilities

# Course objectives & related competencies

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1. To identify paths to medical response when faced with a medical situation in people with IDD
  - Knowledge
  - skill
  - duty
2. To distinguish severity-based situation criteria for medical response in people with IDD
  - Knowledge
  - skill
3. To review common medical problems afflicting people with IDD
  - Knowledge
4. To recite general approaches to medical problems facing support personnel when serving people with IDD
  - Knowledge
  - Skill

# Course modules

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- Module 1- Overview of IDD & general principles of health support
- Module 2- Medical and mental illnesses
- Modules 3 to 6- Medical conditions requiring special considerations: Epilepsy; falls; fainting; GI disorders; head injury; medication administration; pain; respiratory illnesses
- Module 7- Urgent and emergency medical responses

# Overview of IDD & general principles of health support

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## Objectives of module 1:

1. To review the epidemiology of IDD
2. To define ethics and its components
3. To recite principles of inter-disciplinary and person-centered support
4. To identify general concepts of health supports needs for people with IDD

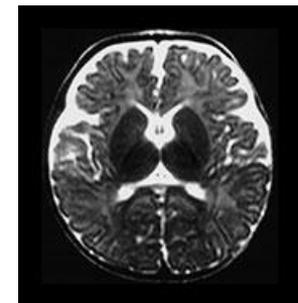
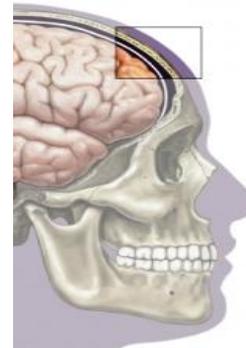
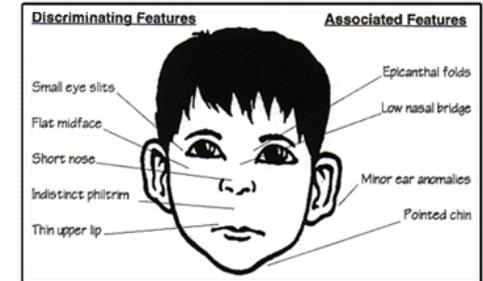
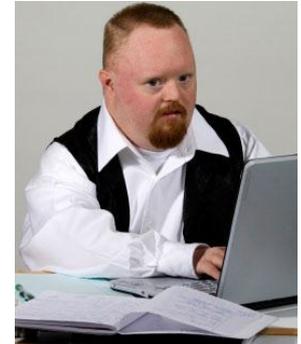
# IDD criteria

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- Likely to continue indefinitely (chronic)
  - Variable severity
  - Onset before 22y
  - Generally static (no expected progression overtime)
  - In 1-3% of the US population
- Substantial functional limitations in 3+:
    1. Self-care
    2. Receptive/expressive language
    3. Learning
    4. Mobility
    5. Self-direction
    6. Capacity for independent living
    7. Economic self-sufficiency

# Causes of IDD

- No known cause in 1/3
- Genetic disorders (Down syndrome)
- Pregnancy problems (fetal-alcohol syndrome, intrauterine infections)
- Prematurity, low birth weight
- Perinatal problems (low oxygen at birth, birth injury)
- Infantile/childhood problems (infections, trauma)



# Mild ID (IQ= 50-70)

## 85% of people with ID

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- Participate in and contribute to families and communities
- Have important life relationships
- Work in open or supported employment
- May live and travel independently
- Need support and help to handle money
- Often need help to plan and organize their daily life
- May marry and raise children with support
- May learn to read and write
- Have a life expectancy similar to people without ID (~74 y)

# Moderate ID (IQ= 35-49)

## 10% of people with ID

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- Have important life relationships
- Enjoy range of activities with families, friends, acquaintances
- Understand daily schedules or future events if provided with pictorial visual prompts such as daily timetables
- Make choices about basic needs
- May learn to recognize some words in context
- May be independent in personal care
- Need lifelong support in planning, organization
- Have a life expectancy in the late 60s (~68 y)

# Severe/Profound ID (IQ<35)

## 3-4% severe; 1-2% profound

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- Recognize familiar people and may have strong relationships with key people in their lives
- Have little or no speech and rely on gestures, facial expression and body language to communicate
- Require lifelong help with personal care tasks, communication, and access to/participation in community services and activities
- Have a life expectancy in the late 50s (~58 y)

# Principles of health support

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If you can't afford a doctor, go to an airport - you'll get a free x-ray and a breast exam, and; if you mention Al Qaeda, you'll get a free colonoscopy.

# Pillars of support

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Respect



Dignity



Independence



Safety

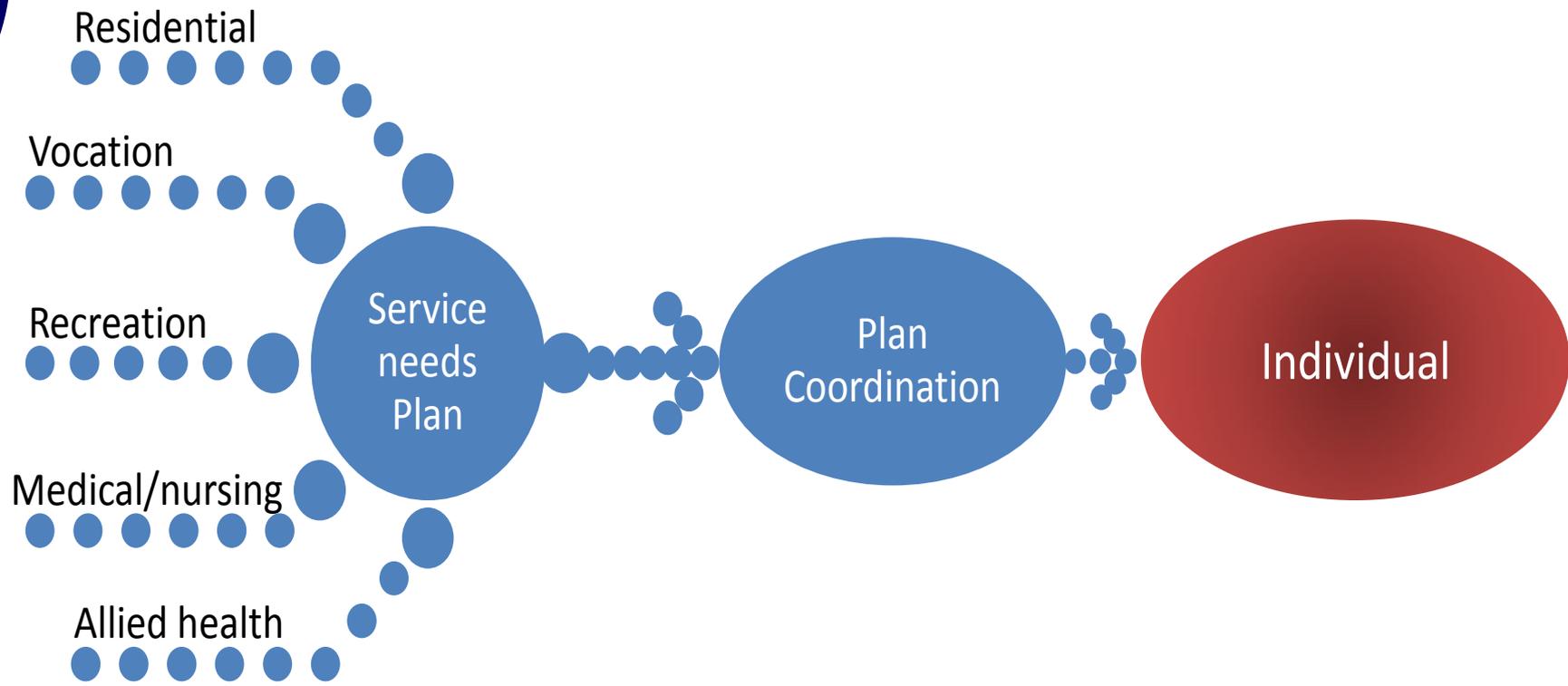


Health



# Health needs support

## Interdisciplinary, person-centered



# Ethics

## Definitions

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- Standards that define what is right (rightness) and what is wrong (wrongness)
- Involves the interaction between at least two people
- Application of what is considered right or wrong in deciding what to do in the context of human rights, obligations, benefits to a particular society, and fairness.
- Not synonymous with morals or morality, which define a personal character

# Medical ethics

## Principles

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1. Autonomy (independence, choice)
2. Beneficence (do only good, in the person's best interest)
3. Non-maleficence (do not harm)
4. Justice (do what is fair)
5. Relationships (build trust)

# Advance medical planning

## Definitions

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- Advance Medical Directive or Planning (AMP): Plan for medical care/support in a particular situation prior to its occurrence (e.g., cardiac arrest).
- Do Not Attempt Resuscitation (DNAR) or Do Not Resuscitate (DNR): AMP to forego one or more resuscitative procedure in case of medical futility.
- Medical Futility (MF): Condition where likelihood of acceptable outcome from heroic or resuscitative procedures is very low, and which is ascertained by two licensed medical professionals.

# DNR or DNAR

## What to do and not to do

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### Do

- Suction airway
- Provide oxygen through nose or mouth
- Position for comfort
- Control bleeding
- Provide pain medication
- Provide emotional support

### Do not

- Administer chest compression
- Insert artificial airway
- Administer resuscitative drugs
- Initiate cardiac monitoring
- Defibrillate
- Provide artificial ventilation
- Insert intravenous line
- Transfer to hospital

# Meeting the health needs

## What to do

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- Self-health literacy (learn about your own health and wellness)
- Practice what you learn
- Preach (encourage) what you practice
- Encourage health literacy among people with IDD
- Stress and encourage health screening and early illness detection strategies
- Stress and encourage health safety methods (e.g., proper hygiene)

# Meeting the health needs

## More on what to do

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- Learn and promote a safe environment (e.g., non-slippery surfaces, proper lifting techniques and tools, etc.), regardless of location
- Learn and teach about medication effects AND side-effects
  - ◆ Be diligent about monitoring and recording
- Be the ambassador when visiting health professionals with the person with IDD
  - ◆ Be prepared with health information needed

# Care (health support) plan

## What it is!

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- Plan of support that is based on the individual's health needs
- Synonymous with health support plan, health care plan, nursing care plan, integrated care plan, etc.
- Often constructed based on nursing care plan models
- Useful in diverse residential settings where people have complex medical problems
- Designed for implementation by health support, similar to any other program within the individual support plan

# Care (health support) plan

## What it is not!

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- A nursing assessment
- To be developed only when people have 24-h nursing support
- To be used only by nurses

# Care (health support) plan Components

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Identifies the ‘what, how, by whom, and by when’

- Listing of medical support needs in lay terms (the “what”)
- Short-, long-term goals and timelines for achievement of desired goals (the by “when”)
- Interventions or implementation strategies (the “how”)
- Responsible or accountable people for implementing plans (the “by whom”)



# A few words about allied health

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- Refers to health professions such as physical, occupational, medical nutritional, speech (speech-language), and respiratory therapies
- Depending on medical condition(s), one or more are integral components of the overall health support and service
- Can include direct and indirect therapy

# Direct vs. indirect therapy

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## Direct therapy

- Services provided while in direct contact with the individual
  - ◆ Can be one-on-one or in a group setting
  - ◆ Generally directed towards acquiring new, or enhancing existing skills

## Indirect therapy

- Coaching
- Training of support personnel by therapist to carry out therapeutic interventions
  - ◆ Suitable for maintaining existing skills and applying them in different settings

# Formal vs. informal

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## Formal

- Objectives and measures clearly identified
- All direct therapies
- Indirect therapies when interventions are linked to broader goals that are identified in IPP/ISP

## Informal

- Day-to-day interventions or implementation strategies that do not need to be measured or be specific-goal oriented (e.g., passive range of motion)



Oh cool, they'll pay a fortune for this ... heyyyyy, hang on ... who says I have anti-social personality disorder!

# Medical & mental illnesses

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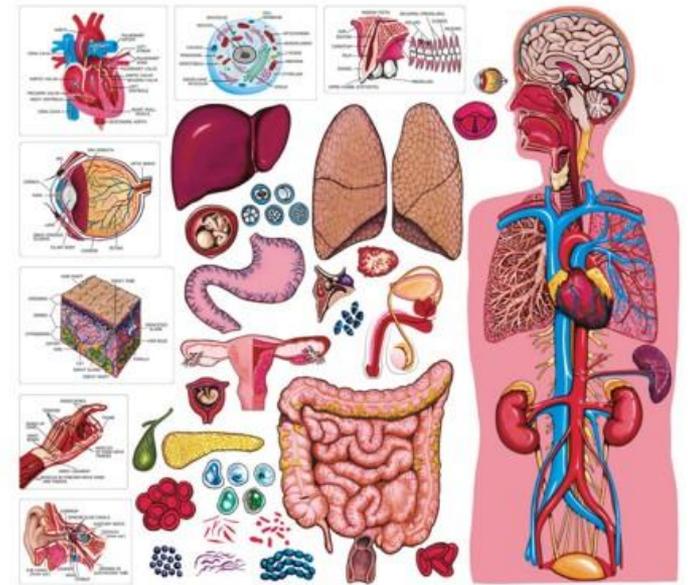
## Objectives of module 2:

1. To define situational criteria for emergency, urgent, and routine medical responses
2. To describe medical, mental and neurological conditions that commonly afflict people with IDD
3. To review dental, hearing, and vision needs of people with IDD

# IDD and medical illnesses

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- Up to 20% have associated medical problems
- 10-40% have mental illness (-es)
  - ◆ More common in older people
  - ◆ More common in people with epilepsy
- Epilepsy occurs in 15-40%





# Approach to a medical situation

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*"To respond to a situation, we need to understand what it is"*  
Personal quote

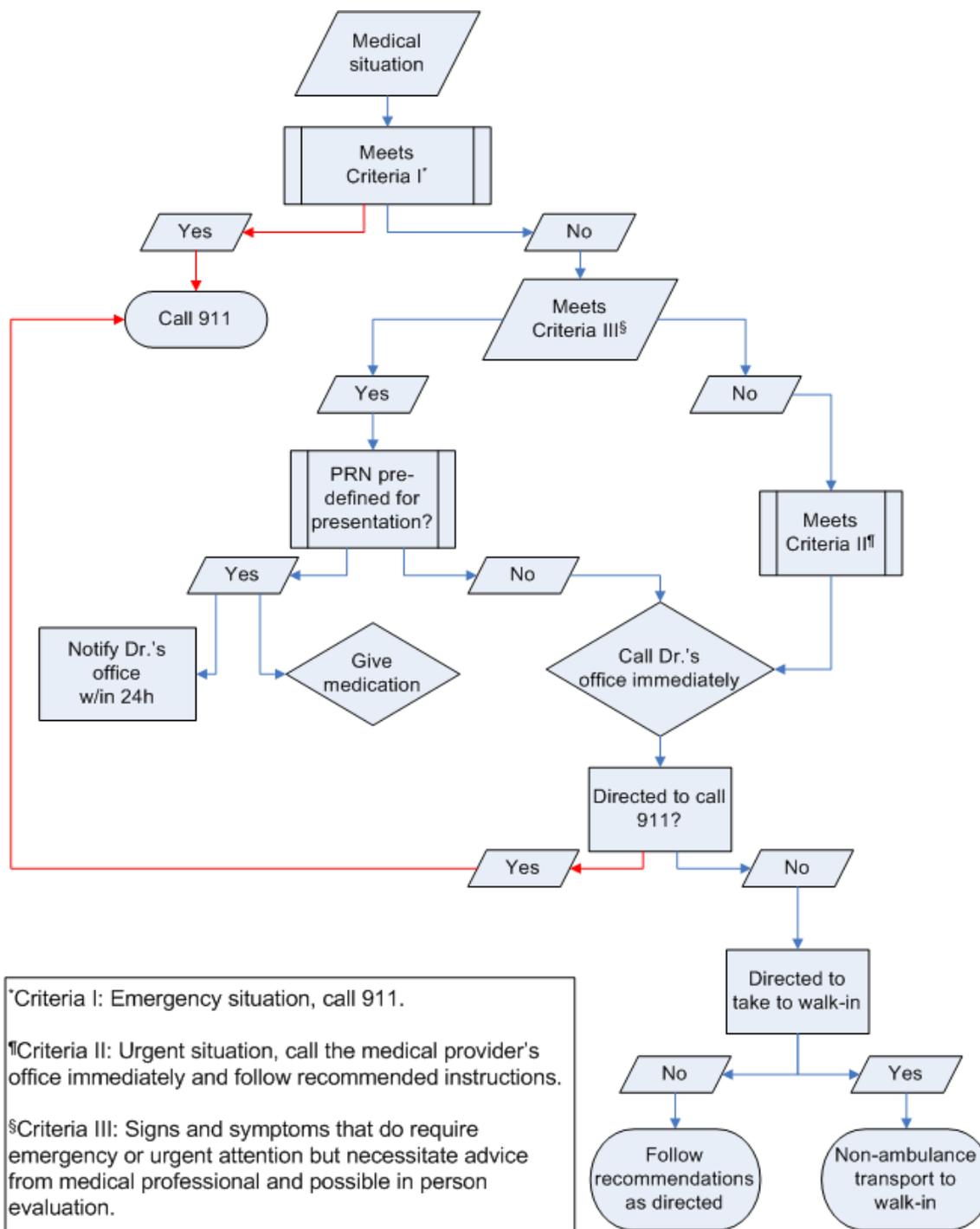
# Medical response criteria

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- I. Emergency= call 911
- II. Urgent= call professional's office immediately and follow instructions
- III. Signs and symptoms that do not require emergency or urgent attention



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# Medical and mental conditions

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- Physical inactivity & obesity
- Pain
- Medications
- Thyroid disease
- GI disorders
- Respiratory illnesses
- Infections
- Musculoskeletal
  - ◆ Osteoporosis
- Neurological
  - ◆ Dementia
  - ◆ Epilepsy
  - ◆ Head injury
- Mental illnesses
- Dental illnesses
- Vision & hearing

# Physical inactivity & obesity

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# Physical inactivity & obesity

## Why and so what?

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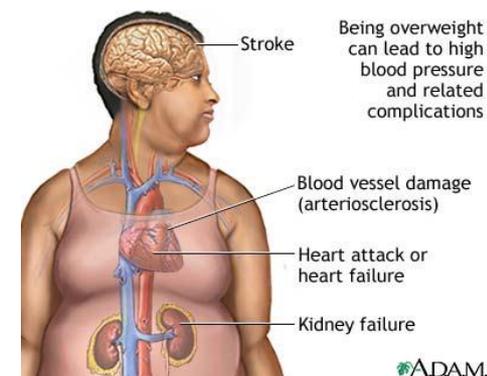
- Caused by:
  - ◆ Sedentary life style
  - ◆ Physical problems such as non-ambulation
  - ◆ Acquired injury such as spinal cord or brain trauma
  - ◆ Medical conditions such as Prader Willi
- Predispose to:
  - ◆ Heart problems
  - ◆ Constipation
  - ◆ Diabetes (high blood sugar)
  - ◆ Osteoporosis (bone thinning)
  - ◆ Early death

# Obesity

## What should you know?

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- Normal ranges for body mass index (BMI)\*:
  - ◆ <18.5= underweight
  - ◆ 18.5-24.9= normal
  - ◆ 25-29.9= overweight
  - ◆ 30+= obese
- Obesity more common in women, people with Down syndrome and people with mild IDD
- Underweight more common in people with severe/profound IDD
- Among people with IDD:
  - ◆ 1/6 are underweight
  - ◆ ~30% are overweight
  - ◆ Up to 35% are obese



\*BMI=  $\frac{\text{wt (lbs)}}{(\text{ht (in)})^2} \times 703$ ; Wt= weight; Ht= height; lbs= pounds; in= inches

# Physical inactivity & obesity

## What should you do?

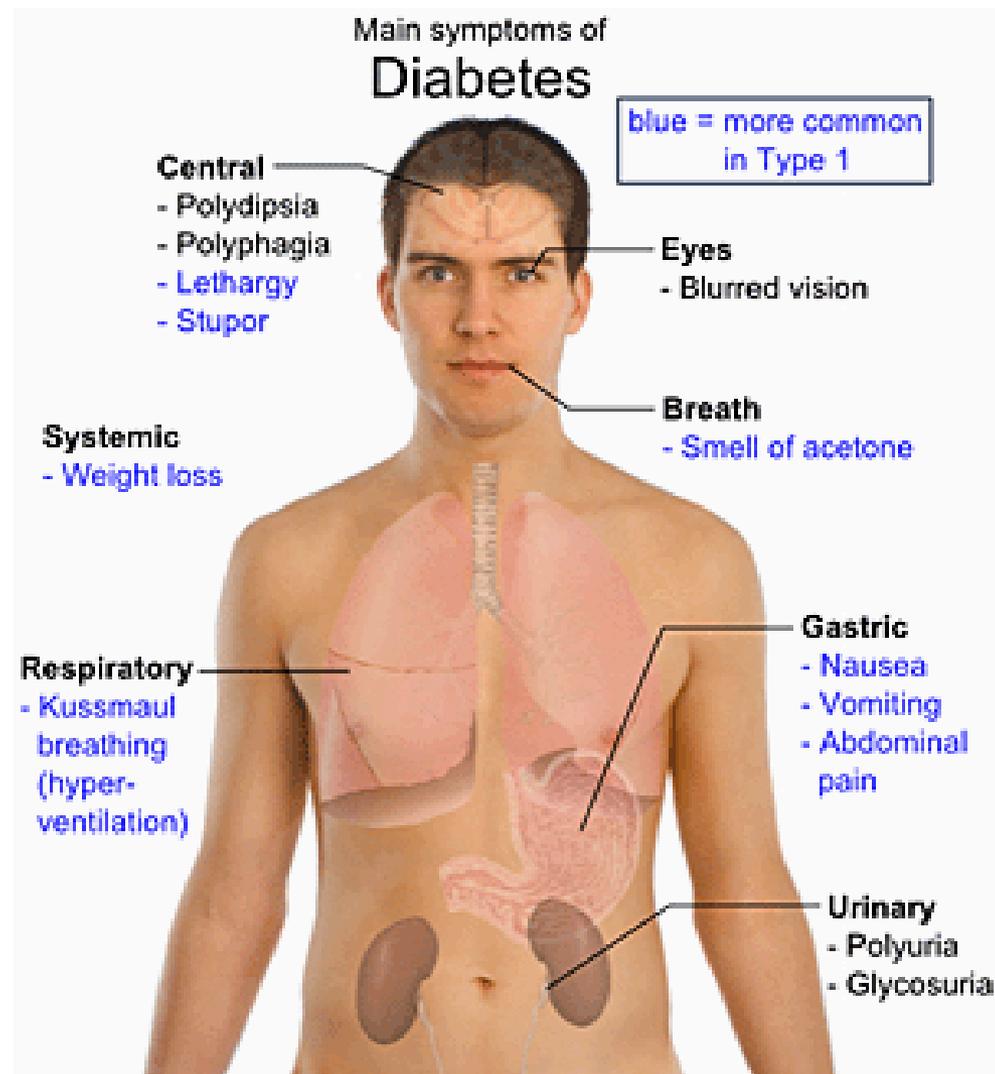
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- Encourage regular physical activity into daily routine<sup>1</sup>
- Counsel at least yearly on physical fitness
- Follow advice of nutritionist
- Monitor weight and height regularly



# Sugar diabetes

## Diabetes Mellitus (DM)



# Sugar (glucose) diabetes

## What should you know?

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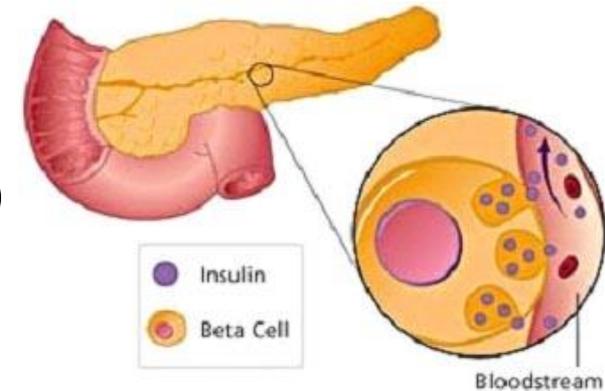
- Common chronic medical condition that leads to increased blood sugar
- Complications include heart, vascular (blood vessel) and/or neurologic (nerve) disease, poor circulation, blindness, kidney failure, poor healing, stroke, ...
  - ◆ Complications prevented with careful blood sugar management, and control of high blood pressure and high cholesterol levels, when present
- Not curable but can be treated successfully

# Diabetes

## More on what you should know

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- Two types
  - ◆ Type 1 (more in kids) when the body's pancreas does not produce enough insulin (the hormone that processes glucose)
  - ◆ Type 2 (more in adults) because of insulin resistance—the body produces insulin but is unable to process glucose appropriately, and insulin deficiency
- Can be without symptoms or can cause increased thirst, frequent illnesses, poor circulation, wounds that don't heal, blurred vision



# Diabetes

## What should you do?

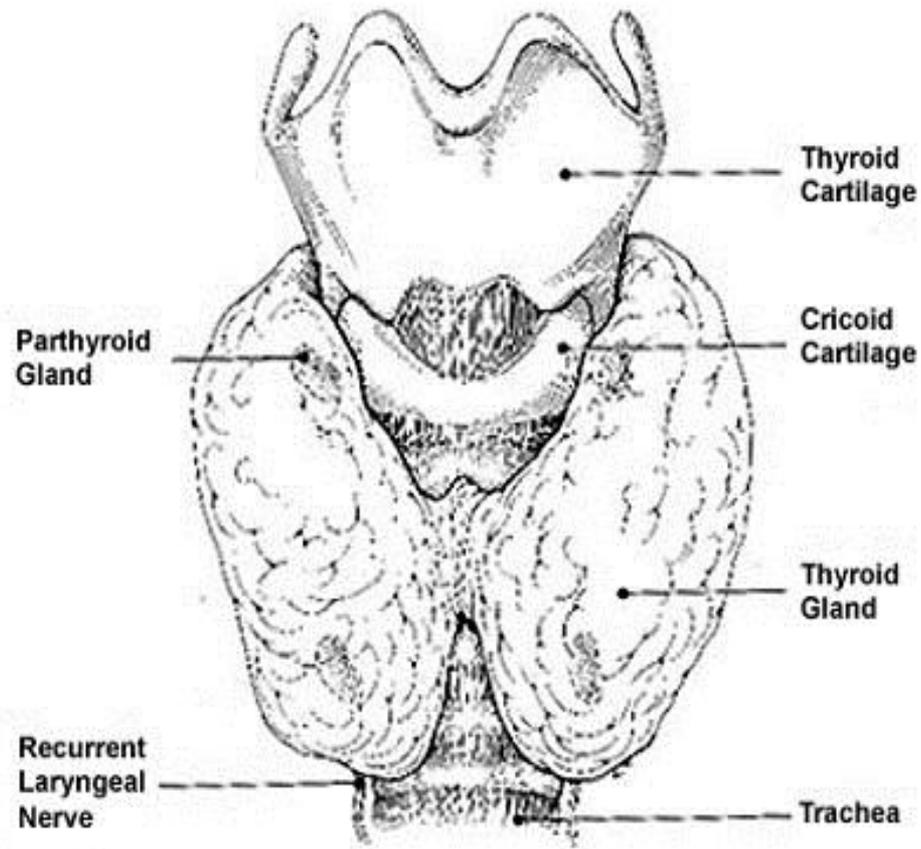
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- Encourage maintaining healthy weight
  - ◆ Avoid processed foods
  - ◆ Low-fat diet rich in vegetables and whole grains
- Encourage plenty of exercise
- Follow instructions on prescribed treatments
- Learn about symptoms of low sugar (confusion, dizziness, sweating, passing out)
- Ask the professional how often glucose control should be checked using what is called HbA1C



# Thyroid disease

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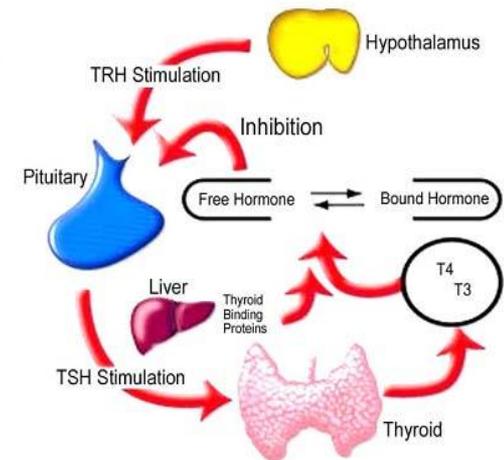


# Thyroid gland

## What should you know?

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- Gland in front of the throat that releases thyroid hormones called  $T_3$  and  $T_4$ 
  - ◆  $T_4 = 4.5-11$  mcg/dL;  $T_3 = 60-180$  ng/dL
  - ◆  $T_3$  comes mostly from  $T_4$ . This is the reason we mostly measure  $T_4$
- Called 'major' metabolic hormones because they affect every tissue in our body
- Under the influence of a brain area called the hypothalamic-pituitary axis (HPA)

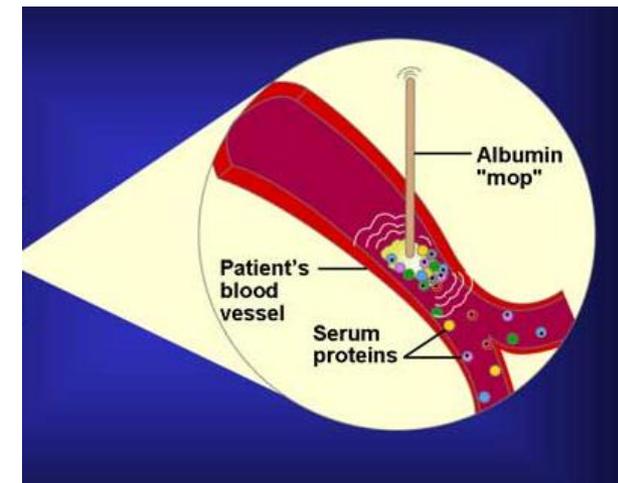


# Thyroid hormones

## What should you know?

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- Production dependent on availability of iodine
- Formation of  $T_3$  dependent on liver function, and some from kidney and other tissues
  - ◆ Reason we look at liver and kidney function tests when suspecting problems with thyroid hormones
- Transported in blood to tissues by proteins, called carriers
  - ◆ Reason we measure free hormone levels when suspecting blood protein issues

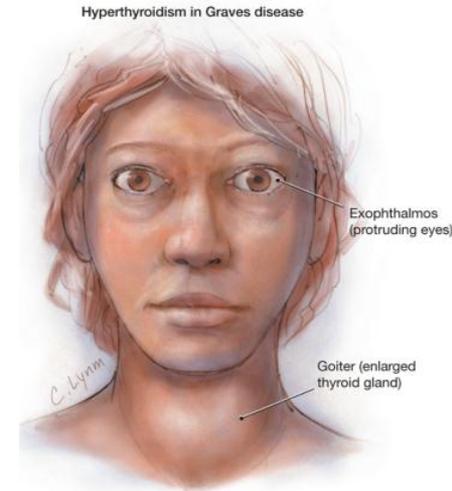


# Thyroid disease

## What should you know?

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- Thyroid disease more common
  - ◆ In women
  - ◆ With increasing age
  - ◆ In people with IDD, particularly Down
- Hypothyroidism (low) in up to 5%
  - ◆ Causes weight gain, cold intolerance, increased risk for heart disease and attacks
  - ◆ Caused by genetic factors, inflammation, drugs such as lithium and amiodarone
- Hyperthyroidism (high) in ~1%
  - ◆ Causes weight loss, heat intolerance, nervousness, tremors
  - ◆ Caused by tumors, inflammation



# Infections

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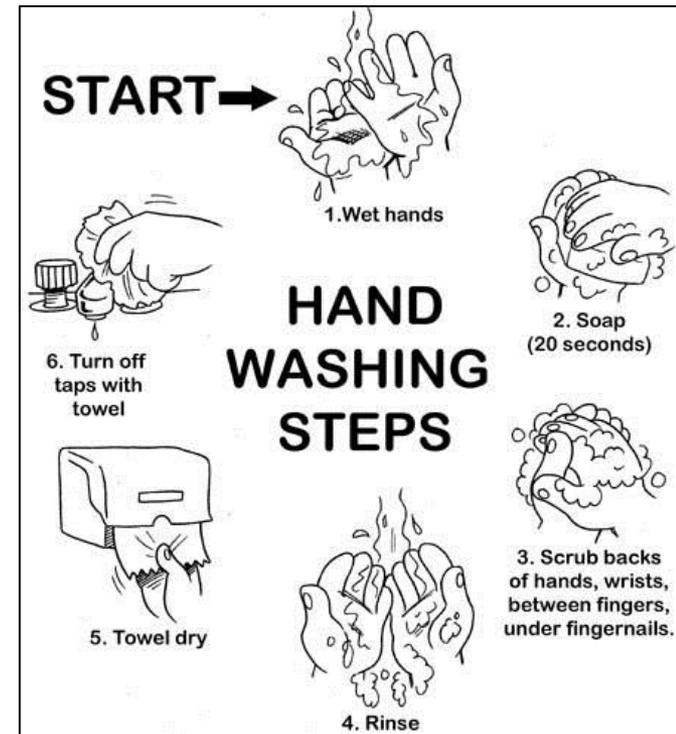
"Relax. I just had a cappuccino."

# Infection prevention

## What does CDC tell us?

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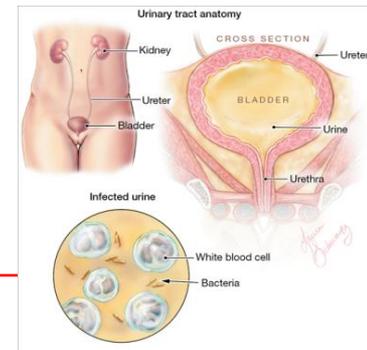
- Clean hands, single most important factor in
  - ◆ preventing spread of infectious agents
  - ◆ preventing antibiotic resistance
  - ◆ reducing incidence of infections
- More widespread use of hand hygiene products that improve adherence to recommended hand hygiene practices promote safety and prevent infections



# Urinary tract infection

## What should you know?

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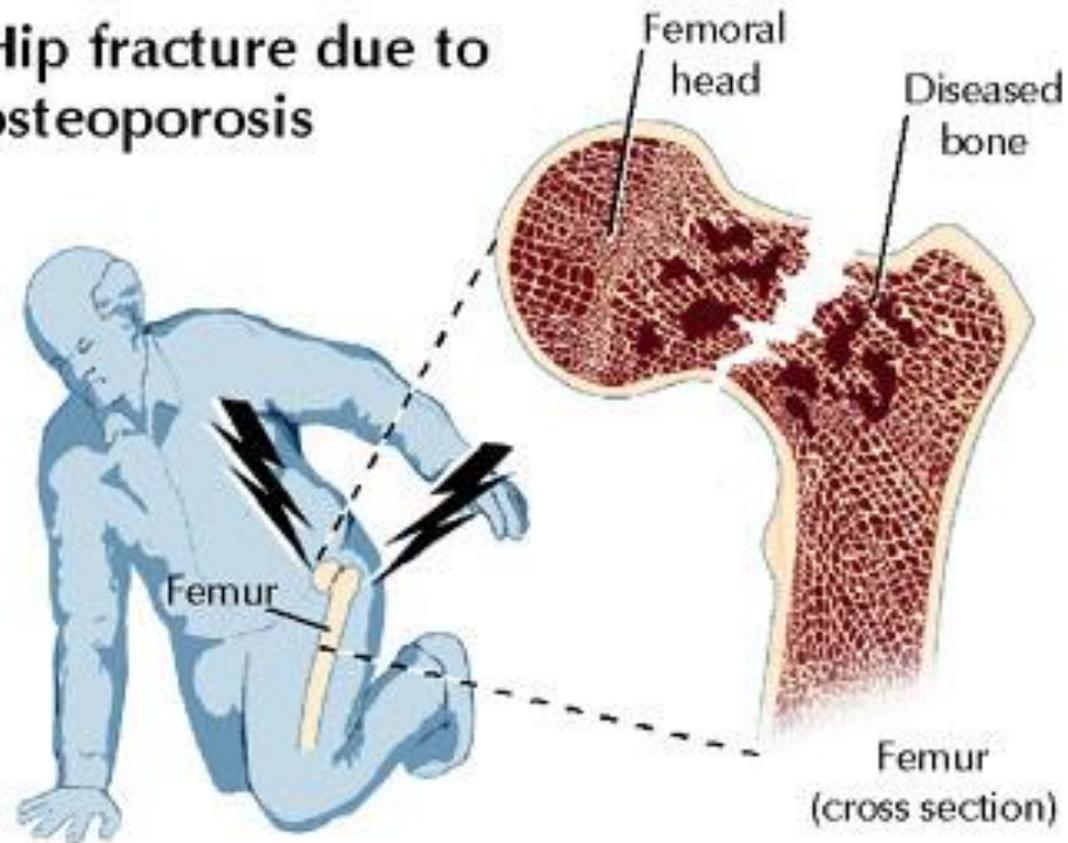


- Symptoms include:
  - ◆ Burning pain on urination (dysuria)
  - ◆ Urinary frequency or urgency
  - ◆ Urinary incontinence (leakage)
  - ◆ Blood in the urine
  - ◆ Foul-smelling urine
  - ◆ Fever may be present in cases of more serious infection
- More common
  - ◆ In women
  - ◆ People with bladder problems
  - ◆ People with kidney stones
  - ◆ People with prostate enlargement
  - ◆ People with urinary catheters

# Osteoporosis

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Hip fracture due to osteoporosis



# Osteoporosis

## What should you know?

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- Risk factors
  - ◆ Female gender\*
  - ◆ Advancing age
  - ◆ Low body weight
  - ◆ White race
  - ◆ Sedentary life style
  - ◆ Immobility
  - ◆ Too much alcohol use
- Increases risk for fractures
- Linked to
  - ◆ Diabetes
  - ◆ Too much vitamin A
  - ◆ Low vitamin D
  - ◆ Certain medications (heparin, steroids, certain seizure meds)
  - ◆ Liver disease
  - ◆ Hyperthyroidism
- People with IDD at higher risk because of risk factors

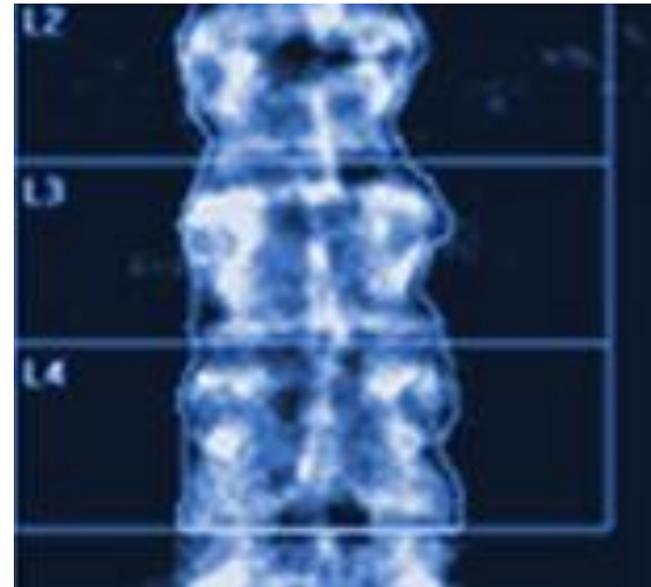
\*Almost 4 million US women have it

# Osteoporosis

## What should you do?

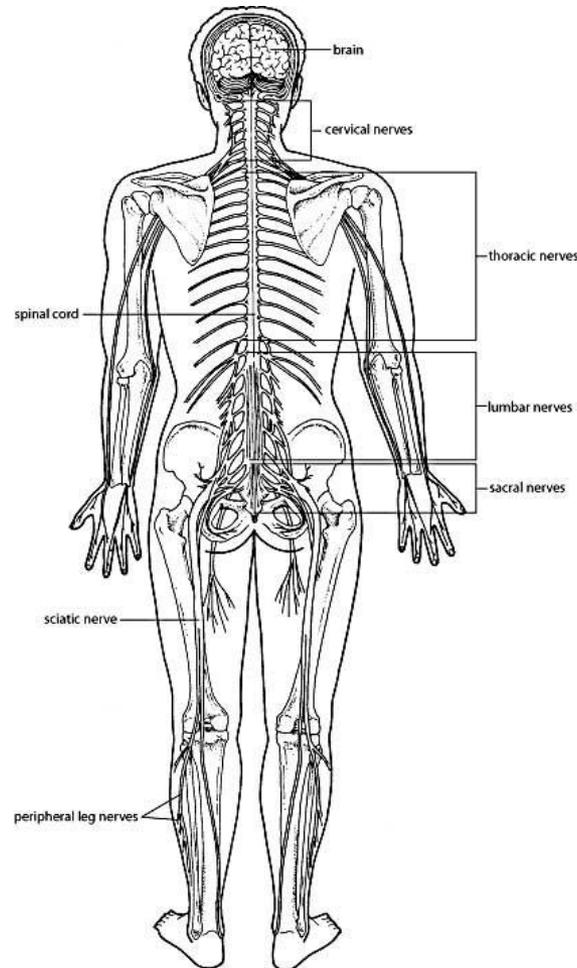
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- Encourage use of calcium and vitamin D
- Encourage exercise
- Ask the medical professional about when to do screening tests (example is what is called DEXA scan) and re-testing when on treatment
- Ask the medical professional if prescription medication (example is 'Fosamax') should be used



# Neurological conditions

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# Dementia

## Symptoms you should know

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- Learning and retaining information
  - ◆ Repetitiveness, forgetfulness
- Handling complex tasks
  - ◆ Meal preparation, finances
- Reasoning
  - ◆ Following rules of social conduct
- Spatial orientation
  - ◆ Finding one's way around familiar settings
- Language
  - ◆ Word finding
- Behavior
  - ◆ Irritability, suspiciousness, agitation

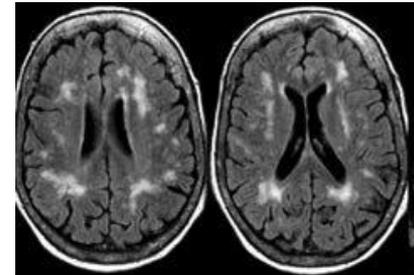
# Dementia Stages

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<b>Early</b>	<b>Mid</b>	<b>Late</b>
<ul style="list-style-type: none"><li>• Memory loss for recent events</li><li>• Changes in behavior</li><li>• Changes in personality</li><li>• Changes in work/skills performance</li></ul>	<ul style="list-style-type: none"><li>• Significant decline in skills</li><li>• Difficulty identifying objects, understanding directions</li><li>• Confusion and disorientation</li><li>• Changes in personality</li></ul>	<ul style="list-style-type: none"><li>• Loss of basic skills (eating, drinking)</li><li>• Loss of weight (up to 20-30%)</li><li>• Inability to walk</li><li>• Difficulty recognizing others, environment</li></ul>

# Dementia Causes

- Similar to those in the general population, likely to occur at a similar age; earlier and faster in people with Down syndrome
- Irreversible (treat symptoms but not disease): Alzheimer's disease, dementia secondary to multiple strokes (vascular dementia)
- Reversible conditions (treatable once diagnosed): accumulation of blood on the surface of the brain from head injury (subdural hematoma), increased size of brain fluid cavities (ventricles) from what is called normal pressure hydrocephalus, liver disease, and kidney disease
- Sometimes symptoms of depression could look like dementia



# Dementia

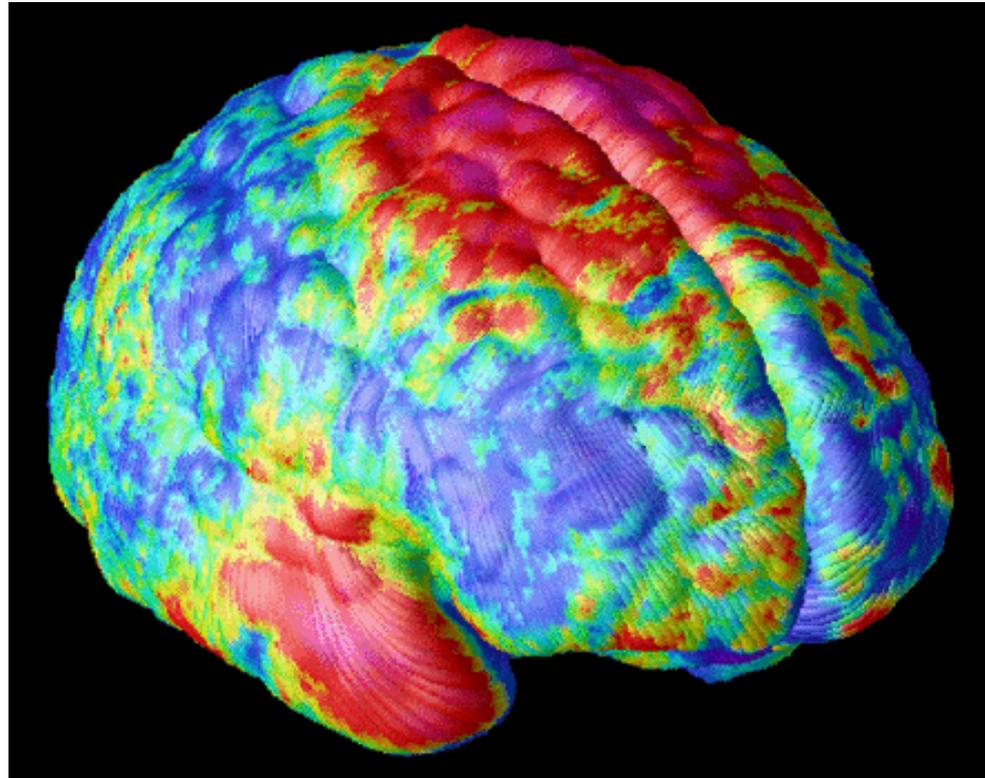
## What should you do?

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- Interact with the person; take time; give eye contact continuously; communicate with simple but meaningful sentences, with not at or to; use gestures; use person's name frequently; provide comfort and reassurance; simplify steps, activities, tasks and environment
- Focus on ADLs (activities of daily living) like personal care
- Provide consistency across staff & shifts
- Emphasize predictable, simple routines

# Mental illnesses

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# Dual diagnosis<sup>1</sup>

## What should you know?

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- Psychiatric, behavioral problems in up to 40% of people with IDD
- Higher rates of psychosis, particularly schizophrenia, and phobic disorders among adults with mild to moderate ID
- Psychotic disorders, affective disorders (like depression) and anxiety disorders are the most common in people with IDD



<sup>1</sup>IDD and psychiatric illness (-es) sometimes is referred to as dual diagnosis

# Dual diagnosis

## More on what you should know

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- Difficult to diagnose
  - ◆ Interfering behavior can be misdiagnosed as psychiatric illness
  - ◆ A psychiatric diagnosis can be missed on the assumption that the symptoms are 'behavioral'
  - ◆ Commonly used assessment, screening tools often do not apply to people with IDD
- Psychiatric illnesses higher with age and physical disability
- Evidence for higher rates of psychiatric illnesses in people with IDD and epilepsy
- No evidence that personality disorders are more common in people with IDD

# Dual diagnosis

## What should you do?

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- Recognize that interfering behaviors may be manifestations of a functional need that the person cannot express
- Listen, communicate, and be patient
- Observe, record and report
- Follow professional's recommendations
- Be aware of medication side effects, when prescribed
  - ◆ Be diligent in reporting potential side effects

# Dental disease

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# Dental disease and IDD

## What should you know?

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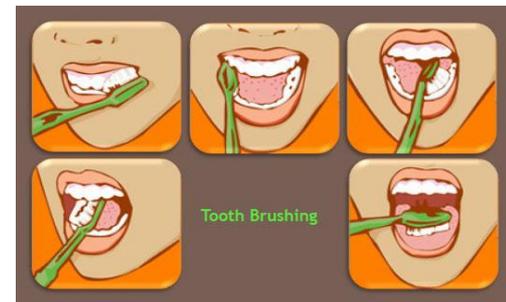
- Poorer oral health and oral hygiene
- More untreated caries
- Higher rates of gingivitis and other periodontal diseases
- Difficult to properly evaluate because of the physical and mental ailments

# Dental disease and IDD

## What should you do?

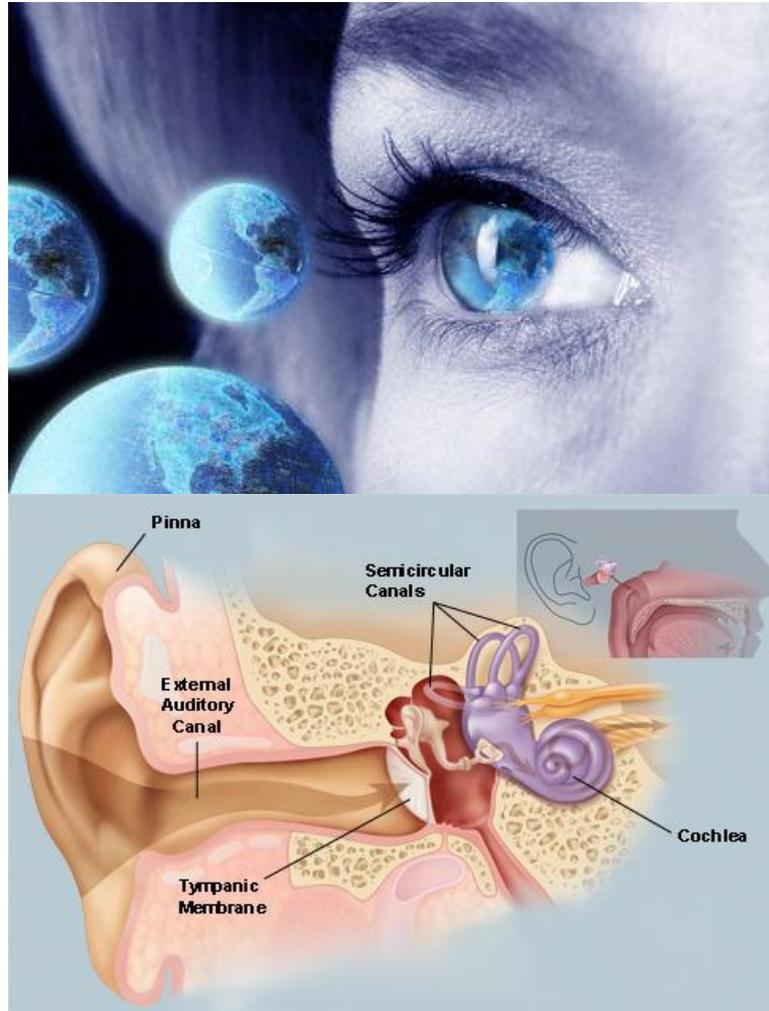
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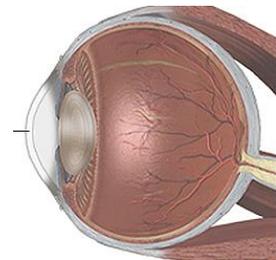
- Encourage independence in daily oral hygiene
- Encourage to follow professional's recommendations
- Involve person in hands-on demonstrations of brushing and flossing
- Learn from professional proper techniques of brushing and flossing techniques in order to assist
- Encourage use of power toothbrush or floss holder



# Vision & Hearing

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# Vision

## The know and do

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### Know

- Refractive errors, strabismus (cross eye), cataracts, and keratoconus (degeneration of the cornea) more common in people with IDD
- Vision problems more likely to occur as the person ages
- Can lead to behavioral problems

### Do

- Watch for signs of impaired vision (squinting, searching, bumping into things)
- Follow professional recommendations for screening/assessment
  - ◆ Annual physical
  - ◆ Specific vision tests every 5y after 45y

# Hearing

## The know and do

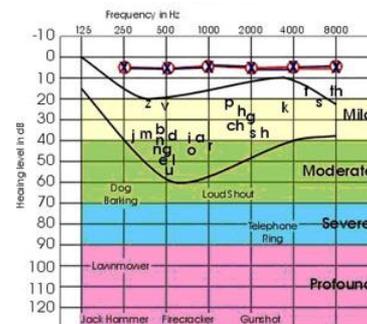
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### Know

- Hearing loss can occur at an earlier age, particularly in people with Down's syndrome
- Can lead to behavioral problems
- Ear wax (cerumen) more likely to build up in ears of people with IDD

### Do

- Watch for signs of impaired hearing (inattention, asking you to repeat,)
- Follow professional recommendations for screening and evaluation



# Medical conditions requiring special considerations

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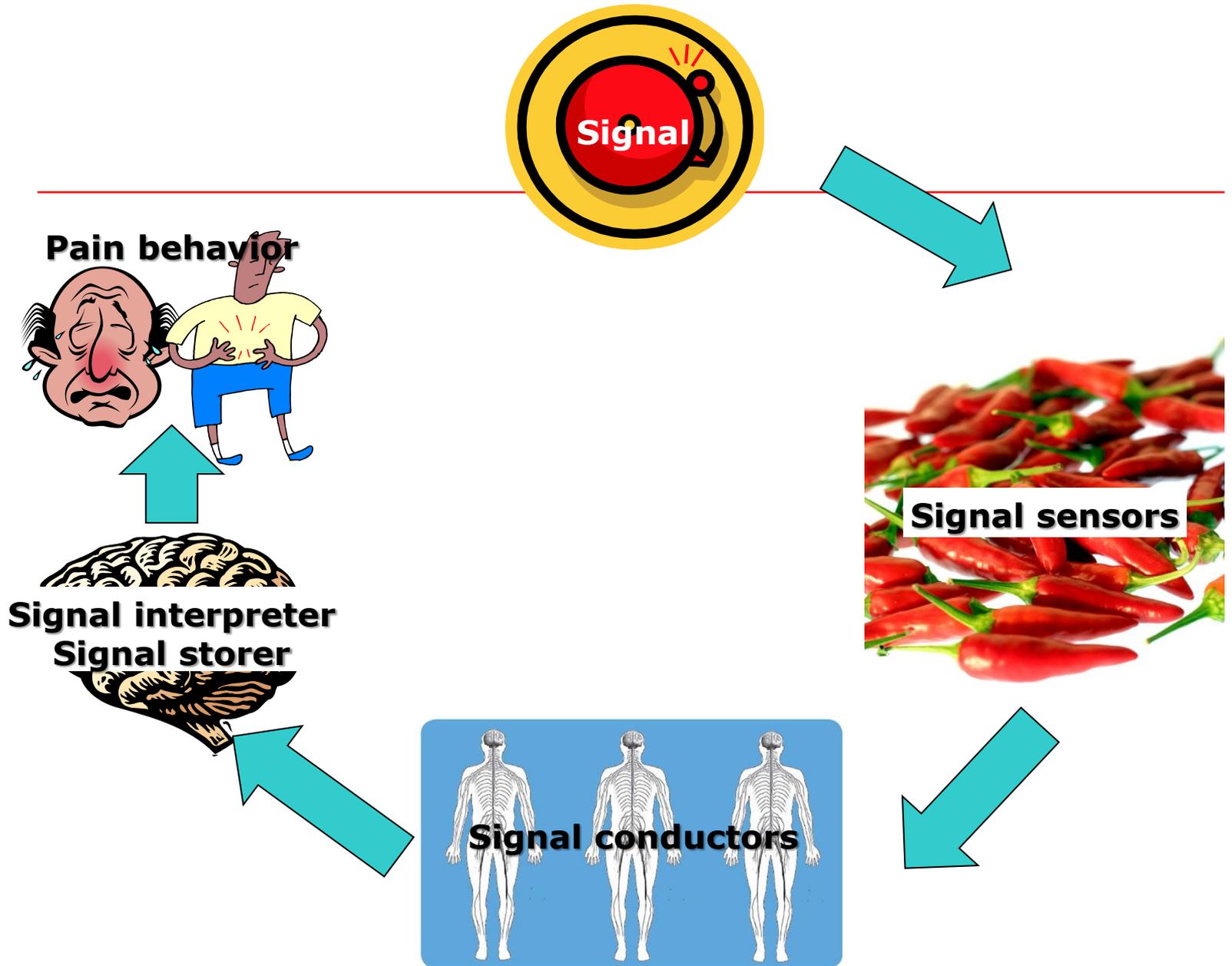
Objectives of modules 3-6:

1. To describe what a support person should know about medical conditions that require special attention in people with IDD
2. To identify non-urgent and non-emergency approaches in supporting people with IDD who experience falls, fainting, gastrointestinal disorders, head injury, pain, respiratory problems, and seizures
3. To recite principles of supporting people with IDD in medication administration

# Pain

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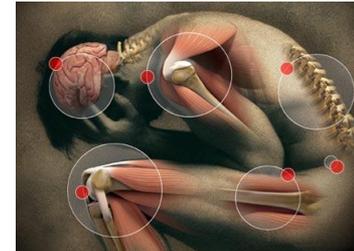


# Pain

## What should you know?

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- Like people without IDD, pain is common
- Can be from obvious injury or not so obvious causes (e.g., internal problems or injuries)
- Can occur daily for months (called chronic) or for a few days (called acute)
- People with IDD and SIB may have problems with pain processing in the brain
- Unlike people without IDD, pain can manifest as unusual behaviors, particularly in people who cannot express themselves in words



# Pain

## What should you do?

---

- Be compassionate, patient, and let your supervisor know, if you notice any of the following
  - Frowning, fearful facial expressions
  - Grinding of the teeth
  - Fidgeting, restlessness, or agitation
  - Aggression, destructive behavior
  - Eating, sleeping poorly
  - Sighing, groaning, crying, breathing heavily
  - Decreasing activity levels, avoiding enjoyed activities
  - Resisting movements during care
  - Change in walking
  - Inability to participate in activities
  - Self-injury

# Pain

## More on what you should do

---

- Call the medical professional soon for an appointment or advice if situation is not urgent or emergency when:
  - ◆ Pain is not severe and comes and goes (examples: heartburns, headaches, stomach pain, leg cramps, back pain, etc.)
  - ◆ Previously prescribed pain meds, called analgesics, are not relieving pain
  - ◆ Pain severity is increasing over days.
  - ◆ Pain is interfering with sleep
  - ◆ Pain with sadness, or depressed feelings (withdrawn, doesn't want to eat or do routine activities)



# Pain

## What should the professional know/do?

---

- Ask where it hurts and how bad, if possible
- Use assessment tool adapted for individuals with IDD (e.g., PADS, DisDAT)
- Can be due to:
  - HENT problems (ex. dental problems, ear infections, headache)
  - GI problems (ex. reflux, constipation)
  - GU problems (ex. full bladder, kidney stones)
  - Pressure ulcers
  - Musculoskeletal problems (ex. arthritis, muscle spasms, immobility, contractures, bone fractures, physical therapy, positioning)
  - Self-injury

# Falls

---



# Falls

## What should you know?

---

- More common in people with IDD
- Higher rates of fall-related injuries in people with IDD
- Increase risk with age
- Commonly due to what is called intrinsic –internal- or extrinsic – external- factors



# Falls

## More on what you should know

---

### Intrinsic (internal):

- Prior falls
- Muscle problems (cerebral palsy, spasticity, weakness)
- Neurological problems of walking/balance (stroke, diabetes)
- Seizures
- Vision problems (cataracts)
- Cognitive impairment (inability to think clearly; poor judgment)
- Medications (psychotropic medications, antidepressants, allergy meds, sleep aids)

### Extrinsic (external):

- Environmental issues, e.g.,
  - ◆ slippery floors,
  - ◆ loose carpets,
  - ◆ poor lighting,
  - ◆ no grab bars,
  - ◆ low bed,
  - ◆ low seat chair
- Ill-fitting footwear
- Poorly-maintained assistive devices (wheelchair, walker)

# Falls

## What should you do?

---

- Address home modifications, ill-fitting footwear
- Keep assistive devices in optimal working condition
- Encourage exercise (balance, strength, endurance)
- Learn/teach proper use of assistive devices
- Learn about proper transfer
- Properly report fall observation and participate in prevention planning with other team members, including the professionals
- May want to participate in GUGT



# Fainting

---



What's wrong with this picture?

# Fainting

## What should you know?

---

- Brief loss of consciousness (LOC) (passing out) due to a drop in blood flow to the brain
- Usually for a few minutes followed by full recovery
  - ◆ Coma if LOC for more than a few min
- Can be preceded by light-headedness or dizziness
- Some experienced nausea, a feeling like the world is closing in or/and weakness

# Fainting

## More on what you should know

---

- Causes/situations when someone could faint include:
  - ◆ Coughing very hard
  - ◆ Bowel movement with straining
  - ◆ Urinating, particularly after a full bladder
  - ◆ Suddenly standing up
  - ◆ Standing in one place for too long
- Can be due to:
  - ◆ Emotional distress/fear
  - ◆ Low blood sugar
  - ◆ Severe pain
  - ◆ Medications (anti-anxiety, anti-HTN)
  - ◆ Sudden BP drop
  - ◆ Abnormal heart rhythm or heart attack
  - ◆ Alcohol
  - ◆ Hyperventilation
  - ◆ Seizure
  - ◆ Stroke

# Fainting

## What should you do?

---

- Follow professional instructions, if previous history
- Assist in getting up slowly
- ✓ airway/breathing
- Loosen tight clothing around neck
- Raise feet above heart level (~12")
- Call for professional advice if <50y and no urgent or emergency situation
- Turn onto side to prevent choking, if vomited
- Keep lying down for at least 10-15 min, preferably in a cool and quiet space. If not possible, sit the person forward with the head between the knees

# Fainting

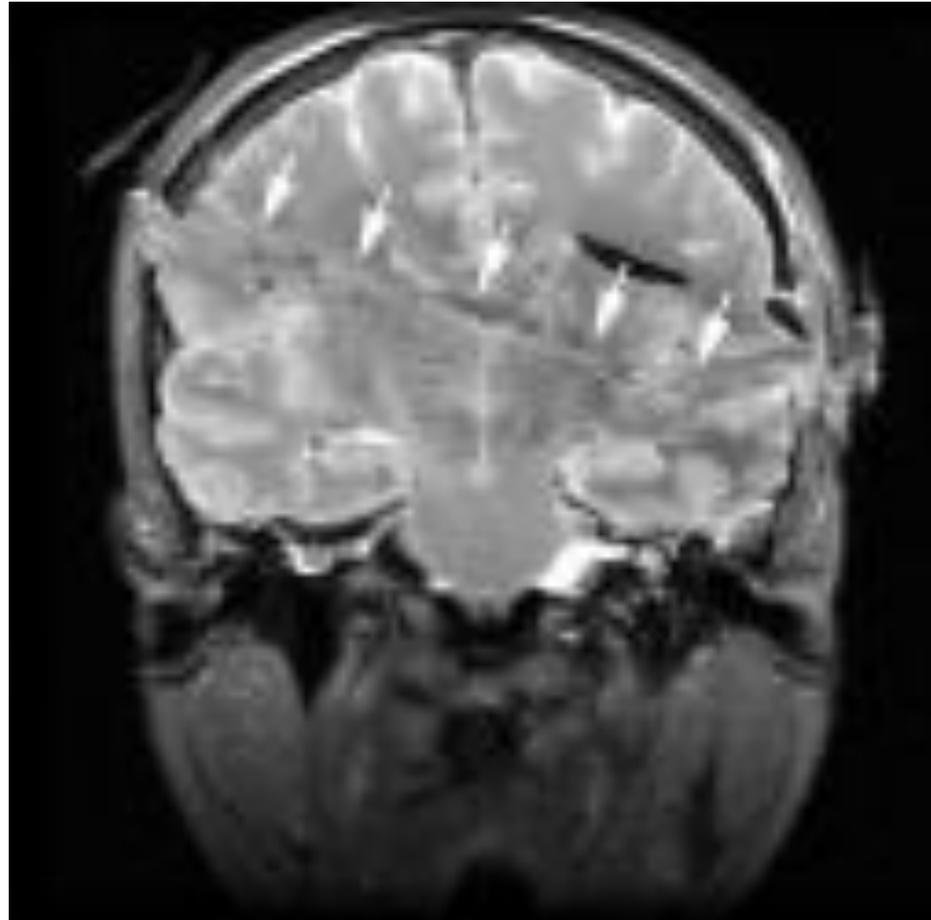
## More on what you should do

---

- Call the doctor's office soon for an appointment/advice if no urgent or emergency situation and any of the following is applicable:
  - ◆ Person under 50 years old and this is their first fainting spell
  - ◆ Person known to faint but now fainting often
  - ◆ Fainting with new symptoms that do not qualify as urgent or emergency

# Head injury

---



# Head injury

## What should you know?

---

- Trauma with injury to scalp, skull, or brain
- From minor (bump on the skull) to quite serious leading to brain injury or even death
- Closed or open (penetrating)
  - ◆ Closed: Hard blow to the head from striking an object w/o breaking skull.
  - ◆ Open: hit with an object that broke skull and entered brain (e.g., gun shot, going through the windshield during a car accident)
- Head injuries include:
  - ◆ Concussion, the most common type of traumatic brain injury, in which the brain is shaken
  - ◆ Contusion, which is a bruise on the brain
  - ◆ Scalp wounds
  - ◆ Skull fractures

# Head injury

## More on what you should know

---

- Problems can arise without skull fracture because the brain can bang against the inside of the skull (brain bruising)
- In any serious head trauma, always assume spinal injury
- Symptoms depend on the extent of the trauma, type of injury and its location
- Symptoms can appear immediately or develop over hours to days



# Head injury

## Symptoms

---



- Blood pressure drop or increase
- Changes in, or unequal size of pupils
- Chronic or severe headaches
- Drowsiness, confusion or even coma
- Fluid draining from nose, mouth, or ears
- Fracture in the skull or face, bruising of the face, swelling at the site of the injury, or scalp wound
- Irritability
- Low breathing rate
- Memory loss
- Mood, personality, or behavioral changes
- Paralysis
- Restlessness, clumsiness, or lack of coordination
- Seizures
- Speech and language problems
- Stiff neck or vomiting
- Vision, taste, or smell changes or loss

# Mild head injury

## Do and do not

---

### Do

- Closely watch person for any concerning symptoms over 24 h
- While the person is sleeping, wake him/her up every 2-3 h and ask simple questions to check alertness, such as "What is your name?"

### Do NOT

- Wash a head wound that is deep or bleeding a lot
- Remove any object sticking out of wound
- Move or shake the person
- Remove helmet, if one is on

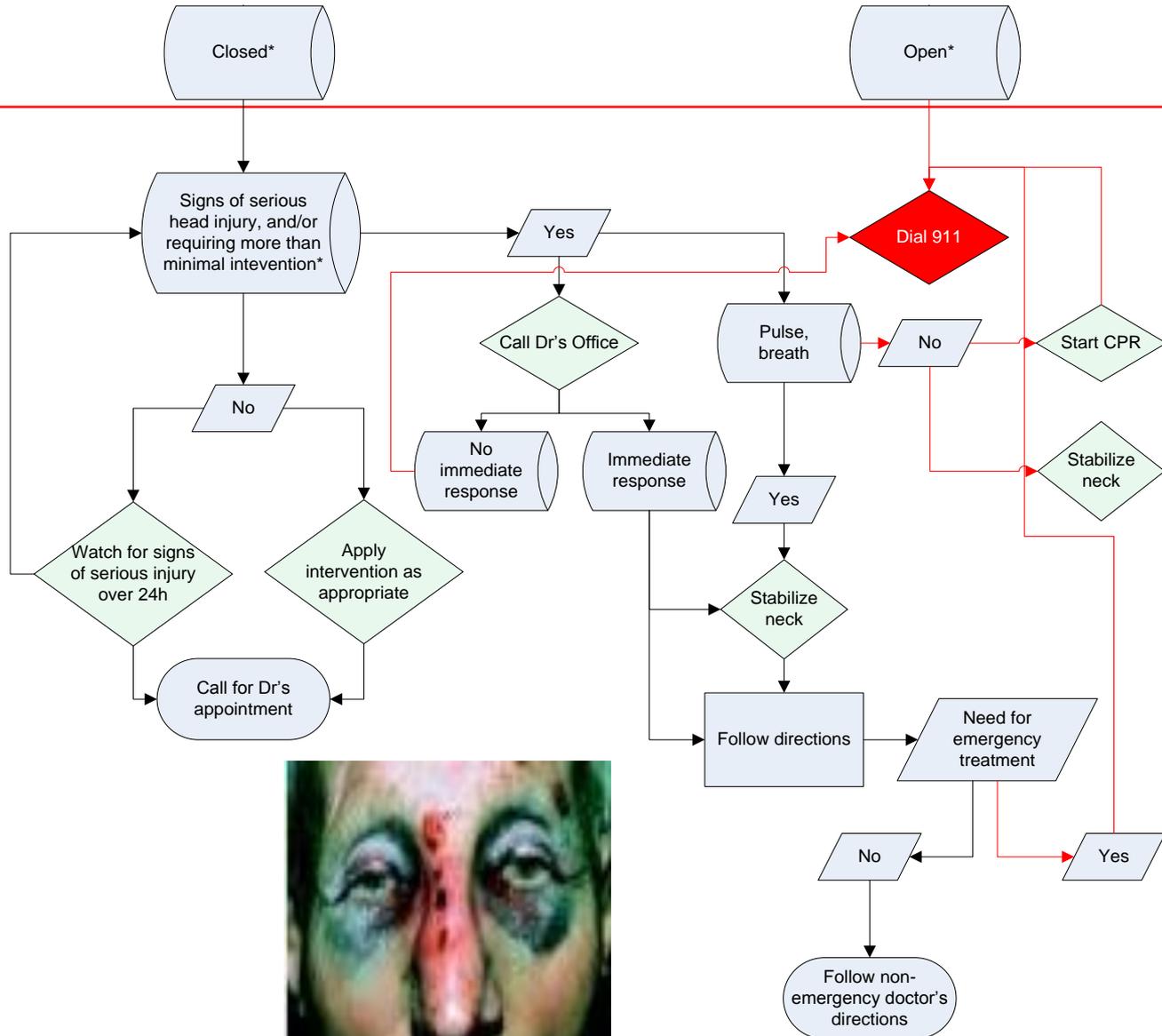
# Serious head injury

Any open or closed with...

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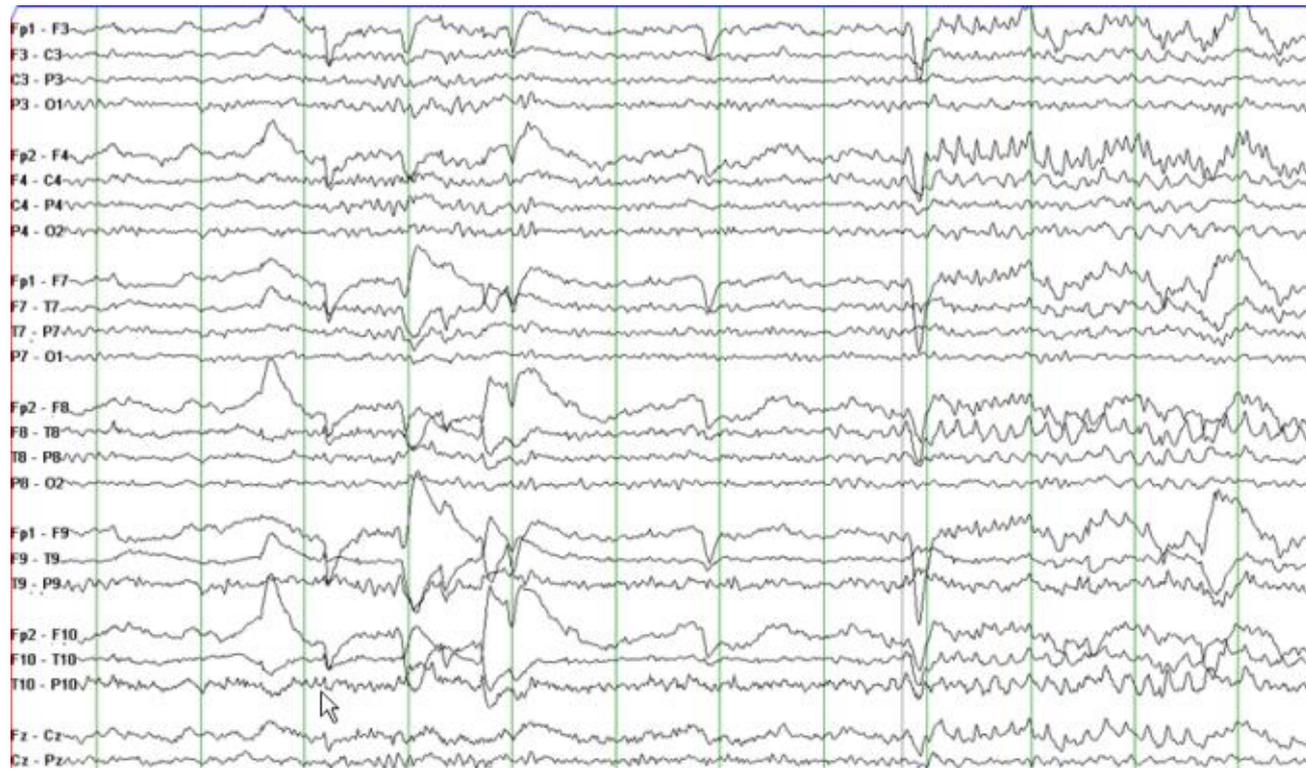
- Unequal pupils,
- Complaint of severe headache,
- No response to verbal or body stimulation,
- Fluid draining from the nose, mouth or ears,
- Suspected fracture,
- Confusion or drowsiness,
- Seizure,
- Garbled speech or unable to speak when previously s/he was,
- Breathing rate  $\leq 12$  breaths per minute,
- O<sub>2</sub> saturation  $\leq 88\%$ ,
- Blurred vision or unable to see when previously s/he was,
- Lack of coordination beyond baseline,
- Inability to move an extremity that previously was not affected,
- Vomiting,
- Resistance to neck movement.

# Head injury: What should you do?



# Epilepsy & seizures

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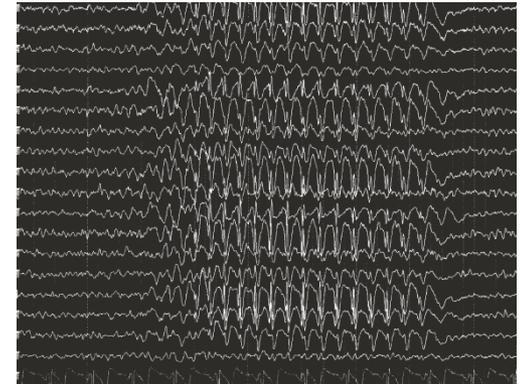


# Epilepsy & seizures

## What should you know?

---

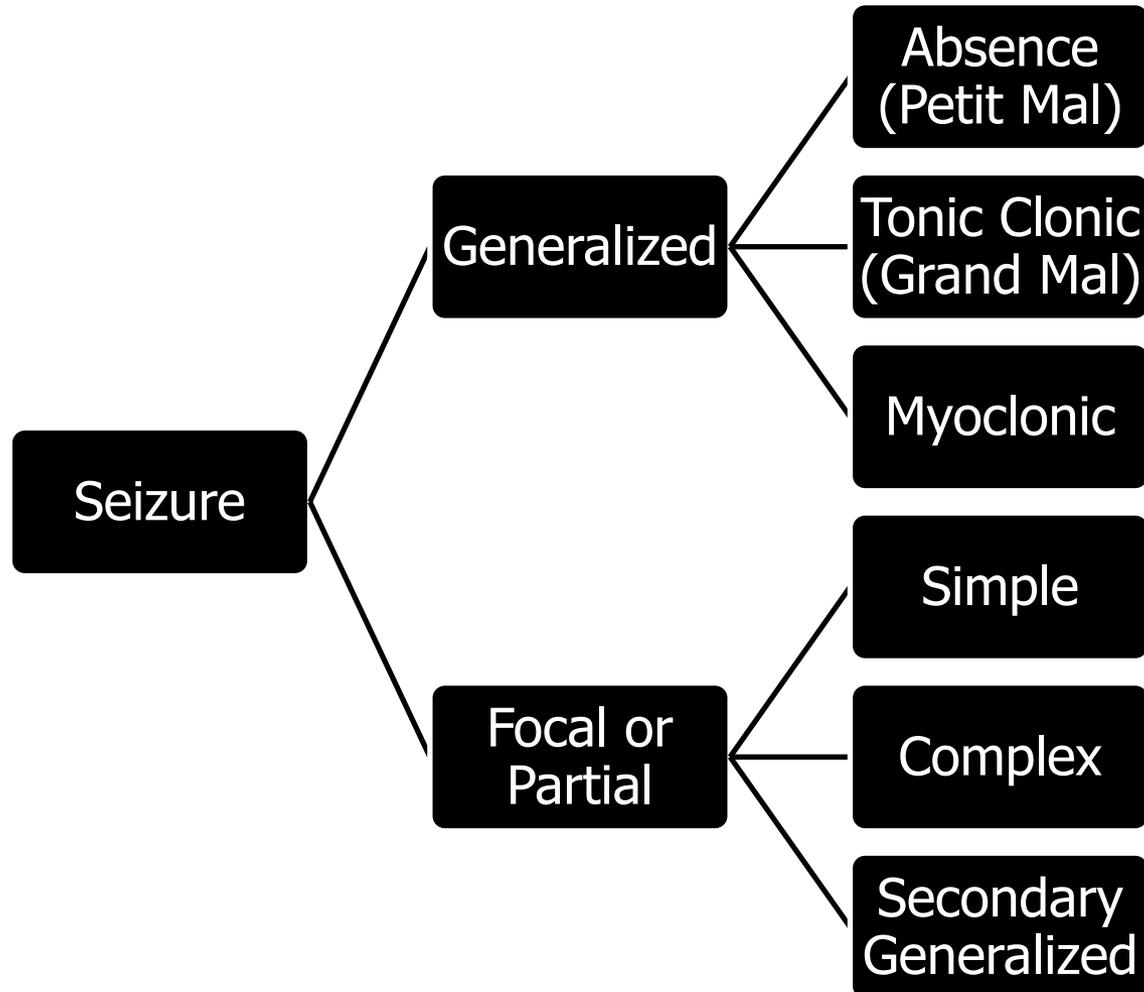
- Seizure: symptom(s) of an abnormal, excessive excitation/synchronization of a population of brain nerve cells called cortical neurons
- Epilepsy: recurrent (2+) seizures not provoked by systemic or acute neurologic insults
- Any one can have a seizure
- Epilepsy in ~1% of people
- More common with IDD



# Seizures

What should you know about type?

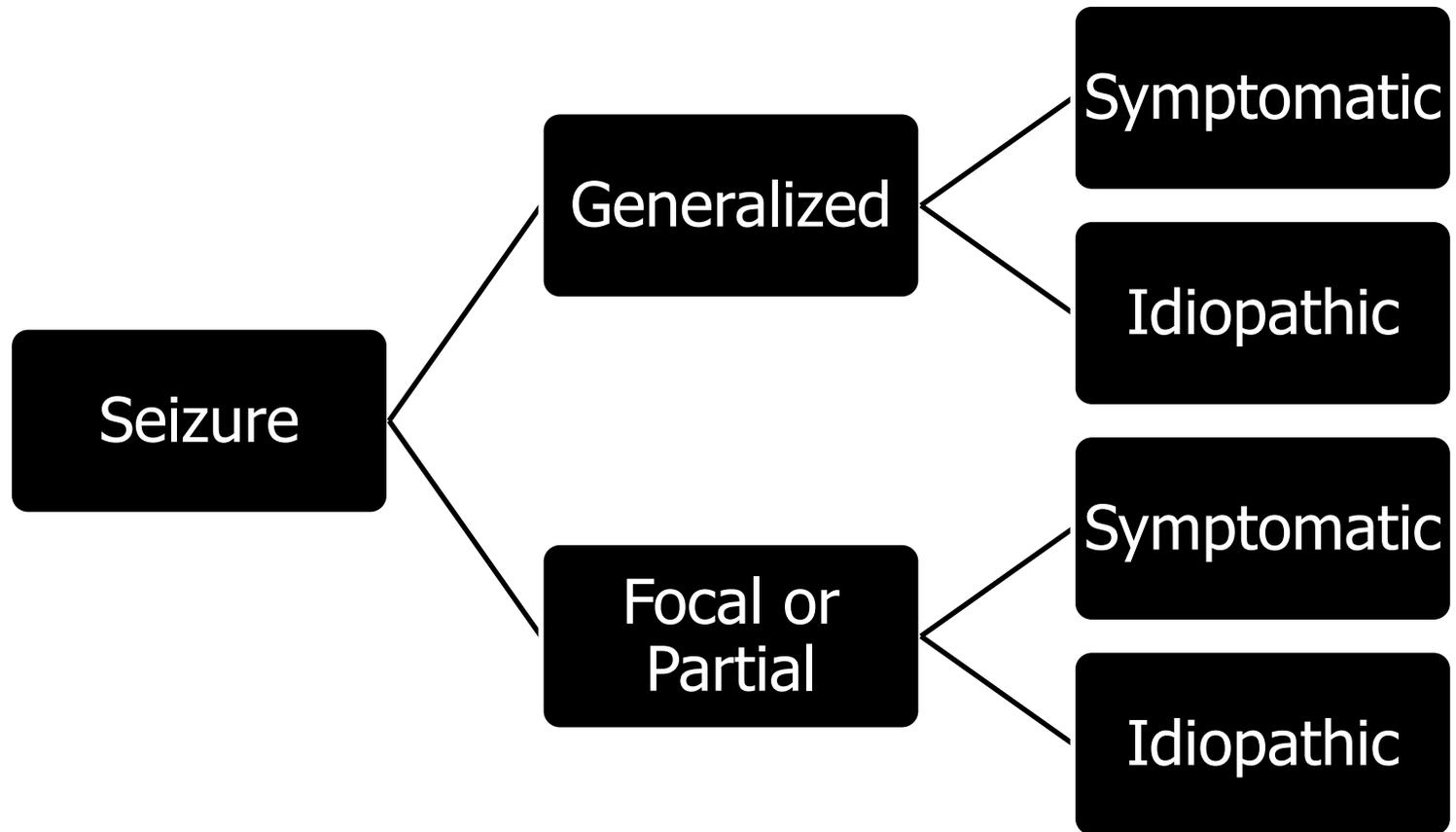
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# Epilepsy syndrome

What should you know about type?

---



# Causes, triggers, consequences

## What should you know?

---

### Causes

- Genetic
- Head trauma
- Drugs and withdrawal
- Stroke
- Brain tumor
- Metabolic problems (e.g., low sugar, low calcium, low sodium)
- Brain degeneration (Alzheimer's disease)

### Triggers

- Head trauma
- Missing seizure meds
- Prescribed or OTC meds
- Fever
- Infection
- Lack of sleep

### Consequences

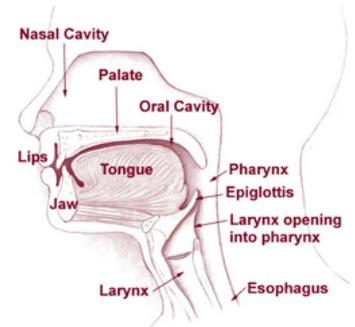
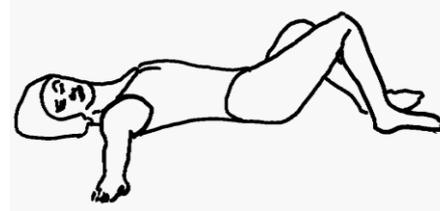
- Brain damage
- Respiratory or cardiac arrest
- Injuries
- SUDEP (sudden unexplained death with epilepsy)

# Epilepsy & seizures

## What should you do?

---

- Roll to the side
- Cushion the head
- Loosen any tight clothing around the neck
- Keep airway open
  - ◆ If necessary, grip the person's jaw gently and tilt head back
- Remove any sharp or solid objects
- Note how long the seizure lasts and what symptoms occurred
- Stay with the person until the seizure ends



# Epilepsy & seizures

## More on what you should do

---

- Person may be groggy and tired after seizure
  - ◆ Be patient
  - ◆ Give them space
  - ◆ Assist them to a calm and restful place
- Call the doctor's office for appointment if not emergency or urgent situation when
  - New symptoms with seizure, which do not fit urgent or emergency criteria
  - Suspect AED side effects or allergic reaction
  - Increased seizure frequency
  - Seizures medications running low and need authorization for refill

# Epilepsy & seizures

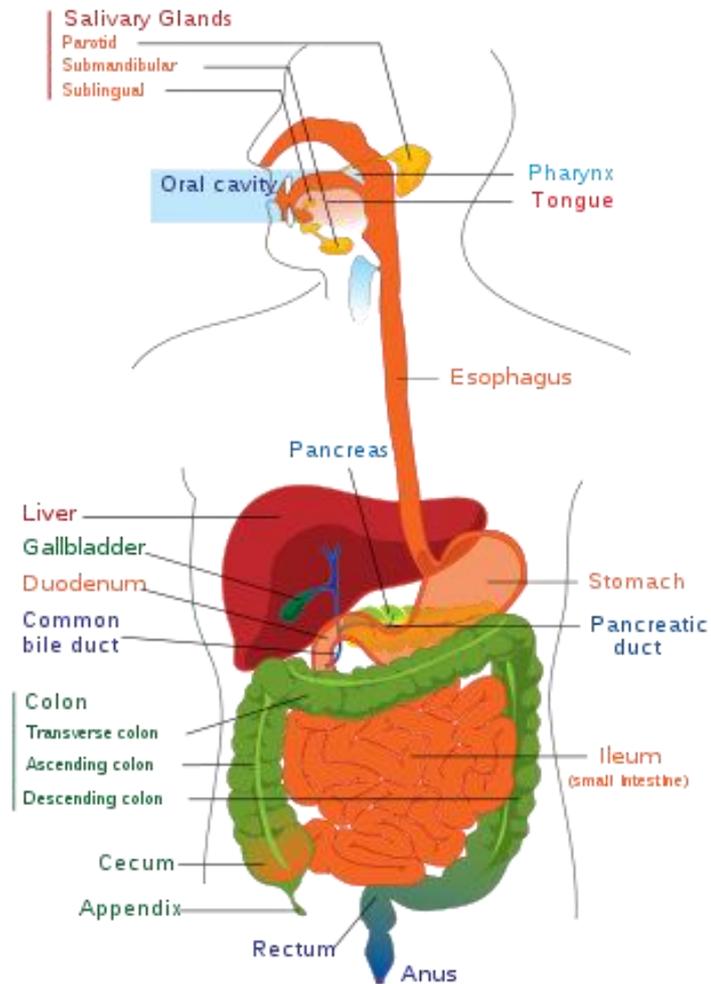
## What shouldn't you do?

---

- Restrict the person from moving
- Put anything into the person's mouth, not even medicine or liquid. These can cause choking or damage to the person's jaw, tongue, or teeth. Contrary to widespread belief, people cannot swallow their tongues during a seizure or any other time



# GI problems

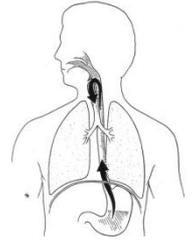


GI= gastrointestinal

# Acid reflux & GERD

## What should you know?

---



- Symptoms OR damage to food pipe (esophagus) lining (mucosa) produced by gastric content (such as gastric acids) getting up (reflux) into the esophagus
- Causes heartburn, discomfort behind the chest bone (sternum), bitter taste in the mouth when lying down or bending over from regurgitation of acidic fluid into the mouth
- Everyone experiences heartburn at one time or another after a meal. When symptoms keep coming back, there is damage to the mucosa, there are symptoms at night, or there is swallowing difficulty or chronic cough, then it might be GERD

# Acid reflux

## What should you do?

---

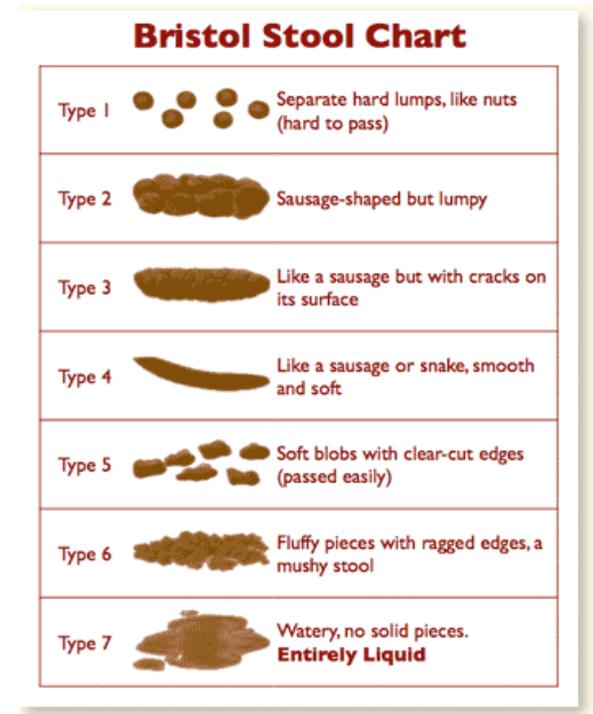
- Follow medical recommendations
  - ◆ Instructions for medications, if prescribed. These are antacids like Maalox, what is called H<sub>2</sub>-blockers like Pepsid or Zantac, and PPIs like Nexium or Prilosec
  - ◆ Ask the doctor about medications that can make GERD worse (aspirin)
  - ◆ Prop up bed
- Encourage life style modifications
  - ◆ Avoiding large meals, acidic foods like citrus or tomato, alcohol, caffeine, chocolate, onions, garlic, peppermint
  - ◆ Low fat diet
  - ◆ Avoiding laying down within 2-3 h after a meal
  - ◆ Loose fitting clothes around the waist
  - ◆ Quitting smoking

# Constipation

## What should you know?

---

- Having a bowel movement <3x per week
- Related symptoms:
  - ◆ Hard stools
  - ◆ Difficulty passing stools (straining)
  - ◆ Pain or pain-like behavior
  - ◆ Tear of the lining (mucosal membrane) of the anus, causing bleeding and the possibility of an anal fissure



# Constipation

## What should you do?

---

- Ask the nurse or doctor to review medication list to see if any may cause constipation
- Always ask for instructions on PRN medications, if prescribed
- Ask nutritionist or doctor if increasing dietary fiber<sup>1</sup> is an option
- Encourage person to attempt to have a bowel movement soon after waking in the morning or 30 minutes after meals
- Encourage physical activity
- If confined to wheelchair or bed, changing position frequently and performing abdominal contraction exercises and leg raises all help

<sup>1</sup>Vegetables, fresh fruits, dried fruits, and whole wheat, bran, or oatmeal cereals

# Constipation

## More on what you should do

---

**Call the doctor's office soon for an appointment/advice (Criteria III)**

- One episode of fresh blood in the stool
- Black stools
- Constipation alternating with diarrhea
- Rectal pain
- Thin, pencil-like stools
- Unexplained weight loss
- Using prescribed laxatives for more than a month without help

# Diarrhea

## What should you know?

---

- Uncomfortable (could be embarrassing) condition that can have many causes
  - ◆ Infections
  - ◆ Medications
  - ◆ Inflammation
  - ◆ Etc.
- Mostly goes on its own
- In some cases, can lead to dehydration or be a sign of a more serious problem

# Diarrhea

## What should you do?

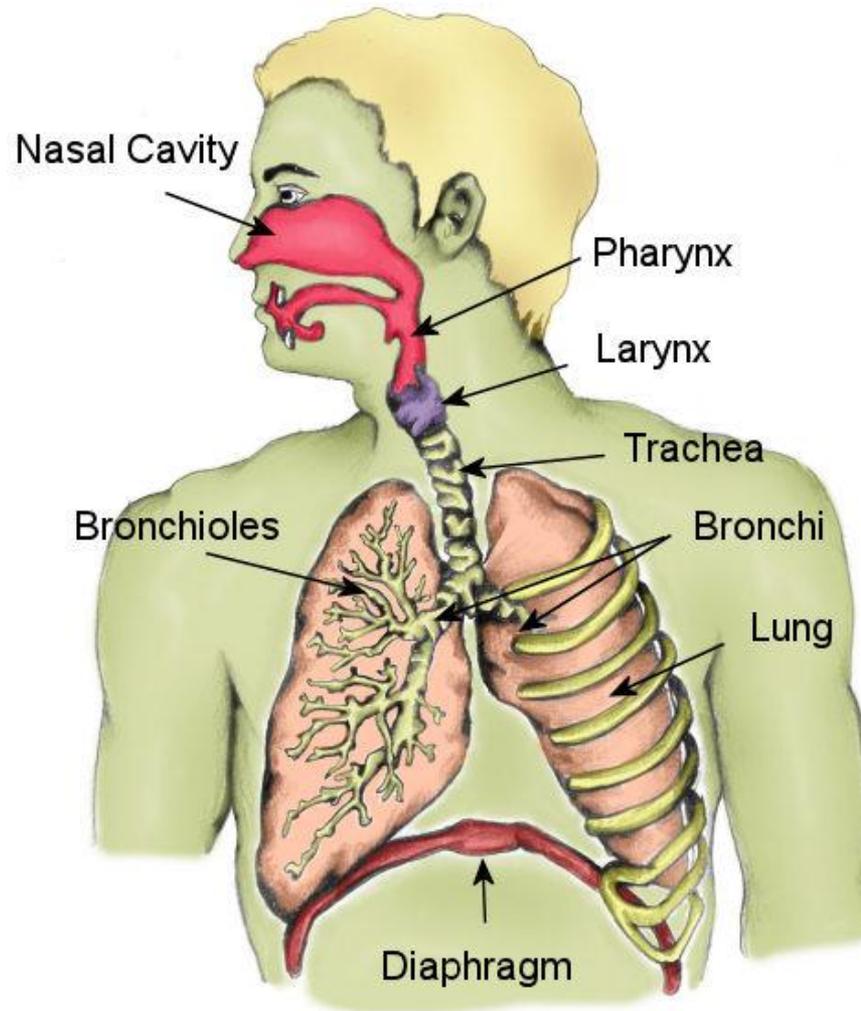
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### Call the doctor's office soon for an appointment/advice (Criteria III)

- Frequent bowel movements mixed with mucus (slime), and non-severe abdominal pain and cramping
- Frequent stools or diarrhea and a newly prescribed medication.
  - ◆ Do not stop the medication unless previously advised to do so
- Diarrhea with headache, muscle aches, low grade temp.
- Suspect mild food poisoning (diarrhea for longer than 2 days after eating food that might be spoiled, or someone else has eaten the same food and become ill too)
- Diarrhea, particularly with nausea, 1/2 h to 2h after drinking dairy products

# Respiratory problems

---

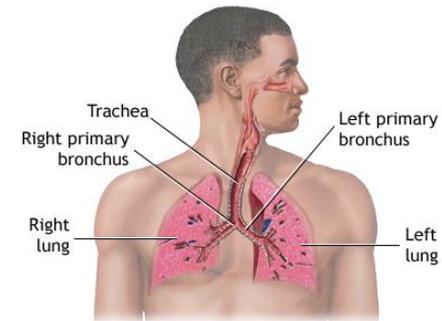


# Aspiration

## What should you know?

---

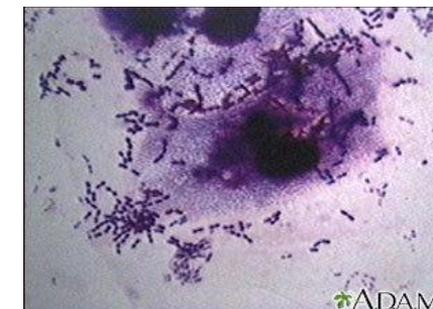
- Process by which stomach or oral contents wrongly enter the breathing apparatus
- Causes cough and wheezing
- If with infection, aspiration pneumonia
- Linked to conditions common with IDD
  - ◆ Larynx dysfunction, impaired swallowing (dysphagia), acid reflux (GERD), tooth/mouth disease, tube feeding, inability to self feed, impaired neuromuscular status



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"This is your captain speaking, we will be serving codeine cough syrup in our Whooping Cough flight this evening."



# Preventing aspiration

## What should you do?

---

- Rest period (~30 min) before starting meal
- Position upright in chair or at 90° if bedbound
- Chin-down or chin-tuck
- Slow pace, small bites
- Alternate solid and liquids
- Present food on the good side, when applicable
- Approach person based on professional recommendations
- Follow instructions on food and fluid consistency, size, type
- Encourage self-feeding, when applicable and as possible

# Dysphagia

## What should you know?

---

- Medical term used for swallowing problems
- Caused by:
  - ◆ Reduced alertness, fatigue, medications, poor muscle function or coordination, problem behavior (e.g., stuffing food, PICA, rapid eating), medical conditions (e.g., tardive dyskinesia, GERD, esophagus narrowing), poor posture



# Dysphagia

## More on what you should know

---

- Common symptoms:
  - ◆ Coughing, excessive drooling, pocketing food, choking, runny nose, trouble chewing, trouble with eating certain foods, refusing meals, gurgled voice , throat clearing, feeling like something is stuck in the throat, frequent colds, pneumonias, unexplained weight loss
- If untreated can lead to medical problems
  - ◆ Aspiration pneumonia, dehydration, and malnutrition

# Dysphagia

## What should you do?

---

- Do not minimize the problem
- Follow instruction of professionals
- Keep abreast of diet modifications, when applicable, and encourage compliance
- Be patient when assisting someone with meal
- If prescribed special utensils (weighted spoon), use it
- Ensure proper position/posture (same as in prevention of aspiration)



# Medication administration

---

Copyright 2001 by Randy Glasbergen. [www.glasbergen.com](http://www.glasbergen.com)



**“An aspirin a day will help prevent a heart attack if you have it for lunch instead of a cheeseburger.”**

# Medications

## What should you know?

---

- People with IDD often take multiple medications
- Medications not only can benefit people but also can cause side effects and interact with each other (called drug-drug interaction or DDI)

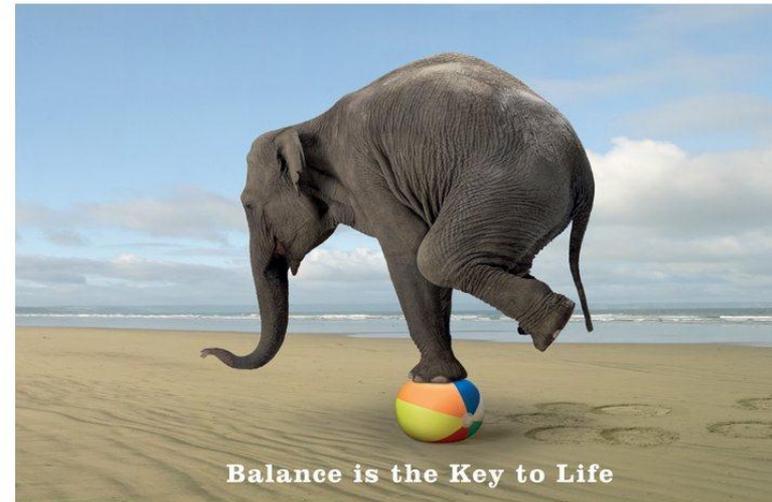


# Medications

## More on what you should know

---

- Routes of administration
- Dosing and dosing frequency concepts
- Benefits
- Side effects
- Toxicity
- DDI
- DDM
- TDM



# DDI

## What should you know and do?

---

### What to know

- Occur when effect of a drug is changed if taken with another drug, or with food
  - ◆ Major
  - ◆ Moderate
  - ◆ Minor
- Can make drugs less effective and/or can lead to side effects

### What to do

- Always ask the medical professional what to look for
- If suspect it, ask the nurse and they can look it up for you or ask the medical professional

# DDM and TDM

## What should you know and do?

---

- Drugs can damage organs or tissues such as the liver. In order to pre-empt problems, monitoring of early signs, like obtaining tests to check liver function) are sometimes done. This is called diagnostic drug monitoring (DDM)
- Levels of medications in the blood (for example seizure meds) can give us an idea of how to best adjust doses. This is called therapeutic drug monitoring (TDM)
- Always ask the medical provider what you should know about and do when a new medication is being prescribed

# Medications

## What should you do?

---

- Review with professional date of initiation, indication, dosage, and effectiveness of medication every three months or less
- Regularly monitor side effects, DDI, TDM, and DDM, using observation logs, and report them to supervisors/professionals
- Know about both prescribed and OTC medications

# PRN medications

## What should you do?

---

- Unless otherwise directed, giving PRN medications ONLY applies to Criteria III
- Take note of all symptoms a person is experiencing or reporting
- Look for the person's records and establish if PRN medications are allowed for the symptoms he or she is experiencing or reporting
- Review from the records the parameters that are established for giving PRN medications (for example: if temperature is over 101°F [38.3°C], give Tylenol two tablets per mouth)
- Call the designated person for authorization of PRN medication
- Record all processes of medication administration, and per customary procedures
- Monitor medication response, as instructed

# Urgent and Emergency Medical Response

©Nabih  
Ramadan



# Urgent & emergency medical responses

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Objectives of module 7:

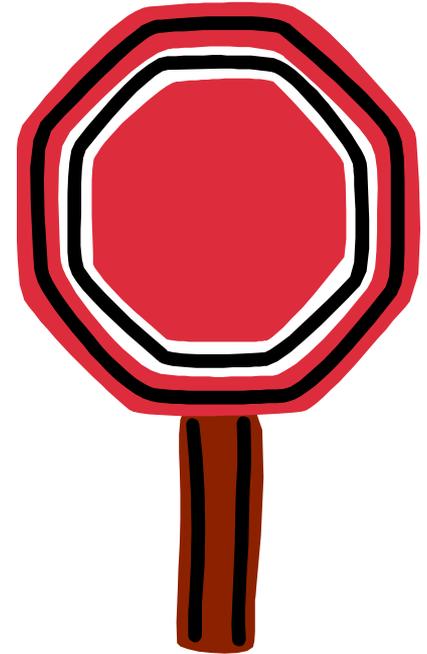
1. To define and identify warning signs that might signal a medically urgent or emergency situation
2. To recite common medical emergencies in people with IDD
3. To select the right approach (-es) to handling emergency and urgent medical situations that can face people with IDD

# Warning signs

## What should you know?

---

- Observation alerting support personnel to act
- May signal an emergency
- Include general and individual-specific ones



# Warning signs

## What are they? BEST PRACTICE®

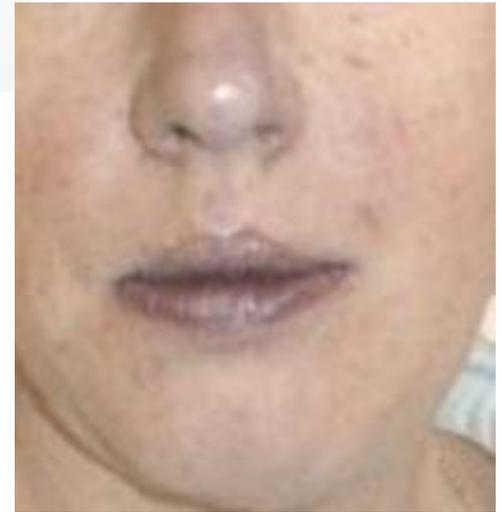
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- **B**urns, smoke inhalation
- **E**xcessive bleeding
- **S**udden or severe vomiting, pain.  
dizziness, weakness or change in vision
- **T**rauma to head or spine
- **P**ain that does not go away
- **R**espiratory problems such as turning blue or shortness of breath
- **A**brupt change in consciousness, behavior or degree of alertness
- **C**hest pain
- **T**hinking of suicide or homicide
- **I**ngesting poisonous material
- **C**hoking or coughing up blood
- **E**xcessive vomiting

# Images of warning signs

---



# Bleeding (1)

## What should you do?

---

### Call 911

- Continued external bleeding despite direct pressure
- Internal bleeding
  - ◆ Bleeding from body cavity
  - ◆ Vomiting/coughing up blood
  - ◆ Bruising on neck, chest, abdomen or side,
  - ◆ Wound penetrated skull, chest or abdomen
  - ◆ Looking 'shocky' (weakness, anxiety, thirst, skin cool to the touch)



# Bleeding (2)

## What should you do?

---

**Call the doctor's office immediately and your supervisor**

- Gravel/dirt cannot be removed easily with gentle cleaning
- Increasing pain
- Observe redness, swelling, yellow or brown fluid, fever, or red streaks spreading from the site toward the heart
- Injury from animal/human bite



# Constipation

## What should you do?

---

**Call the doctor's office and your supervisor immediately. Do NOT give any laxatives**

- Sudden constipation with abdominal cramps and an inability to pass gas or stool
- Sharp abdominal pain with bloating



# Diarrhea

## What should you do?

---

**Call the doctor's office and your supervisor immediately**

- Nausea or vomiting with persistent or severe abdominal cramps or watery diarrhea followed by greasy stools
- Fever and pain in the middle or upper belly that goes into the back
- Bloating, and severe lower belly pain or cramping
- Watery diarrhea when the person normally has chronic constipation

# Fainting

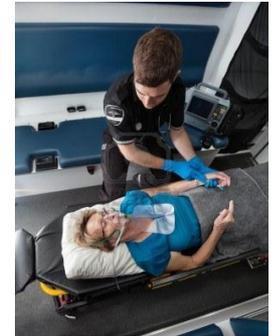
## What should you do?

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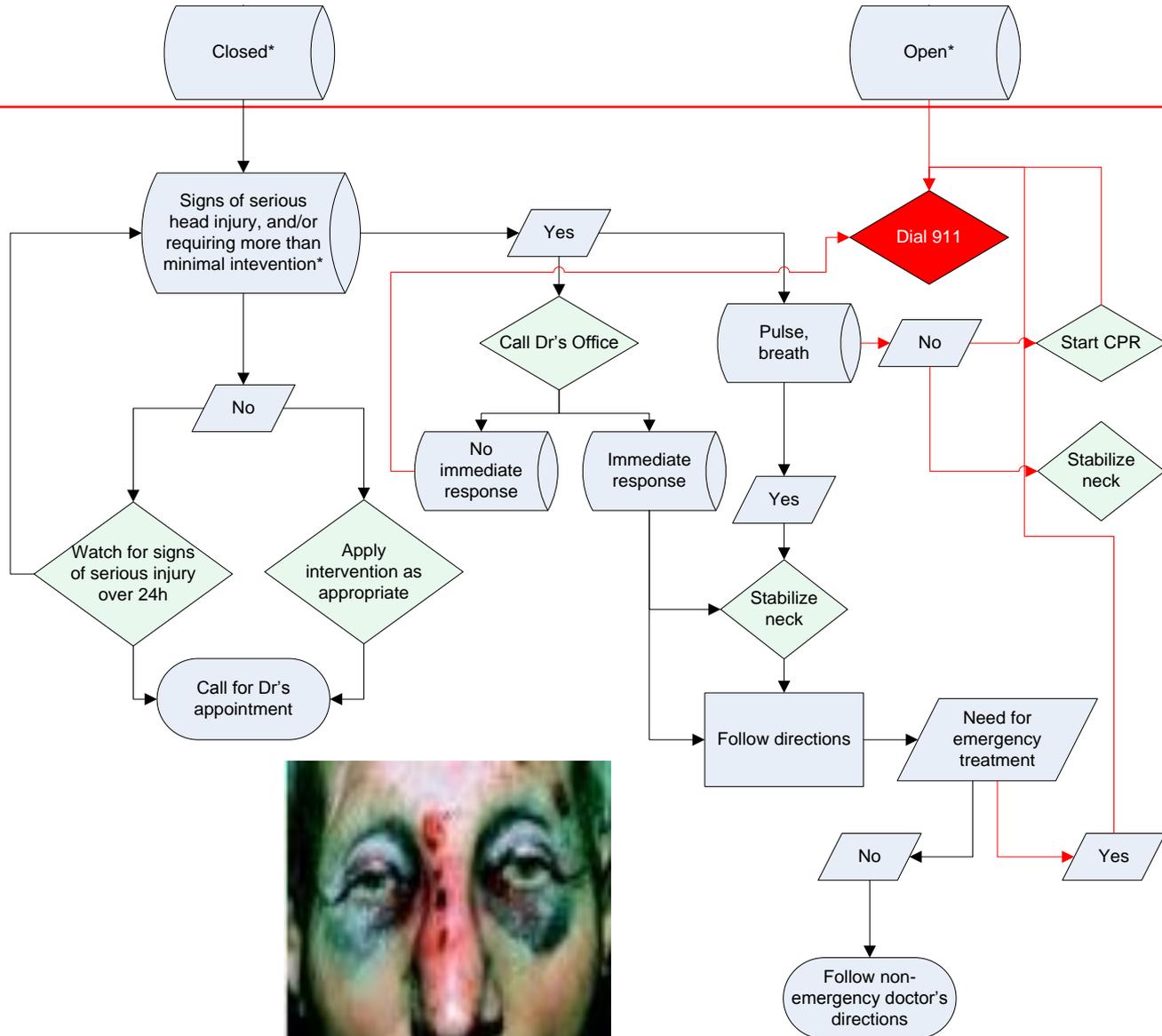


**Call 911 immediately**

- First time, if over 50y
- Fall from height, especially if injured or bleeding
- Unresponsive for more than 2 minutes
- With loss of speech, vision problems, inability to move one side or both
- In the context of sugar diabetes
- With chest pain, pressure, discomfort, pounding or irregular heartbeat



# Head injury: What should you do?



# Poisoning

## What should you know?

---

- Any substance that can harm the body by altering cell structure or functions, such as:
  - ◆ What is called toxins (mushrooms, plants, food contaminated with bacteria, insecticides, cleaning products, etc.)
  - ◆ Overdose of prescribed or OTC medications
  - ◆ Environmental factors (carbon monoxide)
- Symptoms vary, depending on the poison



# Poisoning

## What should you do?

---

- Gather as much information you can get to share with supervisor and medical professional
- **Call 911 if observe or suspect:**
  - ◆ Ingestion of poisonous material
  - ◆ Food poisoning with severe dehydration
  - ◆ Food poisoning from a canned food and blurred or double vision, trouble swallowing or breathing, and muscle weakness
- **Call the doctor's office immediately if:**
  - ◆ Severe diarrhea (large amounts of loose stool every 1-2 h) that lasts longer than 2 days
  - ◆ Vomiting for more than a day
  - ◆ Severe belly pain

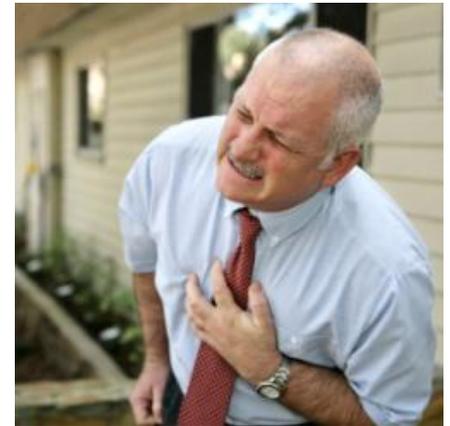
# Respiratory problems

## What should you do?

---

**Call 911 immediately**

- Breathing stops
- Moderate to severe difficulty breathing
- Complaining of, or suspect chest pain



# Respiratory problems

## More on what you should do

---

### Call the doctor's office immediately

- Coughing up blood
- Having shortness of breath or wheezing that is getting worse in a matter of minutes
- Coughing more deeply or more often
- Having increased swelling in the legs or belly
- Having fever over 101°F (38.3°C)

# Seizures & epilepsy

## What should you do?

---

**Call 911 immediately**

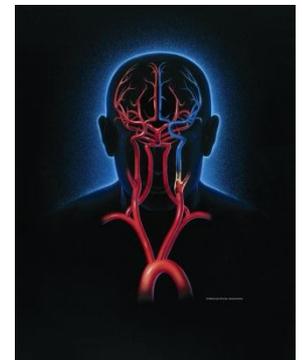
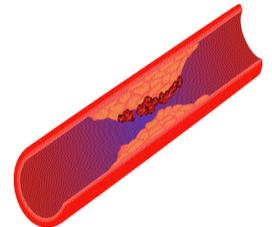
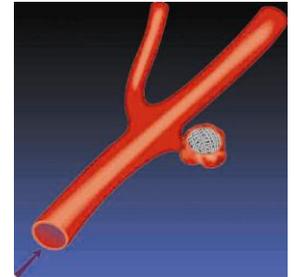
- Seizure >5 minutes
- Stops breathing or turns blue during a seizure.
- The person has a seizure in a water medium
- One seizure after the other
- First ever seizure
- A seizure after years without one
- Head injury

# Stroke

## What should you know?

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- Also called brain attack, happens when blood flow stops to one part of the brain (called ischemic) or when a brain blood vessel bursts (called hemorrhagic). Either way, brain cells can die
  - ◆ Clot can form at the site of a weak artery, thrombotic, or come from far (heart, neck), embolic
- Fat, cholesterol, and other substances collect on the artery walls, forming a sticky substance called plaque, and predispose to a thrombus
- $\frac{3}{4}$  of a million Americans every year



# Stroke risk factors

## What should you know?

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- Preventable
  - ◆ High blood pressure
  - ◆ High cholesterol
  - ◆ Atrial fibrillation
  - ◆ Sugar diabetes
  - ◆ Overweight
  - ◆ Too much alcohol
  - ◆ Cigarettes
  - ◆ Illegal drugs
- Non-preventable
  - ◆ Age over 55y
  - ◆ Family history of stroke
  - ◆ Male gender

# Stroke symptoms

## What should you watch for?

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Vision trouble  
(blurred, double)



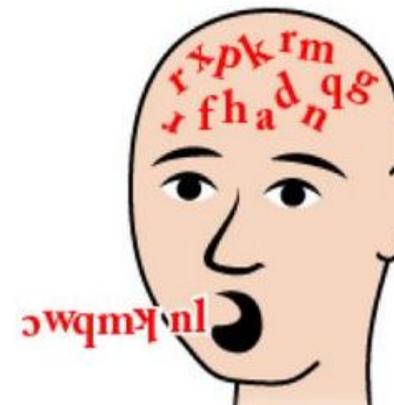
Sudden dizziness,  
walking trouble



Sudden, severe  
headache



Sudden weakness,  
numbness



Sudden trouble speaking,  
confusion

# Stroke

## What are the complications?

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- Falls
- Seizures
- Physical, mental disability
- Depression
- Poor nutrition
- Dysphagia
- Dementia
- Sleep problems
- Sleep apnea

# Stroke

## What should you do?

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**Act fast, call 911**

- Prevent it before it happens
  - ◆ Encourage healthy habits
  - ◆ Compliance with blood pressure meds, sugar control, cholesterol control, heart meds
  - ◆ Encourage to stop smoking



# Vomiting

## What should you do?

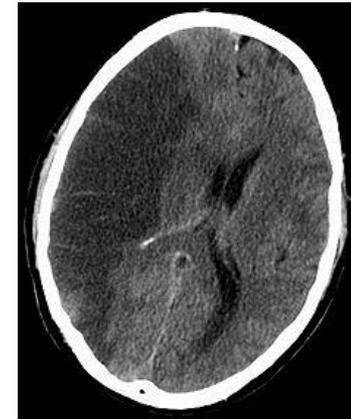
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**Call 911 immediately**

- Vomiting is from poisoning
- Vomiting with symptoms of a possible stroke
- Vomiting with high fever and neck stiffness



The meninges are the membranes covering the brain and spinal cord



# Vomiting

## More on what you should do

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**Call the doctor's office immediately**

- Vomiting on and off into the next day
- Projectile vomiting, blood or bile (stuff from the gall bladder) in the vomit
- Severe abdominal pain
- Signs of severe dehydration
- Inability to retain any fluids for >12 h

