

# Dementias Beyond Alzheimer's

5 HOUR CEU/CE COURSE FOR RCFE, ARF ADMINISTRATORS AND  
NURSES

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# Definitions

DSS = Department of Social Services

RCFE = Residential Care Facility for the Elderly

ARF = Adult Residential Facility

LPA = Licensing Program Analyst

SNF = Skilled Nursing Facility

AB = Assembly Bill

SB = Senate Bill

Resident = anyone living in long-term care

Physician's Report = now termed "medical assessment" (aka LIC 602 or 602A)

Physician = may include "a licensed medical professional acting within their scope of practice" (i.e., Nurse Practitioner or Physician's Assistant)



# Course Objectives

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The main topics that will be covered include, but are not limited to:

- ▶ Discuss these different types of irreversible dementias
  - ▶ Vascular Dementia
  - ▶ Frontotemporal Lobe Dementia
  - ▶ Dementia with Lewy Bodies
  - ▶ Huntington's Disease
  - ▶ Parkinson's Disease

# Course Objectives (cont'd)

The main topics that will be covered include, but are not limited to:

- ▶ Discuss these different types of reversible dementias
  - ▶ Reactions to medications
  - ▶ Metabolic issues
  - ▶ Depression
  - ▶ Infections
  - ▶ Nutritional deficiencies
  - ▶ Alcohol abuse
  - ▶ Normal pressure hydrocephalus



# Course Objectives (cont'd)

The main topics that will be covered include, but are not limited to:

- ▶ Discuss the signs of each type of dementia
- ▶ Discuss how to deal with each type of dementia, including medication options

# Dementia in General





# Dementia in General

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Did you know that there are over 200 different types of dementia\*?



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\*Source: <https://www.dementiauk.org/information-and-support/types-of-dementia/>



An illustration in the background shows a caregiver with short brown hair, wearing a purple t-shirt and blue pants, standing next to a resident. The resident is wearing a brown t-shirt and dark pants, and is using a cane. They are standing in front of a blue car. The entire scene is set against a light blue sky with stylized clouds.

## Dementia in General

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As caregivers, why does it matter if our resident has one type or another? All we care about is getting them in the shower, right?

It **IS** important to know the differences because each type of dementia can cause different behaviors and symptoms, and you need to know how to deal with each one.

# Dementia in General

It is SO important that your resident has an accurate diagnosis of their condition because treatments vary widely depending upon the root cause of the dementia and effective treatment depends entirely upon accurately identifying what type of dementia is present.

Is it reversible? Is it irreversible?



# Dementia in General

You, as a caregiver, are an extremely important part of diagnosis solution.

You should keep a good record of your resident's symptoms and report them to their doctor/medical practitioner. An accurate diagnosis can give your resident a better quality of life!

# Definitions

## What IS "Dementia"????

Prior to 2025: The general term describing the loss of the ability to think, remember, reason and communicate. It's not a *disease*, but a group of symptoms or a syndrome that is caused by certain diseases, conditions or temporary illnesses.

Effective January 1, 2025, DSS now defines "dementia" as:

"....an overall term for diseases and conditions characterized by a progressive decline in memory, language, problem-solving and other thinking skills that are severe enough to interfere with a person's ability to perform activities of daily life. Dementia is a general term referring to "Major Neurocognitive Disorder (major NCD)" ...."



# Definitions Used Throughout This Course

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## New definition (added by DSS to the new 2025 Dementia Regulations):

“**Behavioral expression**” means behavior or behaviors displayed by a resident that may result in harm to self or others including, but not limited to, unsafe wandering.....or elopement.....expressions of frustration, disorientation, hallucinations, or lacking in hazard awareness or impulse control. Behavioral expression may be due to boredom, fear, overstimulation, perceived threat, fatigue, physical discomfort, pain, “**Major Neurocognitive Disorder (major NCD)**”.....or other causes including, but not limited to, medication interactions and/or illnesses such as urinary tract infections.”



# Definitions Used Throughout This Course

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DSS added a brand new term, effective January 1, 2025 to Title 22 regulations:

"**Major Neurocognitive Disorder**" (major NCD) is a clinical term that describes substantially decreased cognitive or mental function due to a medical disease other than a psychiatric illness. Major NCD includes Alzheimer's disease and related disorders diagnosed by a licensed medical professional acting within their scope of practice. Related disorders considered to be major NCDs include, but are not limited to, vascular dementia, Lewy body dementia or Parkinson's disease, and frontotemporal dementia. Major NCDs cause impairment that is sufficient enough to interfere with independence in daily activities and may result in changes that include, but are not limited to, increased tendency to wander and decreased hazard awareness and ability to communicate."



# Definitions Used Throughout This Course

## Degenerative diseases:

Diseases which are characterized by a progressive loss of nerve cells and synapses (i.e., Alzheimer's disease).

Neurodegeneration

## Infectious diseases:

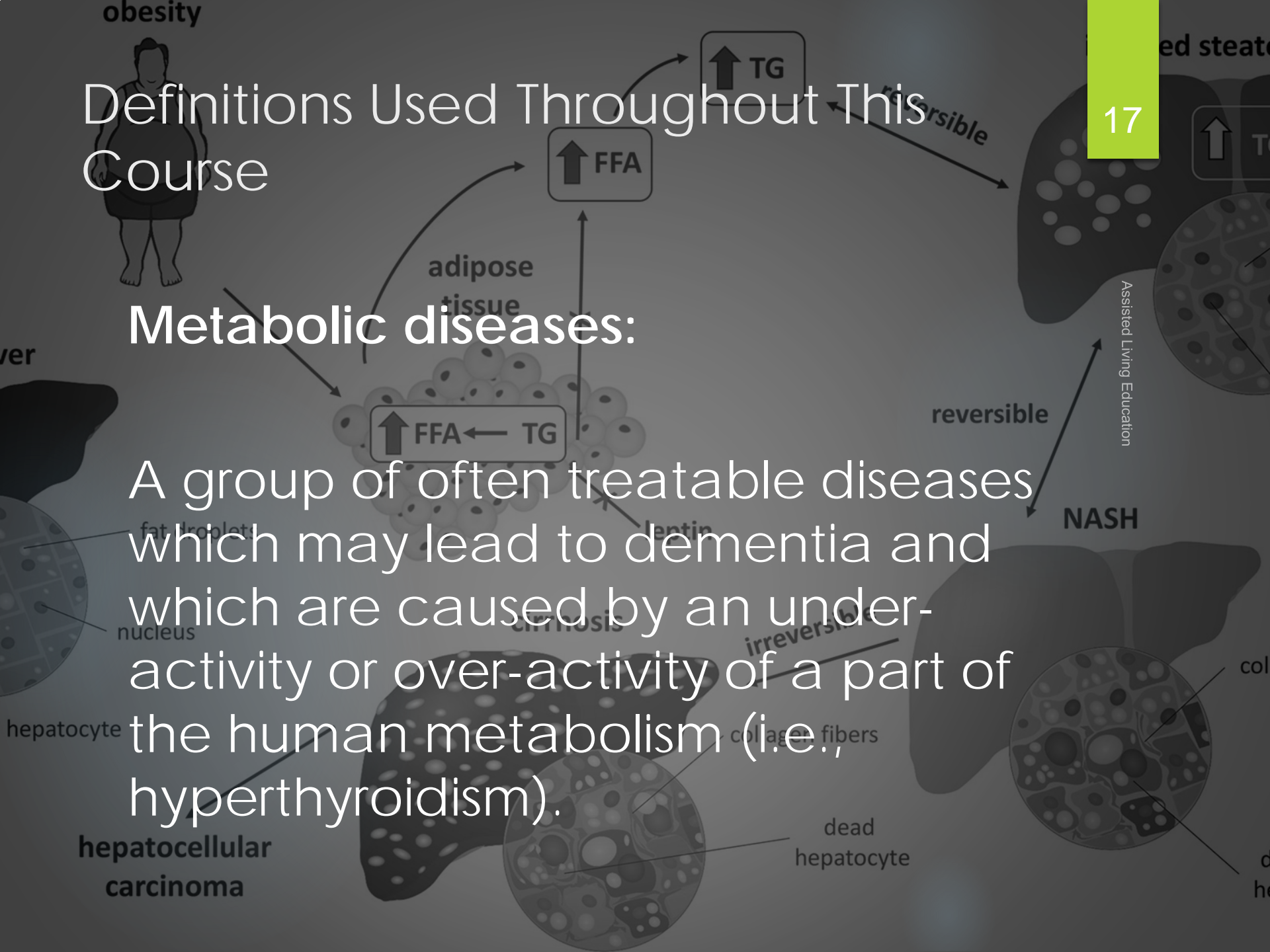
Diseases caused by  
an infectious agent,  
such as a virus or  
prion (i.e., HIV).



# Definitions Used Throughout This Course

## Metabolic diseases:

A group of often treatable diseases which may lead to dementia and which are caused by an under-activity or over-activity of a part of the human metabolism (i.e., hyperthyroidism).



## Traumatic diseases:

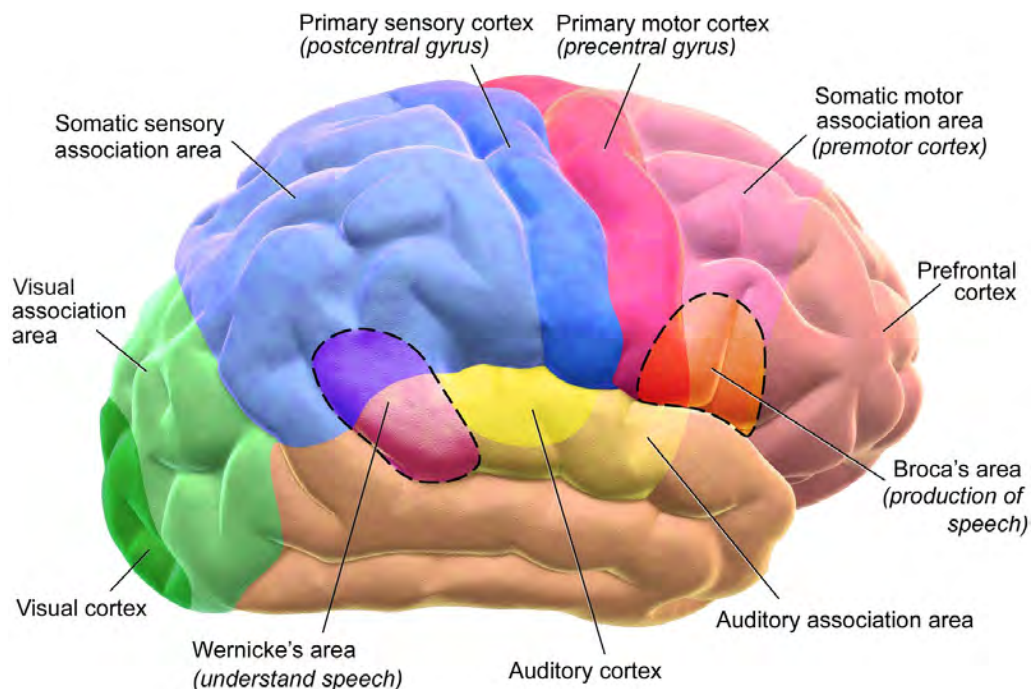
Diseases that are caused by a trauma, such as multiple concussions.



# Definitions Used Throughout This Course

## Cerebrovascular diseases:

Diseases of the blood vessels, arteries or blood supply in the brain, which are the second most common cause for dementia.



# Definitions Used Throughout This Course

## **Irreversible Dementia:**

A disease, injury or illness that causes a permanent dementia, like Alzheimer's disease or a stroke.

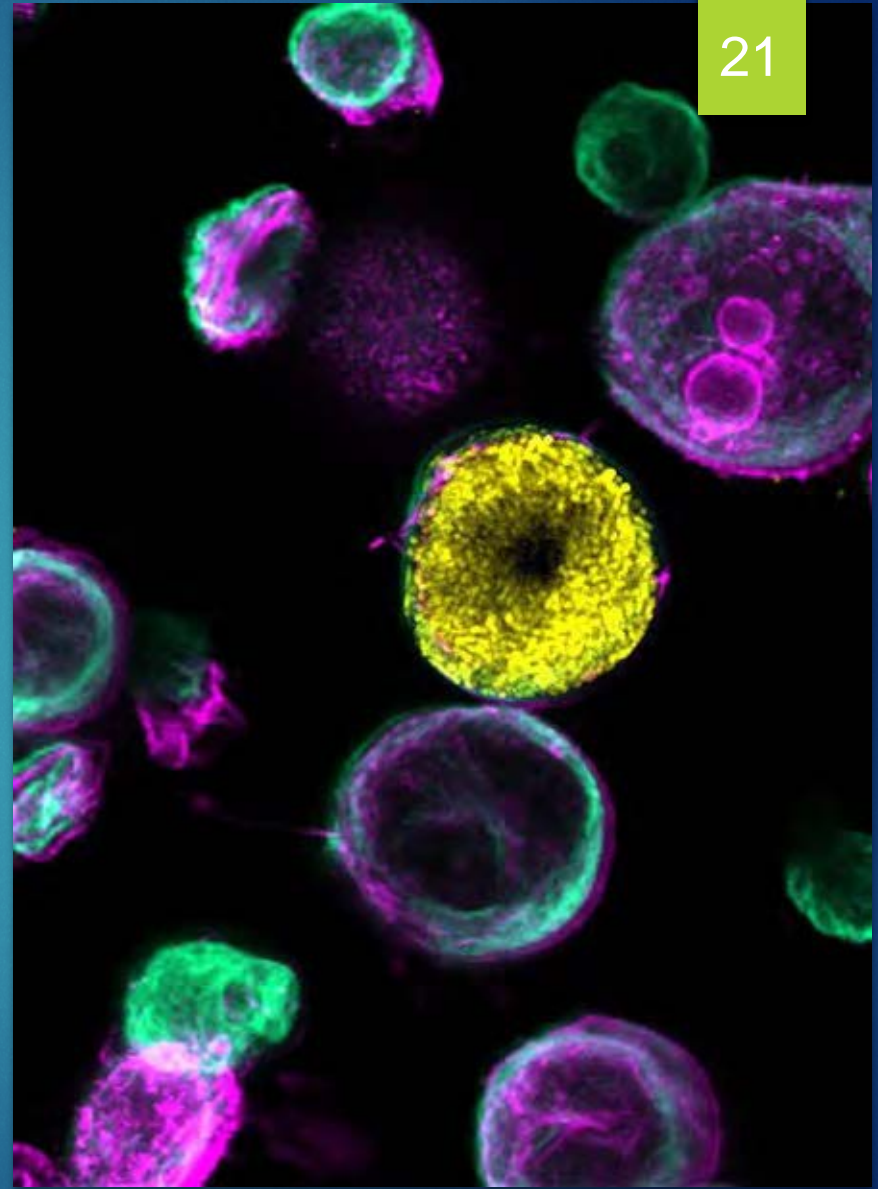




# Definitions Used Throughout This Course

## **Reversible Dementia:**

An injury, illness or condition that causes dementia but can be cured with proper treatment. Examples include substance abuse, infections, such as a UTI, and depression.



# Dementia in General

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- Alzheimer's disease is considered to be the main cause of dementia and according to research, amounts to between 50 and 75% of all cases.
- Vascular dementia is the second most common form of dementia and it is generally accepted that it accounts for between 25-50% of all cases of dementia.

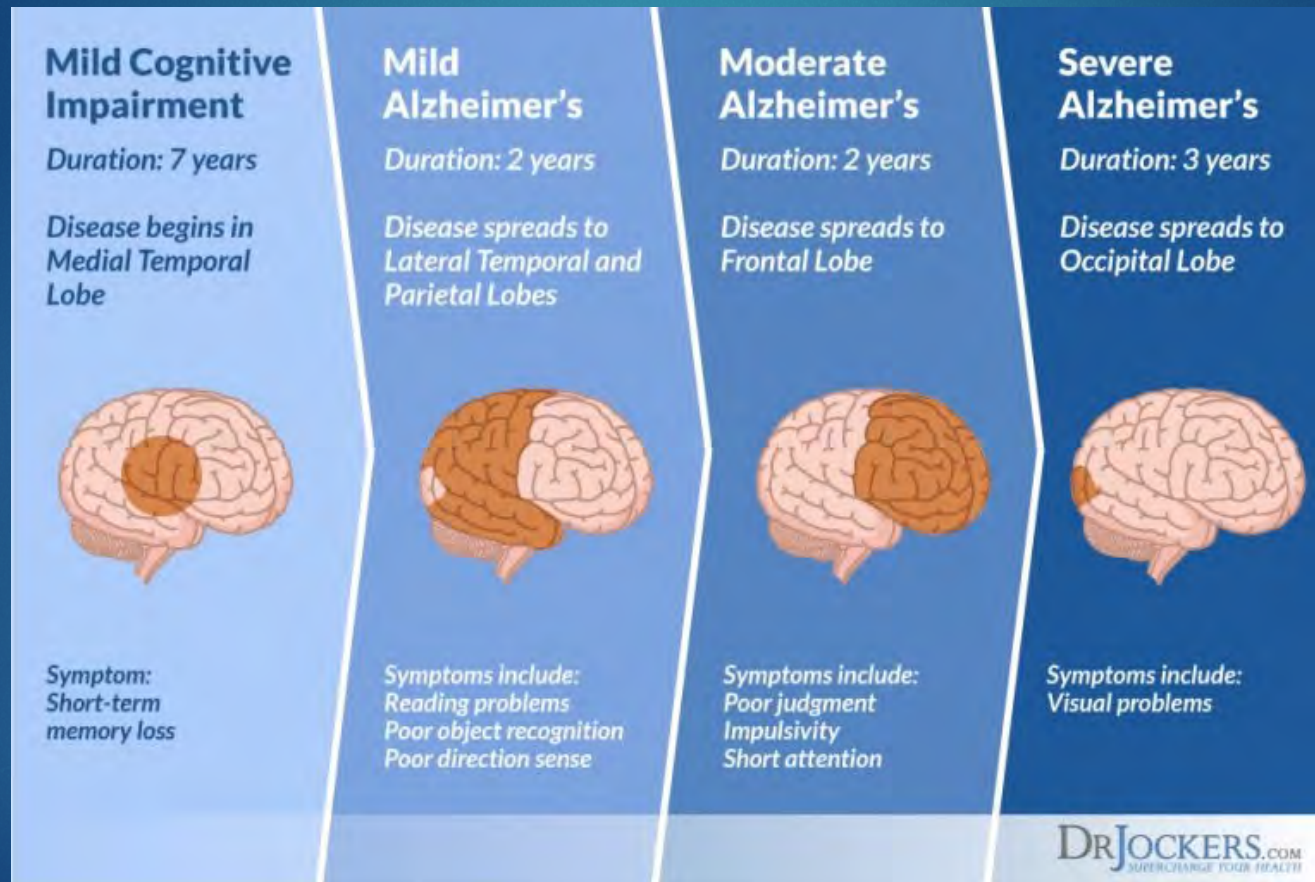
*\*according to Alzheimer-Europe*



# Irreversible Dementias

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# Types of Irreversible Dementias

- ❖ Vascular Dementia
- ❖ Frontol Lobe Dementia
- ❖ Dementia with Lewy Bodies
- ❖ Pick's Disease
- ❖ Huntington's Disease
- ❖ Parkinson's Disease
- ❖ AIDS dementia complex
- ❖ Creutzfeldt-Jakob disease





# Vascular Dementia

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## FACTS\*:

- 2nd most common form of dementia.
- It is generally accepted that it accounts for between 25-50% of all cases of dementia.
- Untreated high blood pressure can account for 50% of all vascular dementias.

\*Source: <https://www.hopkinsmedicine.org/health/conditions-and-diseases/dementia/vascular-dementia#:~:text=Vascular%20dementia%20is%20the%20second,location%20of%20the%20area%20affected.>

# Vascular Dementia (cont'd)

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Vascular dementia is caused by reduced blood flow to the brain – usually from a stroke or series of mini-strokes called “TIA’s”.

If blood supply is blocked for longer than a few seconds, brain cells can die, causing damage to the cortex of the brain - the area that is associated with learning, memory, and language.



# Vascular Dementia (cont'd)

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**TIA** – transient ischemic attack, aka “mini-strokes”



A TIA typically lasts about 2-7 minutes.



The patient may not even know they've had one because it's very short in duration and it passes without lingering symptoms.



A TIA can be followed by a serious disabling stroke within 24-48 hours!

# Vascular Dementia (cont'd)

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## How does a TIA occur?

It may start when a blood clot forms in an artery and blocks it right there or it can travel downstream to the brain or retina...or it could be plaque that breaks off and heads to the brain.

*Plaque – composed of cholesterol, scar tissue and calcium mixed together.*



# Vascular Dementia (cont'd)

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What are the signs of a TIA?

- Numbness in an arm or leg, especially if it spreads to the shoulder or hip.
- Weakness in an arm and leg on the same side.
- Vertigo combined with numbness or weakness on the side of the face, a droopy eyelid or double vision.

# Vascular Dementia (cont'd)

While the mini-strokes may be unnoticeably small, the damage can add up over time, leading to memory loss, confusion, and other signs of dementia.





# Vascular Dementia (cont'd)

Vascular dementia can also result from other conditions that damage blood vessels and reduce circulation, depriving the brain of vital oxygen and nutrients, like:


- ❑ Poorly controlled diabetes
- ❑ High cholesterol
- ❑ High blood pressure



# Vascular Dementia (cont'd)

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The most common type of vascular dementia is called multi-infarct dementia (MID).

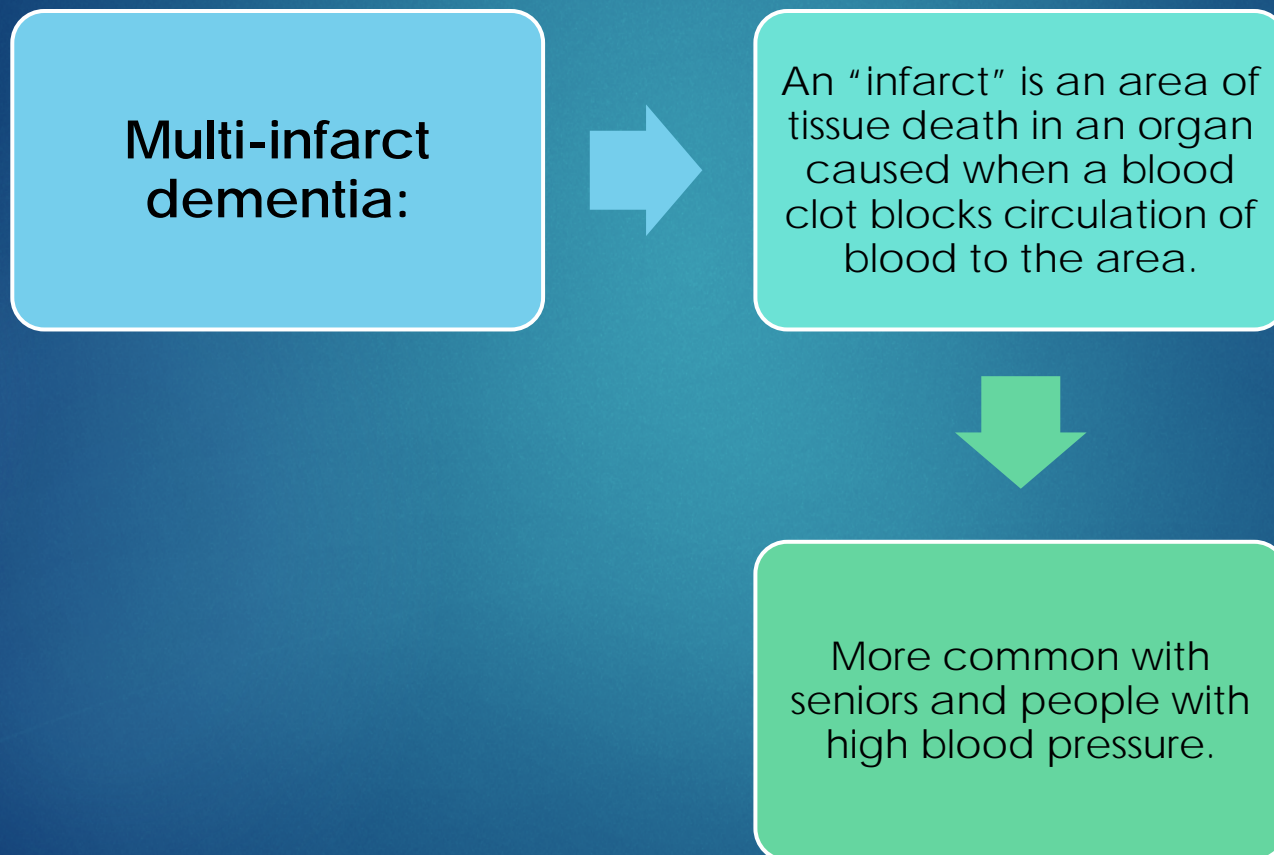


This is a condition in which multiple small clots block blood vessels in the brain, destroying brain tissue.



# Vascular Dementia (cont'd)

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# Vascular Dementia (cont'd)



Symptoms can vary widely, depending on the severity of the blood vessel damage and the part of the brain affected.

Memory loss may or may not be a significant symptom depending on the specific brain areas where blood flow is reduced.



# Vascular Dementia (cont'd)

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Vascular dementia symptoms include:

- Problems with memory
- Confusion
- Wandering at night
- Depression
- Trouble paying attention and concentrating
- Restlessness and agitation
- Unsteady gait



# Vascular Dementia (cont'd)

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## **Vascular dementia symptoms include (cont'd):**

Reduced ability to organize thoughts or actions

Reduced ability to analyze a situation, develop an effective plan, and communicate plan to others

Difficulty deciding what to do next

Sudden or frequent urge to urinate, or inability to control passing urine





## Vascular Dementia (cont'd)

Here is a video clip from Teepa Snow about vascular dementia:

<http://www.youtube.com/watch?v=QTbdgHgmTgw>

# Vascular Dementia (cont'd)

Individuals at highest risk include those who:

- ❑ have had a stroke or a TIA
- ❑ have high blood pressure
- ❑ have high cholesterol
- ❑ have other risk factors for heart or blood vessel disease, like atherosclerosis (it reduces the flow of blood that nourishes the brain)
- ❑ are over the age of 80
- ❑ have diabetes
- ❑ smoke





# Vascular Dementia (cont'd)

Detecting vascular dementia:

There's no specific test that confirms you have vascular dementia, but the physician will conduct:

- Lab tests, such as blood tests for cholesterol and blood sugars and tests for thyroid disorders and vitamin deficiencies





# Vascular Dementia (cont'd)

Detecting vascular dementia.....  
testing (cont'd):

- Neurological exams which include balance, coordination, reflexes, muscle strength, mobility and sense of touch and sight
- Brain imaging, such as CT scans and MRI's
- Carotid ultrasound (used to see if there is blockage of the carotid artery)





# Vascular Dementia (cont'd)

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Detecting vascular dementia..... testing (cont'd):



Neuropsychological tests, assessing for the ability to:

Learn and  
remember  
information

Speak, write  
and understand  
language

Work with  
numbers

Solve a problem

Respond  
effectively to  
hypothetical  
situations

### Treatments and drugs:

- Possible prescription for an Alzheimer's drug, like Aricept
- Treatment for high blood pressure, high cholesterol
- Treatment for diabetes



# Vascular Dementia (cont'd)

## Prevention:

1. Do not smoke or stop smoking.
2. Maintain a healthy blood pressure.
3. Maintain healthy cholesterol levels.
4. Prevent or control diabetes.
5. Physical exercise.
6. Maintain a healthy weight.



# Frontotemporal Dementia

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## Frontotemporal dementia (FTD):

A group of related conditions resulting from the progressive degeneration of the temporal and frontal lobes of the brain.  
(see pic on next slide)

These areas of the brain play a significant role in decision-making, behavioral control, emotion and language.



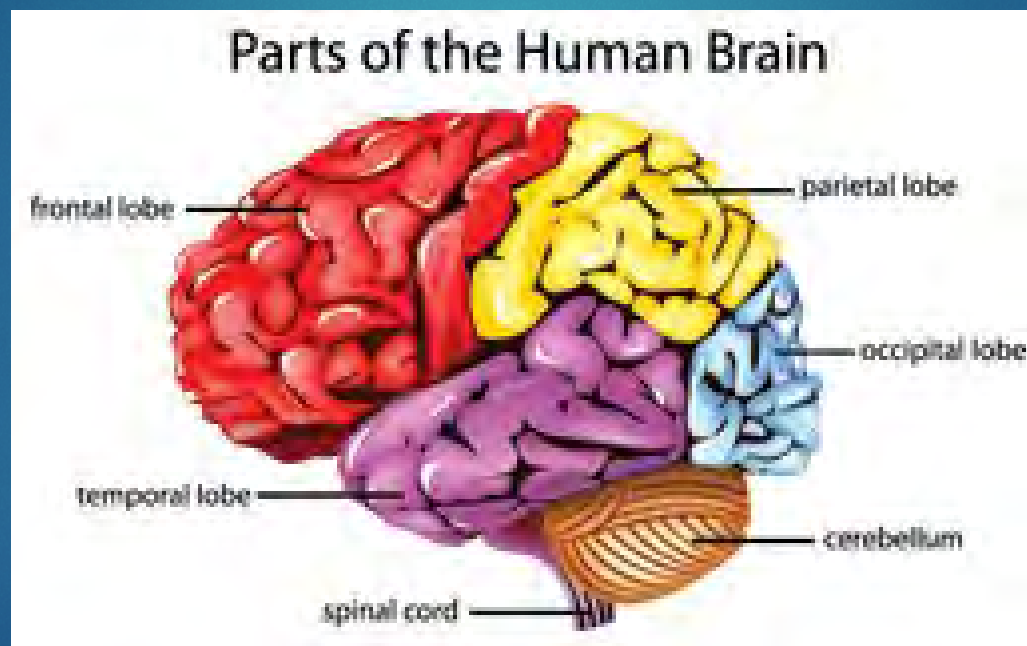
# Frontotemporal Dementia (cont'd)

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Frontal lobe – area behind the forehead

Temporal lobes – regions behind the ears

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# Frontotemporal Dementia (cont'd)

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## According to The Association for Frontotemporal Degeneration\*:

- In people under age 60, FTD is the most common cause of dementia (20-50% of dementia cases).
- Although the age of onset ranges from 21-80, the majority of FTD cases occur between 45-64.
- FTD is a rare but underdiagnosed disease that affects 60,000+ in the U.S. alone.

\*Source: <https://www.theaftd.org/wp-content/uploads/2022/09/FTD-Fact-Sheet-1.pdf>



# Frontotemporal Dementia (cont'd)

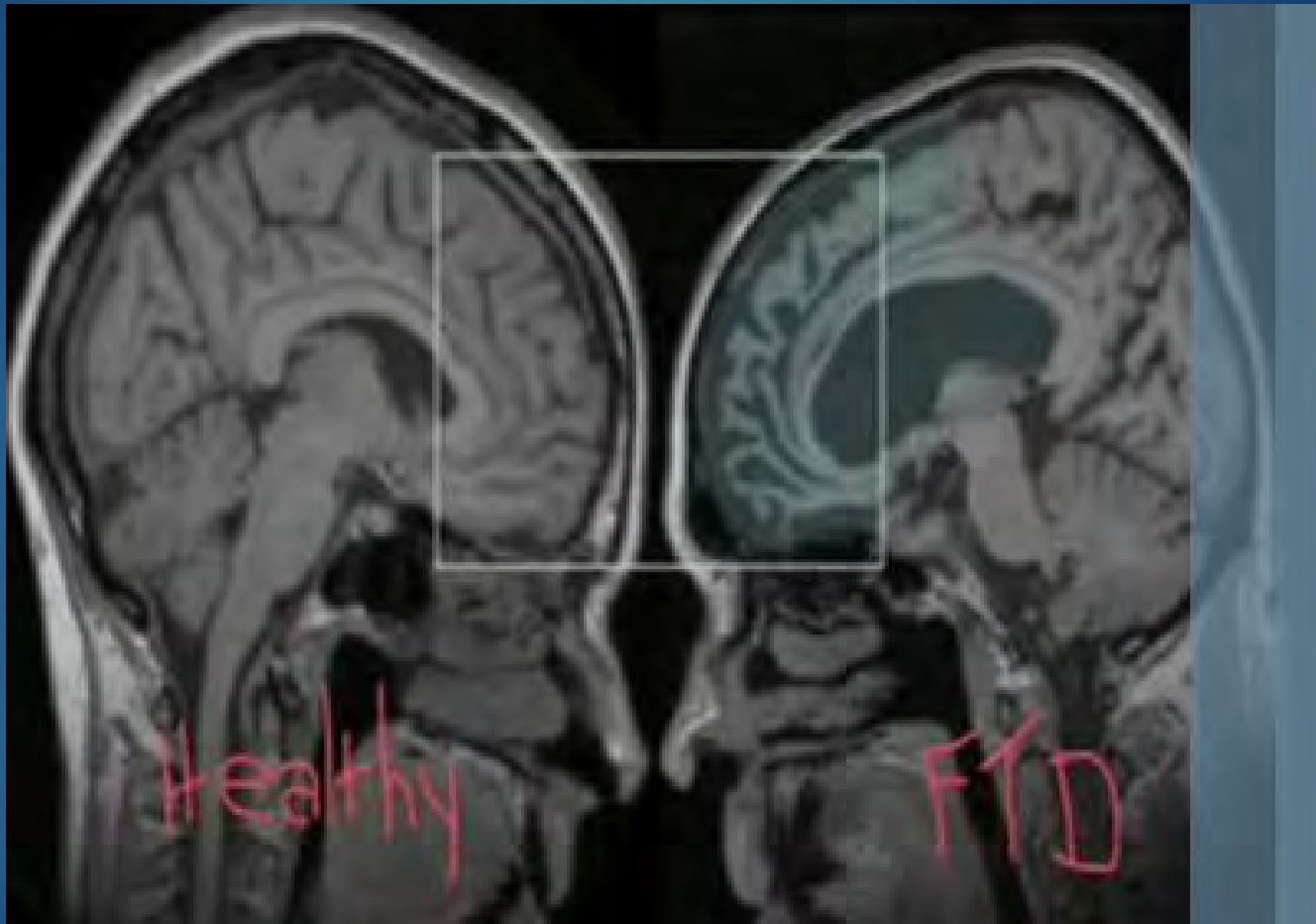
The next slide illustrates what a normal brain looks like versus a brain affected by FTD.

The cell damage caused by FTD leads to tissue shrinkage and reduced function of the brain, as you can see in the next slide.



# Frontotemporal Dementia (cont'd)

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# Frontotemporal Dementia (cont'd)

Due to the symptoms, FTD can be mistaken for Alzheimer's disease, Parkinson's disease or a primarily psychiatric disorder like schizophrenia, depression, manic-depression or obsessive-compulsive disease.



## Frontotemporal Dementia (cont'd)

FTD used to be called Pick's Disease after Dr. Arnold Pick. Some doctors still refer to it as this.



Other terms used to describe it include:



*Frontal lobe disorders;  
frontotemporal disorders; or  
frontotemporal degeneration*



## Frontotemporal Dementia (cont'd)

This type of dementia used to be considered rare, but it's now thought to account for up to 10-15% of all dementia cases, per the Alzheimer's Association.

Cases have been seen as early as 21 and as late as 80, but the disease typically hits during the 40s, 50s and 60s.

# Frontotemporal Dementia (cont'd)

Signs and symptoms:

1. **Apathy.** This is sometimes mistaken for depression. The resident may become emotionally distant, withdrawn and avoid social contact. They most likely will not want to participate in previous hobbies or interests, like Bingo.





## Frontotemporal Dementia (cont'd)

### Signs and symptoms (cont'd):

2. **Decline in personal hygiene.** They may lack a concern for their personal appearance and hygiene and become increasingly unkempt as the disease progresses.

# Frontotemporal Dementia (cont'd)

Signs and symptoms (cont'd):

3. **Disregard for the feelings of others.** They can become very self-centered and unaware of the emotions of others. They can become very inflexible and difficult or laugh when such behavior is inappropriate.





## Signs and symptoms (cont'd):

4. **Impulsive behavior.** They lose their lack of inhibition which could lead them to steal or become sexually promiscuous. They could overeat, touch strangers, steal food off someone else's plates, etc. They may only want to eat sweets.

### Signs and symptoms (cont'd):

- 5. Compulsive behavior.** This might include hoarding, doing or saying the same thing over and over again or pacing.



# Frontotemporal Dementia (cont'd)

Signs and symptoms (cont'd):

6. **Delusional behavior.** They might believe that they have a serious illness, like cancer, and become very fixated on it. They might also become very jealous or have bizarre false thoughts.

## Frontotemporal Dementia (cont'd)

### Signs and symptoms (cont'd):

- **Speech and language problems.** The person with FTD might have impairment or loss of speech and language difficulties. They may difficulty recalling the words for common objects.





## Frontotemporal Dementia (cont'd)

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People with FTD can usually keep track of day-to-day events, are aware of what's going on around them and their language skills and memory usually stay intact until late in the disease.

## Diagnosis:

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# Frontotemporal Dementia (cont'd)

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## Causes and risks:



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graph TD; A[Causes and risks:] --> B[They are unsure what causes FTD.]; B --> C[The only known risk factor for FTD is a family history of the disease; scientists have found several genes linked to FTD.];
```

They are unsure what causes FTD.

The only known risk factor for FTD is a family history of the disease; scientists have found several genes linked to FTD.

# Frontotemporal Dementia (cont'd)

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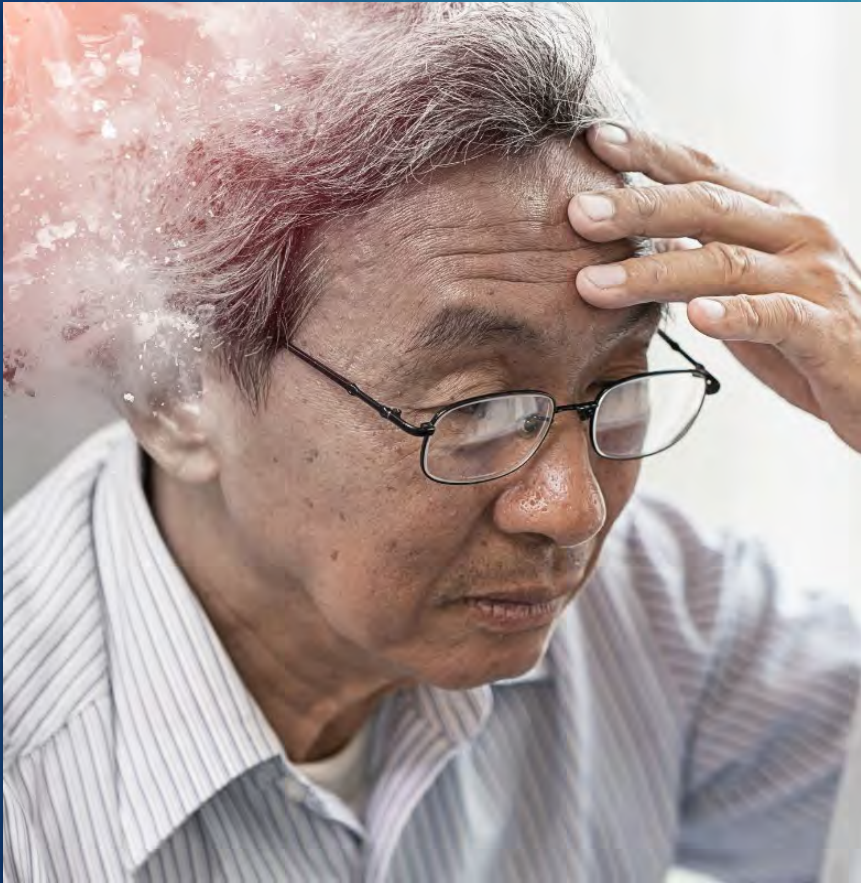
Studies suggest that most people with FTD survive an average of six to eight years\*, but survival can range from two to 20 years\*\*.

\*Source: [https://www.nia.nih.gov/health/frontotemporal-disorders/providing-care-person-frontotemporal-disorder#:~:text=long%2Dterm%20care,-\\_End%2Dof%2Dlife%20care%20for%20a%20person%20with%20FTD,care%20and%20advance%20care%20planning](https://www.nia.nih.gov/health/frontotemporal-disorders/providing-care-person-frontotemporal-disorder#:~:text=long%2Dterm%20care,-_End%2Dof%2Dlife%20care%20for%20a%20person%20with%20FTD,care%20and%20advance%20care%20planning).

\*\*Source: <https://www.theaftd.org/wp-content/uploads/2018/03/Fast-Facts-about-FTD-for-web.pdf>



# Dementia with Lewy Bodies



According to the Alzheimer's Association, most experts estimate that dementia with Lewy bodies is the 3rd most common cause of dementia after Alzheimer's disease and vascular dementia, accounting for 10-25% of cases.

# Dementia with Lewy Bodies (cont'd)

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## Facts of “DLB”:

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Up to 80% of patients suffer vivid hallucinations.

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Average age of onset is 60-85.

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Death usually occurs 5-7 years from onset.

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Just like with Alzheimer's disease, it causes a progressive decline in mental abilities.

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It affects women and men equally.




# Dementia with Lewy Bodies (cont'd)

What is a Lewy body?

- Named after Dr. Frederick Lewy, a neurologist who discovered them while working with Dr. Alois Alzheimer.
- Lewy bodies are tiny, spherical protein deposits found in nerve cells in regions of the brain involved in thinking, memory and movement (motor control).

## Dementia with Lewy Bodies (cont'd)

Lewy bodies are also found in other brain disorders, including Alzheimer's disease and Parkinson's disease.



In fact, because Lewy bodies contain a protein associated with Parkinson's disease and the symptoms are similar, sometimes people are misdiagnosed.



## Dementia with Lewy Bodies (cont'd)

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### Signs and symptoms:

1. Visual hallucinations. Hallucinations may be one of the first symptoms of DLB. The resident may have visual hallucinations, such as seeing colors, shapes, animals or people that aren't there. Some people also may experience sound (auditory), smell (olfactory) or touch (tactile) hallucinations.

# Dementia with Lewy Bodies (cont'd)

## Signs and symptoms:

2. Cognitive problems. Similar to Alzheimer's disease, they may have cognitive problems, such as confusion, reduced attention span and eventually memory loss.





# Dementia with Lewy Bodies (cont'd)



## Signs and symptoms:

3. Movement disorders. Similar to Parkinson's Disease, they may experience tremors, involuntary movements, slowed movement, rigid muscles, a shuffling walk, hunched posture and balance problems. They may have problems with walking and mobility.

# Dementia with Lewy Bodies (cont'd)

## Signs and symptoms:

4. Sleep difficulties. They may develop a sleep disorder called rapid eye movement (REM). This can cause them to physically, and sometimes violently, act out their dreams while they're asleep.



# Dementia with Lewy Bodies (cont'd)

## Signs and symptoms:

5. Fluctuating attention. They may have inconsistent attention levels, frequent episodes of drowsiness, long periods of staring into space, long naps during the day or disorganized speech. Their confusion and alertness can vary from one time of the day to another or from one day to the next.

# Dementia with Lewy Bodies (cont'd)

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## Signs and symptoms:

6. Decreased regulation of body function. Blood pressure, pulse, sweating and digestive process are regulated by a part of the nervous system that is often affected by DLB. This can result in dizziness, falls and bowel issues. It can also affect the nervous system.



# Dementia with Lewy Bodies (cont'd)

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## Causes:

- Researchers have not yet identified any specific causes of DLB.
- Most people with DLB do not have a family history of the disorder.
- No genes linked to DLB have been conclusively identified.

# Dementia with Lewy Bodies (cont'd)

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## Diagnosis:



Like with other types of dementia, there is no single test that can conclusively diagnose DLB.



Doctors diagnose the condition through ruling out other conditions that may cause similar signs and symptoms.



# Dementia with Lewy Bodies (cont'd)

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## Diagnosis (cont'd):

To be diagnosed with DLB, there must be a progressive decline in the ability to think, as well as 2 of the following:

Parkinsonian symptoms

Fluctuating alertness and thinking (cognitive) function

Repeated visual hallucinations

# Dementia with Lewy Bodies (cont'd)

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## Diagnosis (cont'd):

In addition, one or more of the following features are considered supportive of the diagnosis of DLB:

- ▶ REM sleep behavior disorder (a condition in which people act out their dreams during sleep)
- ▶ Autonomic dysfunction, (involves instability in blood pressure and heart rate, poor regulation of body temperature, sweating, and related symptoms)



# Dementia with Lewy Bodies (cont'd)

## Key differences between AD and DLB:

1. Hallucinations – these are more frequent in early stage-DLB than in AD.
2. REM sleep disorder – more common in early stage-DLB than in AD.
3. Memory loss – tends to be more prominent in early AD than in early DLB.

# Dementia with Lewy Bodies (cont'd)

## Key differences between AD and DLB:

4. Movement symptoms – more likely to cause disability issues earlier in DLB.
5. Disruption of the autonomic nervous system (i.e., drop of blood pressure upon standing) – more common in early stage-DLB than in AD.



# Dementia with Lewy Bodies (cont'd)

## Treatments and medications:

Treatment can be challenging, and there's no cure for Lewy body dementia. Instead, doctors treat the individual symptoms with:

1. Cholinesterase inhibitors (as with AD patients);
2. Clonazepam for REM sleep disorders;



# Dementia with Lewy Bodies (cont'd)

## Treatments and medications (cont'd):

3. Anti-depressants to treat depression that usually comes with DLB;
4. Parkinson's disease medications (i.e., Sinemet) can help reduce parkinsonian symptoms, such as rigid muscles and slow movement but could cause increased confusion, hallucinations and delusions;



# Dementia with Lewy Bodies (cont'd)

## Treatments and medications (cont'd):

5. Antipsychotics – used for behavior issues but must be used with extreme care because serious side effects can occur, such as sudden change in consciousness, acute confusion, impaired swallowing and episodes of delusions or hallucinations. They can also cause the involuntary movements, like tremors, to become worse.

# Dementia with Lewy Bodies (cont'd)

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## Caring for your resident:

1. Reduce clutter and distracting noise so the resident can focus and function. It can also reduce the risk that the resident will misperceive objects in the environment and produce behavior similar to hallucinations (like watching TV).



# Dementia with Lewy Bodies (cont'd)

## Caring for your resident:

2. Do not try to convince the resident that there is nothing there when they hallucinate. It is better to try to provide reassurance and alternative distractions.

# Dementia with Lewy Bodies (cont'd)

## Caring for your resident:

3. See if a mobility aid, like a walker, would help them with their balance and mobility issues.





# Dementia with Lewy Bodies (cont'd)

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## Caring for your resident:

4. Create a routine. It may help people with LBD to have predictable routines, especially around meal times and sleep times.
5. To make sleeping easier, limit caffeine, discourage napping, and encourage exercise during the day.

# Dementia with Lewy Bodies (cont'd)

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## Caring for your resident:

6. Enhance communication. When talking with the person with LBD, maintain eye contact. Speak slowly, in simple sentences, and don't rush the response. Present only one idea or instruction at a time. Use gestures and cues, such as pointing to objects.





# Dementia with Lewy Bodies (cont'd)

## Caring for your resident:

7. Encourage participation in games and thinking activities, like games, crossword puzzles and other activities that involve using thinking skills. These may help slow mental decline in people with dementia.

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# Huntington's Disease

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## Facts, according to the Mayo Clinic\*:

- Most people with Huntington's disease develop signs and symptoms in their 40s or 50s.
- Death occurs 10-20 years from onset.
- Named after Dr. George Huntington.
- **Everyone who carries the gene will develop the disease.**

\*Source: <https://www.mayoclinic.org/diseases-conditions/huntingtons-disease/symptoms-causes/syc-20356117>

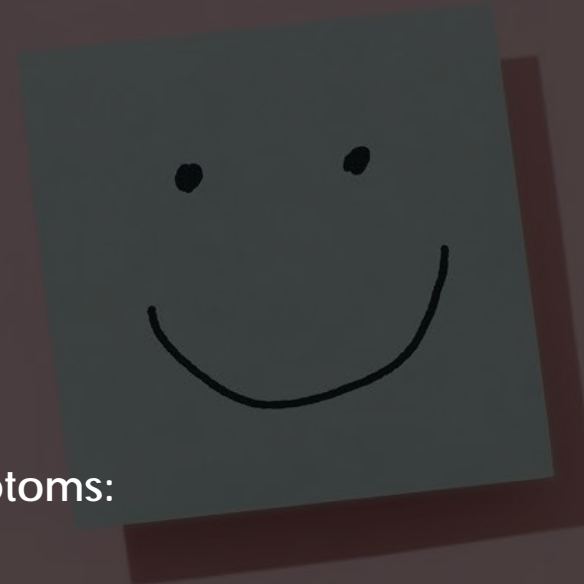
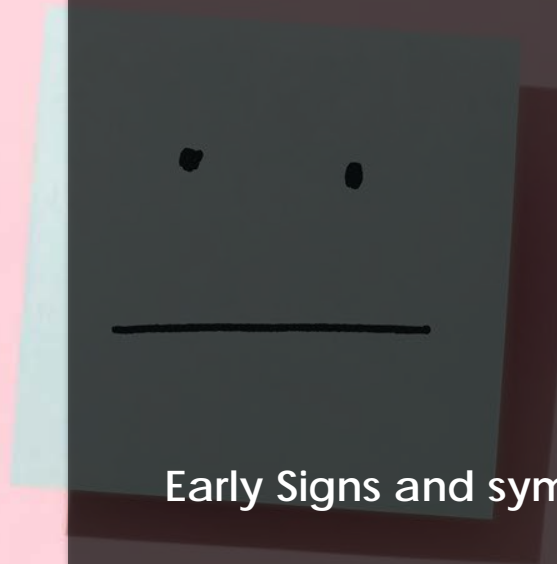


## Huntington's Disease (cont'd)

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Huntington's disease is an inherited disease that causes the progressive breakdown (degeneration) of nerve cells in the brain.

Each child of an HD parent has a 50-50 chance of inheriting the HD gene.



## Early Signs and symptoms:

- ❑ Mood swings
- ❑ Depression
- ❑ Irritability
- ❑ Inability to learn new things, remembering a fact, or making a decision



# Huntington's Disease (cont'd)

## Latter signs and symptoms:

- Concentration on intellectual tasks becomes increasingly difficult.
- Difficulty feeding himself/herself and swallowing.
- Many people with Huntington disease develop involuntary jerking or twitching movements known as *chorea*.

# Huntington's Disease (cont'd)

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## Latter signs and symptoms:

Muscle rigidity

Slow, uncoordinated movements

Slow or abnormal eye movements

Impaired gait, posture and balance

Difficulty swallowing

Depression – because of injury to the brain and subsequent changes in brain function



# Huntington's Disease (cont'd)

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## Cognitive impairment symptoms:

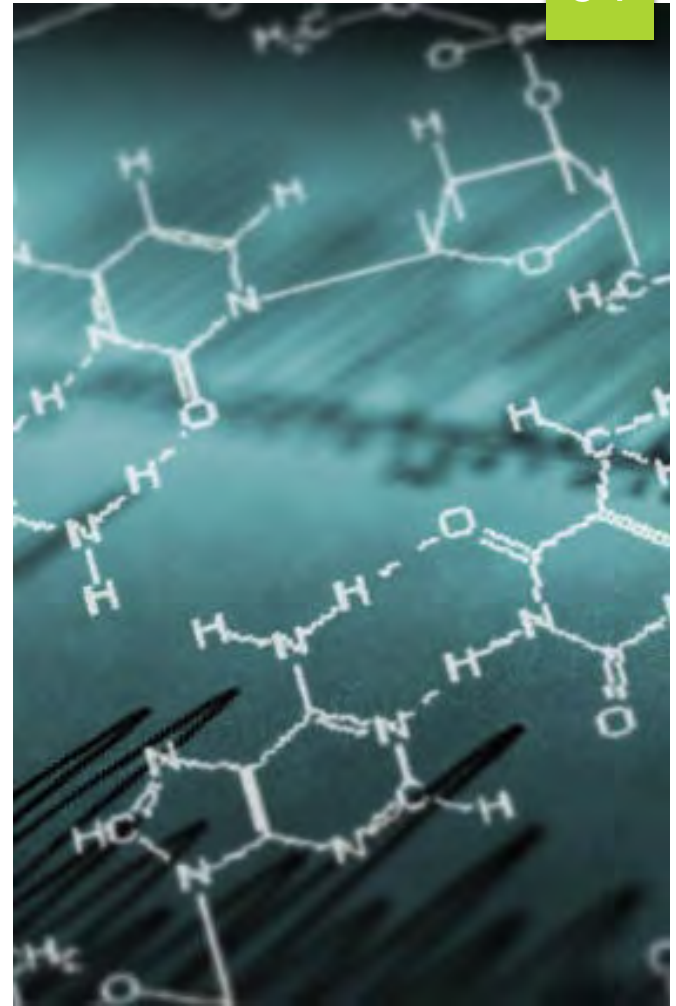
- Difficulty planning, organizing and prioritizing tasks
- Inability to start a task or conversation
- Lack of flexibility, or the tendency to get stuck on a thought, behavior or action
- Lack of impulse control that can result in outbursts, acting without thinking and sexual promiscuity
- Problems with spatial perception that can result in falls, clumsiness or accidents
- Lack of awareness of one's own behaviors and abilities
- Difficulty focusing on a task for long periods
- Slowness in processing thoughts or "finding" words
- Difficulty in learning new information

# Huntington's Disease (cont'd)

## Causes:

Huntington's disease is caused by an inherited defect in a single gene.

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# Huntington's Disease (cont'd)

## Care and Concerns:

The clinical depression associated with Huntington's disease may increase the risk of suicide.

Eventually, a person with Huntington's disease requires help with all activities of daily living and care.

Late in the disease, he or she will likely be confined to a bed and unable to speak.

## Huntington's Disease (cont'd)

### Care and Concerns:

Huntington's disease can significantly impair control of muscles of the mouth and throat that are essential for speech, eating and swallowing.

A speech therapist can help improve their ability to speak clearly and also address difficulties with muscles used in eating and swallowing.





# Huntington's Disease (cont'd)

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## Care and Concerns:

- ➔ Difficulty with chewing, swallowing and fine motor skills can limit the amount of food the resident can eat and increase the risk of choking.
- ➔ Never leave the resident unattended due to the choking hazards.
- ➔ Select foods that are easier to eat and cut into smaller sizes.

# Huntington's Disease (cont'd)

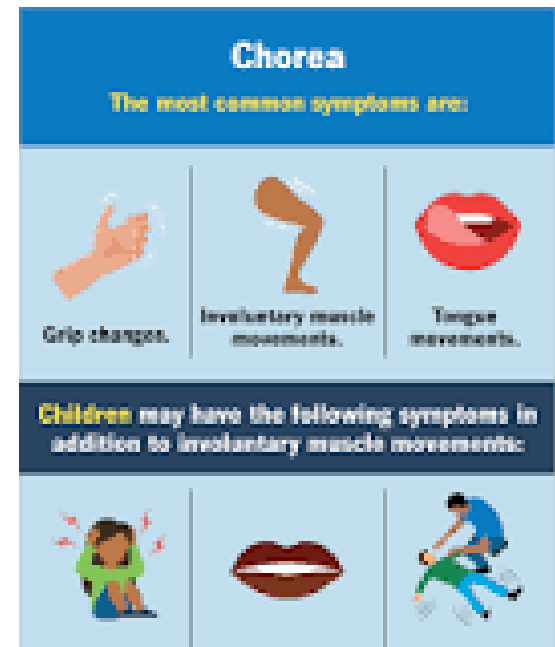
98

## Treatments and Medications:

For the jerking movements (chorea), the doctor may prescribe *Tetrabenazine (Xenazine)*.

Side effects: insomnia, drowsiness, nausea, restlessness.

A serious side effect is the risk of worsening or triggering depression or other psychiatric conditions.





# Huntington's Disease (cont'd)

## Treatments and Medications:

Antipsychotic drugs, such as haloperidol (Haldol) and clozapine (Clozaril), have a side effect of suppressing movements so they may be beneficial in treating chorea.....but, they may worsen the involuntary contractions (dystonia) and muscle rigidity.

# Huntington's Disease (cont'd)

## Treatments and Medications:

The physician may also prescribe an antidepressant, an antipsychotic, or an antianxiety drugs such as diazepam (Valium).





# Parkinson's Disease

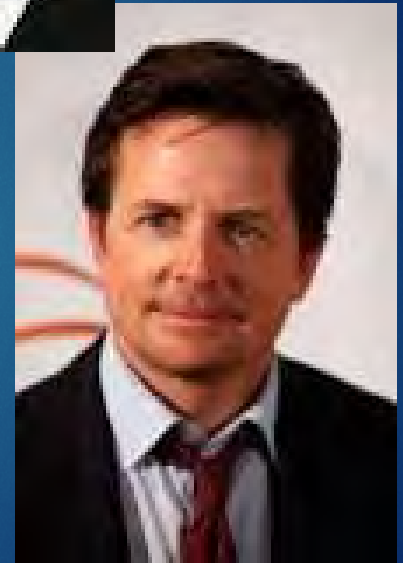
101

Nearly one million people in the US are living with Parkinson's disease.\*

Michael J. Fox is one of them (Mohammed Ali passed away in 2016).

\*Source:

[https://www.apdaparkinson.org/parkinsons-disease-  
registries/#:~:text=You%20may%20have%20heard%  
20the,people%20are%20living%20with%20PD.](https://www.apdaparkinson.org/parkinsons-disease-registries/#:~:text=You%20may%20have%20heard%20the,people%20are%20living%20with%20PD.)



# Parkinson's Disease (cont'd)

102

- Parkinson's involves the malfunction and death of neurons (nerve cells) in the brain, primarily affecting neurons in the an area of the brain called the *substantia nigra*.
- Some of these dying neurons produce *dopamine*, a chemical that sends messages to the part of the brain that controls movement and coordination.
- As the disease progresses, the amount of dopamine produced in the brain decreases, leaving a person unable to control movement normally.



## Parkinson's Disease (cont'd)

103

The disease develops gradually, sometimes starting with a barely noticeable tremor in just one hand.

The tremor may be the most well-known sign of Parkinson's disease, but PD can also cause stiffness or slowing of movement.

## Parkinson's Disease (cont'd)

Scientists are also exploring the idea that loss of cells in other areas of the brain and body contribute to Parkinson's.

Researchers have discovered that the hallmark sign of Parkinson's disease — clumps of a protein *alpha-synuclein*, which are also called Lewy Bodies — are found not only in the mid-brain but also in the brain stem and the olfactory bulb (which control sense of smell and sleep regulation).



# Parkinson's Disease (cont'd)

105

## Causes and Cure:

There is no known cause of PD and no cure to date. Many experts think that the disease is caused by a combination of genetic and environmental factors, which may vary from person to person.

Medications and treatments will be discussed later in this course.

# Parkinson's Disease (cont'd)

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**PD is a progressive disease.**

```
graph TD; A[PD is a progressive disease.] --> B[Some people with PD only have symptoms on one side of the body for many years, but eventually the symptoms begin on the other side.]; B --> C[Symptoms on the other side of the body often do not become as severe as symptoms on the initial side.];
```

Some people with PD only have symptoms on one side of the body for many years, but eventually the symptoms begin on the other side.

Symptoms on the other side of the body often do not become as severe as symptoms on the initial side.





# Parkinson's Disease (cont'd)

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## The early stages:

- ❑ The face may show little or no expression
- ❑ Arms may not swing when walking
- ❑ Speech may become soft or slurred
- ❑ Balance issues

# Parkinson's Disease (cont'd)

## Signs and symptoms:

1. Resting Tremor: In the early stages of the disease, about 70% of patients experience a slight tremor in the hand or foot on one side of the body, or possibly in the jaw or face. A typical onset is tremor in one finger.





# Parkinson's Disease (cont'd)

## Signs and symptoms (cont'd):

1. Resting Tremor (cont'd): A tremor is a shaking or oscillating movement, and usually appears when a person's muscles are relaxed, or at rest, hence the term "resting tremor." The affected body part shakes when it is not performing an action. Typically, the fingers or hand will tremble when folded in the lap, or when the arm is held loosely at the side and at rest.

# Parkinson's Disease (cont'd)

110

## Signs and symptoms (cont'd):

1. **Resting Tremor (cont'd):** The tremor usually stops when a person begins an action, or by keeping the hand in motion or in a flexed grip. The tremor often spreads to the other side of the body as the disease progresses, but usually remains most apparent on the initially affected side. *Note: although tremors are the most noticeable outward sign of the disease, not all people with PD will develop a tremor.*



### Signs and symptoms (cont'd):

2. Bradykinesia: *Bradykinesia* means "slow movement." This can give the appearance of abnormal stillness and a decrease in facial expressivity. Steps may become shorter when walking, or they may have difficulty getting out of a chair. Also, feet may "stick" to the floor while walking, making it difficult to move.





# Parkinson's Disease (cont'd)

112

## Signs and symptoms (cont'd):

3. Rigid muscles: Muscle stiffness may occur in any parts of the body and can limit range of motion and cause pain. People with PD most commonly experience tightness of the neck, shoulder and leg. A person with rigidity and bradykinesia tends to not swing his or her arms when walking.





# Parkinson's Disease (cont'd)

## Signs and symptoms (cont'd):

4. Impaired posture and balance: One of the most important signs of PD is postural instability, a tendency to be unstable when standing upright. The resident's posture may become stooped or may have balance problems.



# Parkinson's Disease (cont'd)

## Signs and symptoms:

5. Speech changes: They may speak softly, quickly, slur or hesitate before talking and speech may be more of a monotone, rather than with the usual inflections. Drooling and excess saliva can occur, resulting from reduced swallowing movements.



### Signs and symptoms:

6. Change in handwriting: Writing may appear small and become difficult. This occurs as a result of bradykinesia, which causes difficulty with repetitive actions.

# Parkinson's Disease (cont'd)

116

## Signs and symptoms:

7. **Mask-like expression:** A person's face may appear less expressive than usual. It can occur because of decreased unconscious facial movements.

Note: a great website to visit for more information is:  
<https://www.parkinson.org/understanding-parkinsons/movement-symptoms/facial-masking>





# Parkinson's Disease (cont'd)

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## Care and Concerns – Mobility:

A person with postural instability has lost some of the reflexes needed for maintaining an upright posture and may topple backwards if jostled even slightly.

Some develop a dangerous tendency to sway backwards when rising from a chair, standing or turning. This may result in a backwards fall. **You will most likely need to assist the resident with mobility ADL's.**



## Care and Concerns – Mobility (cont'd):

People with balance problems may also have particular difficulty when pivoting or making turns or quick movements.



# Parkinson's Disease (cont'd)

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## Care and Concerns – Walking:

Because PD can disrupt the sense of balance, making it difficult to walk with a normal gait, here is what you can do to help:

1. Remind the resident to try not to move too quickly.
2. Tell them to aim for their heel to strike the floor first when they're walking.
3. If you notice them shuffling, stop and check their posture. It's best for them to stand up straight.
4. Have them look in front of them, not directly down, while walking.



# Parkinson's Disease (cont'd)

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## Care and Concerns – “Freezing up”:

- Often, freezing is temporary, and a person can enter a normal stride once he or she gets past the first step.
- Freezing can occur in very specific situations, such as when starting to walk, when pivoting, when crossing a threshold or doorway, and when approaching a chair.
- Some individuals have severe freezing, in which they simply cannot take a step. Freezing is a potentially serious problem in PD, as it may increase a person's risk of falling forward.



### Care and Concerns – Nutrition:

- Serve the resident a nutritionally balanced diet that contains plenty of fruits, vegetables and whole grains.
- Foods high in fiber and drinking an adequate amount of fluids can help prevent constipation that is common in PD.
- A balanced diet also provides nutrients, such as omega-3 fatty acids, that may be beneficial for people with PD.

# Parkinson's Disease (cont'd)

## Risk Factors:

1. **Age.** Young adults rarely experience PD because it ordinarily begins in middle or late life, and the risk continues to increase with age.
2. **Sex.** Men are more likely to develop PD than are women.
3. **Heredity.** Having a close relative with PD increases the chances that you'll also develop the disease. However, your risks are still small unless you have many relatives in your family with the disease.
4. **Exposure to toxins.** Ongoing exposure to herbicides and pesticides may put you at a slightly increased risk.



# Parkinson's Disease (cont'd)

123

## Complications:

1. Dementia usually occurs in the later stages of PD and such cognitive problems are not very responsive to medications.
2. Bladder problems, including being unable to control urine or having difficulty urinating.
3. Many people with PD may experience depression.
4. PD can cause sleep problems, including waking up frequently throughout the night, waking up early or suddenly falling asleep during the day, or rapid eye movement sleep behavior disorder (REM) — acting out dreams.
5. Constipation can occur due to a slower digestive tract.

# Parkinson's Disease (cont'd)

## Treatment Options:

There is no cure for PD but medications can help control the symptoms, often dramatically.

Sometimes surgery is advised, in later cases.



# Parkinson's Disease (cont'd)

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## Treatment Options (cont'd):



Medications can help manage problems with walking, movement and tremor by increasing the brain's supply of dopamine. So why not just give them dopamine?



Unfortunately, dopamine can't be given directly, as it cannot directly enter the brain.

# Parkinson's Disease (cont'd)

## Treatment Options (cont'd):

Levodopa is the most effective PD medication.

It is a natural chemical that passes into the brain and is converted to dopamine.

Levodopa is combined with carbidopa, which protects levodopa from premature conversion to dopamine outside the brain, which prevents nausea.



# Reversible Dementias

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# Types of Reversible Dementias

- ❖ Reactions to medications
- ❖ Metabolic Issues
- ❖ Depression
- ❖ Infections
- ❖ Nutritional deficiencies
- ❖ Alcohol abuse
- ❖ Normal pressure hydrocephalus
- ❖ Brain tumors or subdural hematomas

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# Reactions to Medications

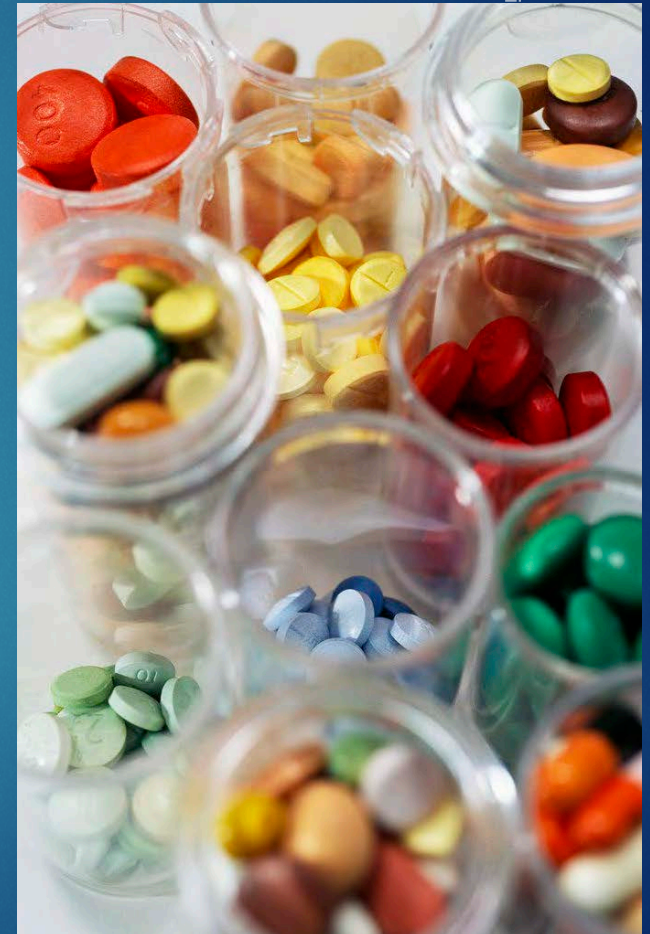
129

Cognitive decline may occur as a reaction to a single medication or because of an interaction of several medications.

Polypharmacy can lead to increased odds of falling, being hospitalized and mortality\*.

\*Source:

<https://www.uspharmacist.com/article/polypharmacy-worsens-symptoms-function-of-patients-with-dementia>



# Reactions to Medications (cont'd)

## *Polypharmacy*\*:

The word *poly* means many, and *pharmacy* refers to medicines, so polypharmacy is when too many (defined as more than 5+) medications are used to treat a person.

\*Source:

<https://www.ncbi.nlm.nih.gov/books/NBK574575/>



# Reactions to Medications (cont'd)

131

The most common culprits are sleeping pills and tranquilizers, but narcotics can cause dementia, also.



Illegal drugs, especially cocaine (which affects circulation and may cause small strokes) and heroin (which is very anticholinergic) may also cause dementia, especially in high doses, if taken for long periods, or in older people.



The withdrawal of the drug usually reverses the symptoms.

# Reactions to Medications (cont'd)

132

The good news is that dementia caused by prescription drug use *may* be stopped by discontinuing the offending medication.

By stopping or modifying the dosage of numerous, frequently prescribed drugs, most patients can be restored to a pre-drug state of mental clarity.



# Reactions to Medications (cont'd)

Why are older people more susceptible to drug-induced delirium and dementia?

1. The body's ability to rid itself of drugs decreases with age, often because of normal age-related decrease in kidney and liver function.
2. Older patients are often prescribed multiple drugs at the same time (polypharmacy), resulting in complicated interactions and enhanced side effects.
3. Older patients' brains may be more sensitive to drugs' effects on the central nervous system.

# Reactions to Medications (cont'd)

Which medications are the worst?

Check out this link:

<http://www.americangeriatrics.org/files/documents/beers/2012AGSBeersCriteriaCitations.pdf>

It is called the Beers List and was created by the American Geriatric Society to help seniors identify potentially hazardous medications for them.



# Reactions to Medications (cont'd)

Also.....

The website:  
[www.worstpills.org](http://www.worstpills.org) lists  
136 of the worst  
offenders (some of which  
will be discussed on the  
next slide).





# Reactions to Medications (cont'd)

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The list includes:

- antihistamines (Benadryl)
- a drug widely used for treating urinary incontinence, tolteridine (Detrol)
- a nausea treatment drug, metoclopramide (Reglan)
- Drugs in the benzodiazepine category such as popular sleeping pills Ambien (zolpidem) and Lunesta (eszopiclone).



## **Dementia-causing medications:**

Benzodiazepines — which include tranquilizers and sleeping pills — have a wide range of effects on the central nervous system.

They are commonly used to treat anxiety in the short-term, and also to sedate critically ill patients or those undergoing surgery.

# Reactions to Medications (cont'd)

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## Dementia-causing medications:

```
graph TD; A[Dementia-causing medications:] --> B[Benzodiazepines (cont'd):]; B --> C[People taking benzodiazepines are at greater risk for developing delirium while hospitalized, and when benzodiazepines are used to treat agitation associated with delirium from other causes, they often make it worse!];
```

## Benzodiazepines (cont'd):

People taking benzodiazepines are at greater risk for developing delirium while hospitalized, and when benzodiazepines are used to treat agitation associated with delirium from other causes, they often make it worse!



### Dementia-causing medications:

Opiates, also called narcotics, are a class of highly effective pain medication that act on the opioid receptor in the brain.

Opiates can cause delirium and the more chronic cognitive changes seen in dementia.

## **Dementia-causing medications:**

Corticosteroids: a type of hormone commonly used to treat severe asthma attacks.

Also used to suppress the immune system including the treatment of auto-immune diseases such as rheumatoid arthritis, but an excess can cause agitation and even actual psychoses.



## **Dementia-causing medications:**

Fluoroquinolone antibiotics are increasingly used to treat a variety of infections and have been linked with delirium in elderly patients.

Examples: Cipro, Levaquin, Cadazolid  
(used to treat C. Diff)

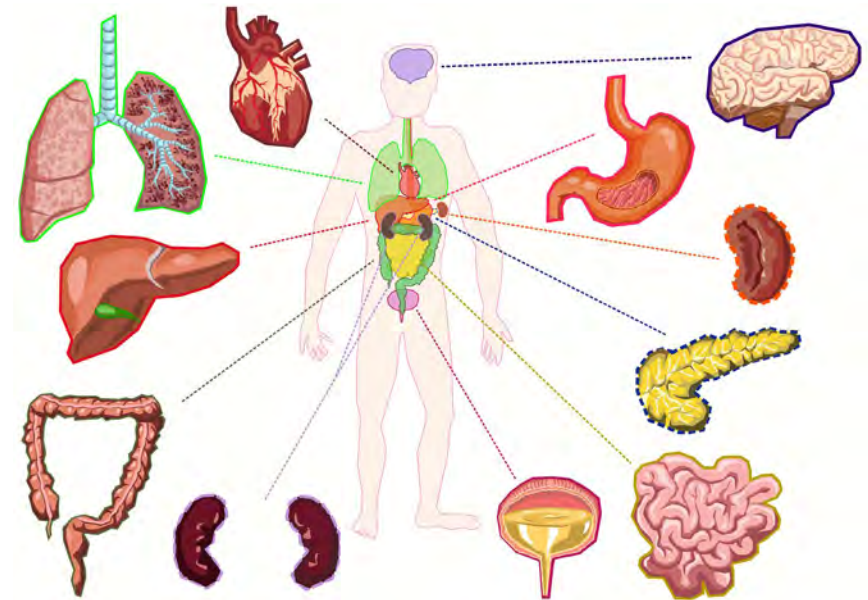
# Metabolic Issues

142

Dementia due to metabolic causes is a loss of brain function that can occur with:

diabetes, thyroid disease,  
and other metabolic disorders.

The term "*metabolic*" refers to the physical and chemical processes in the body.





## Metabolic Issues (cont'd)

Dementia can also be caused by:

- ❖ obesity;
- ❖ hypertension;
- ❖ endocrine disorders, such as Addison's disease or Cushing's disease;
- ❖ too little sugar in the bloodstream (hypoglycemia);
- ❖ heavy metal exposure, such as to lead, arsenic, mercury, or manganese;
- ❖ too low or too high amounts of sodium or calcium; or
- ❖ an impaired ability to absorb vitamin B-12

### Diabetes:

Why would diabetes cause dementia?

There is a strong association between diabetes and vascular dementia, which was discussed earlier in this course.

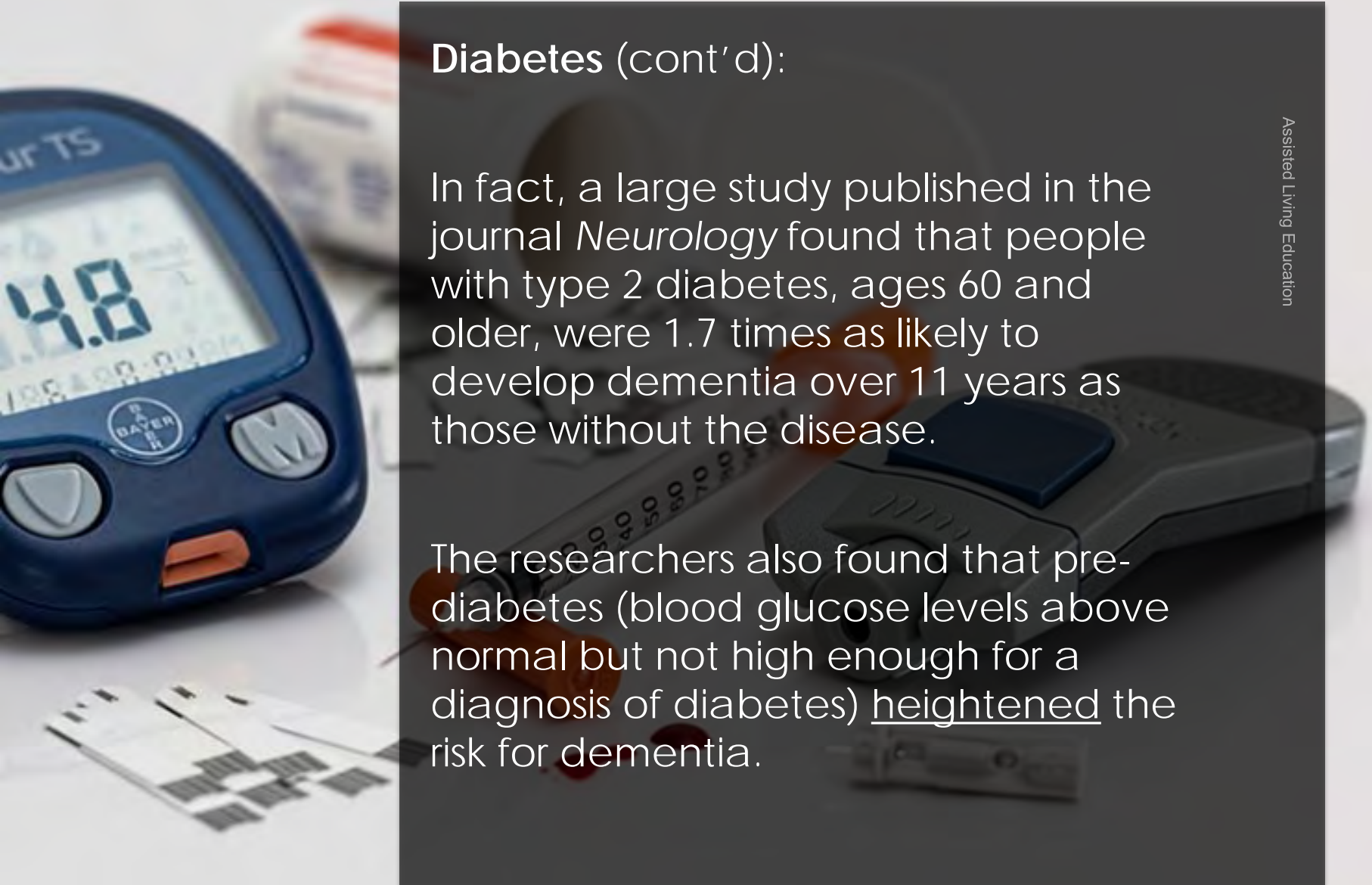
It is *vital* that the person with diabetes control it properly as to not cause vascular dementia.



### Diabetes (cont'd):

In fact, a large study published in the journal *Neurology* found that people with type 2 diabetes, ages 60 and older, were 1.7 times as likely to develop dementia over 11 years as those without the disease.

The researchers also found that pre-diabetes (blood glucose levels above normal but not high enough for a diagnosis of diabetes) heightened the risk for dementia.



# Metabolic Issues (cont'd)

146

## Thyroid disorders:

*Hypothyroidism* is a condition in which the thyroid gland does not make enough thyroid hormone.

This can cause dementia-like symptoms.

In fact, if a resident develops dementia, their thyroid is always checked.



# Metabolic Issues (cont'd)

147

## Vitamin B-12 deficiencies:

If a person is deficient in Vitamin B-12 or cannot absorb vitamin B-12 properly, they may develop dementia.

Vitamin B12 has many important functions in the body. It helps keep levels of the amino acid homocysteine in check, which may help decrease heart disease risk, and it is essential to the production of red blood cells, which carry oxygen through the blood to the body's tissues.





# Metabolic Issues (cont'd)

148

## Vitamin B-12 deficiencies (cont'd):

How does someone become deficient?

Typically, it occurs in people whose digestive systems do not adequately absorb the vitamin from the foods they eat. This can be caused by:

- Anemia
- Gastritis
- Conditions affecting the small intestine, such as Crohn's disease, celiac disease
- Alcoholism
- A Vegetarian diet



# Metabolic Issues (cont'd)

149

Diseases of the liver, pancreas, or kidneys can lead to dementia by disrupting the balances of salts (for example, sodium and calcium) and other chemicals (like low glucose levels) in the blood.

If the underlying disease persists, however, brain cells may die, and the person will develop dementia.



# Depression

Since depression and dementia share many similar symptoms, including memory problems, sluggish speech and movements, and low motivation, it can be difficult to tell the two apart.

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# Depression (cont'd)

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## Is it Depression or Dementia?

### Symptoms of Depression

- Mental decline is relatively rapid
- Knows the correct time, date, and where he or she is
- Difficulty concentrating
- Language and motor skills are slow, but normal
- Notices or worries about memory problems

### Symptoms of Dementia

- Mental decline happens slowly
- Confused and disoriented; becomes lost in familiar locations
- Difficulty with short-term memory
- Writing, speaking, and motor skills are impaired
- Doesn't notice memory problems or seem to care

# Depression (cont'd)

Recognizing depression in the elderly starts with knowing the signs and symptoms. Depression red flags include:

- Sadness
- Fatigue
- Sleep disturbances
- Abandoning or losing interest in hobbies or other pleasurable pastimes
- Social withdrawal and isolation
- Weight loss or loss of appetite
- Loss of self-worth (worries about being a burden, feelings of worthlessness, self-loathing)
- Fixation on death; suicidal thoughts or attempts



Because depression in the elderly is often linked to physical illness, which can increase the risk for depression, make sure you help them get medical attention.

This can result in an antidepressant medication prescription or counseling/therapy services.

# Infections

Infections of brain structures, such as encephalitis and meningitis, can cause dementia.

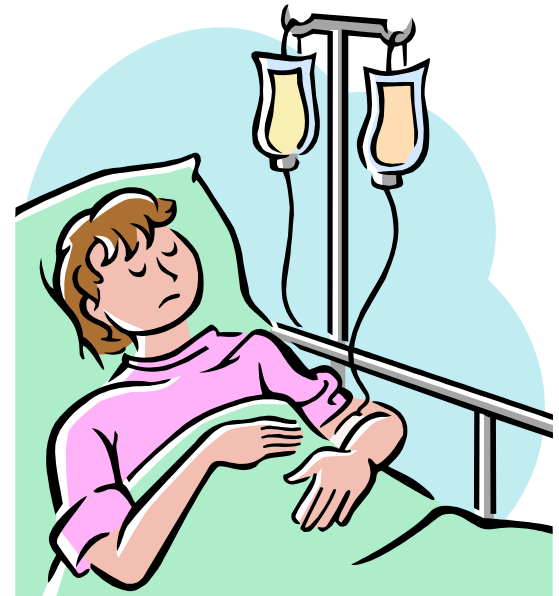
Other infections, such as HIV/AIDS and syphilis can also affect the brain.

Why? Because inflammation of the brain from these infections causes damage to brain cells.



# Infections (cont'd)

- ▶ Confusion can be a symptom of an infection and needs to be brought to the attention of the physician.
- ▶ Other possible infections include: UTI's, cold and flu, staph, etc. Also, dehydration can cause confusion.





# Nutritional Deficiencies

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Poor nutrition and/or eating habits can either cause dementia or worsen dementia.

If someone is malnourished, or has anorexia, they are not getting or absorbing the necessary nutrients for brain health.

Also, dehydration can cause dementia and confusion.



Excessive drinking over a period of years may lead to a condition known as Alcohol Dementia, which can cause problems with memory, learning and other cognitive skills.

Nutrition problems which often accompany long-time alcohol abuse can be another contributing factor, since parts of the brain may be damaged by vitamin deficiencies.

# Alcohol Abuse (cont'd)

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Alcohol Dementia is also sometimes known as *Wernicke-Korsakoff Syndrome* and can include symptoms caused by alcohol withdrawal.

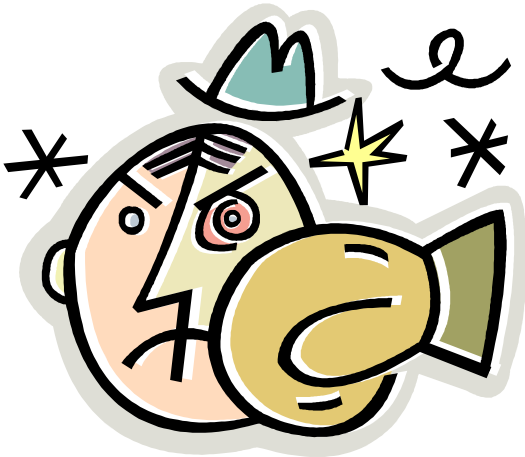
The cause is generally attributed to malnutrition, especially lack of vitamin B-1 (thiamine), which commonly accompanies habitual alcohol use or alcoholism.

In this type of dementia, abstinence may partly restore mental functioning



# Normal Pressure Hydrocephalus

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- Hydrocephalus = "water on the brain" - an excess of cerebrospinal fluid around the brain.
- Can result from head trauma, brain hemorrhage, or meningitis (inflammation of the membrane covering the brain), but most cases occur spontaneously without an obvious preceding illness.

## Normal Pressure Hydrocephalus (cont'd)

### Tell me more....

The brain floats in a clear fluid called cerebrospinal fluid; this fluid also fills internal spaces in the brain called cerebral ventricles.

If too much fluid collects outside the brain, it causes hydrocephalus.

This condition raises the fluid pressure inside the skull and compresses brain tissue from outside. It may cause severe damage and death.



# Normal Pressure Hydrocephalus (cont'd)

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## Tell me more....

If fluid builds up in the ventricles, the fluid pressure remains normal ("normal pressure hydrocephalus"), but brain tissue is compressed from within.

Shunt surgery, which delivers cerebrospinal fluid from the head to the abdomen or heart, may help the symptoms.

## Normal Pressure Hydrocephalus (cont'd)

In addition to developing dementia, people with this condition lose bladder control and walk in a slow, hesitant manner, as if their feet are stuck to the floor.



# Brain Tumor or Subdural Hematoma

## Brain Tumors:

- Can interfere with cognitive functioning and cause personality changes.
- Depending on their location, they can trigger other symptoms, such as headaches, seizures, or vomiting.
- However, the first symptoms of slow-growing tumors frequently resemble dementia, especially in older people.

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# Brain Tumor or Subdural Hematoma (cont'd)

## Subdural Hematoma:

- *Hematomas* = blood clots caused by bruising.
- When located in the subdural area, between the brain surface and the thin membrane that covers it (the dura), they can cause symptoms that mimic Alzheimer's disease.
- Such subdural hematomas can also be life-threatening, causing coma and death.



# Brain Tumor or Subdural Hematoma (cont'd)

## Subdural hematomas (cont'd):

- Elderly people sometimes develop subdural hematomas after a very minor (and, therefore, often forgotten) head injury.
- As blood oozes into a closed space, the hematoma enlarges and begins to interfere with brain function. Removing the clot within weeks of the injury may restore mental function.
- However, the symptoms often evolve so slowly that diagnosis is delayed for months.

# Caregiving



# Caregiving

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Because you, the caregiver, know your residents the best, you need to be aware of any change to their medical or emotional health and report them to their physician/medical professional immediately.



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# Sources

168

California Department of Social Services  
Alzheimer's Association  
Dementia UK  
USPharmacist.com  
Mayo Clinic  
Cleveland Clinic  
WebMD  
Parkinson's Foundation  
National Institute on Aging  
Alzheimer's Society  
World Health Organization  
Alzheimer's.gov  
Johns Hopkins Medicine  
National Institute of Neurological Disorders and Stroke

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# Conclusion

Assisted Living Education  
thanks you for attending  
this Class.

We look forward to seeing  
you again at another one  
of our Courses!

