

Why are our senses important for cognitive health?

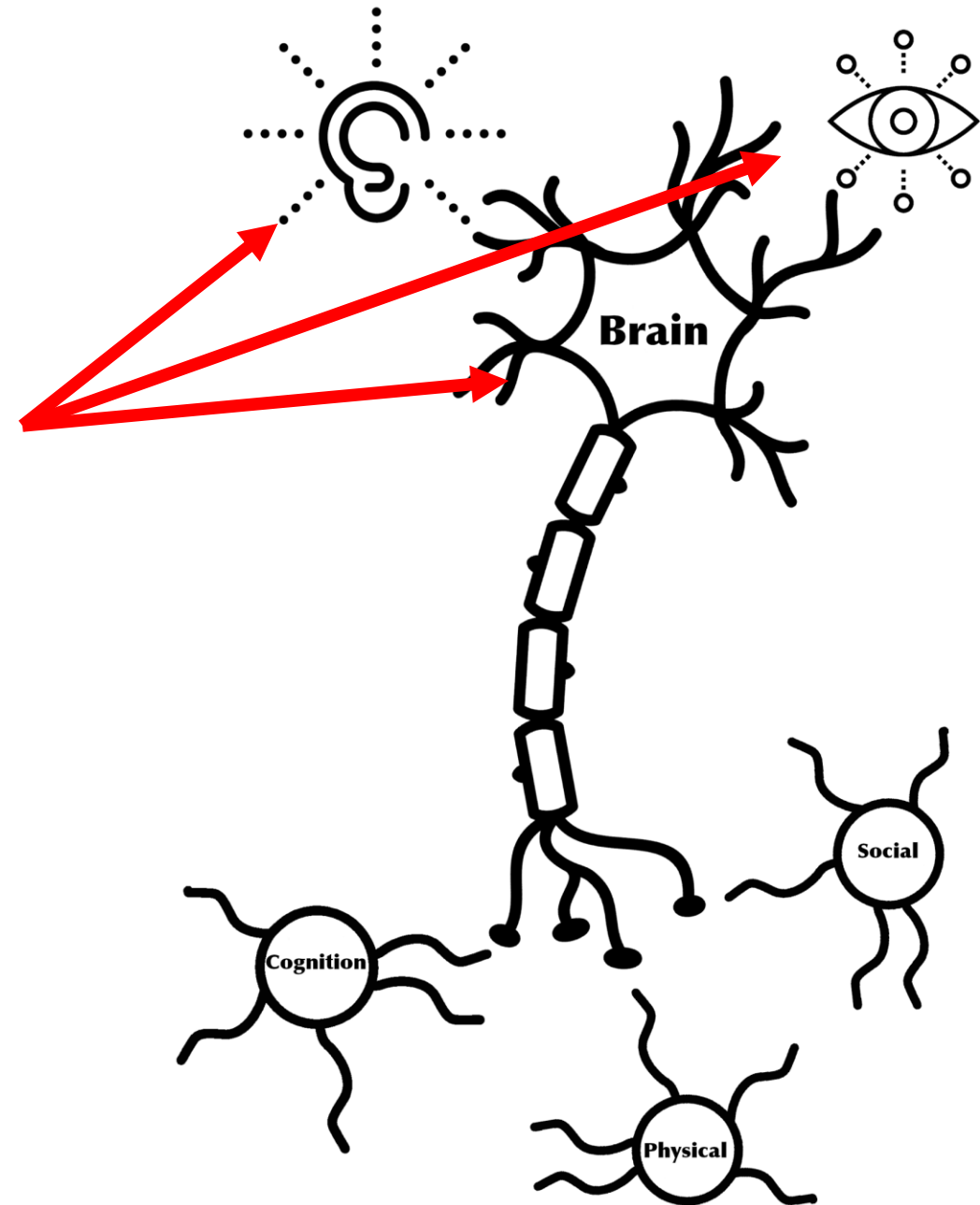
Dr. Natalie Phillips
Professor and
Neuropsychologist



Dr. Walter Wittich
Low Vision Therapist

What can we do to
keep our mind healthy?

Be mentally active
Be physically active
Be socially active



Staying ACTIVE depends on many things

Including your **vision** and your **hearing**

One of our clients told us:

*“When you are hard of hearing you struggle to hear;
When you struggle to hear you get tired;
When you get tired you get frustrated;
When you get frustrated you get bored;
When you get bored you quit.
-- I didn't quit today.”*

The sense & the brain

- Our senses connect us
 - To each other (e.g., dancing, talking)
 - To the world (e.g., walking in the forest, driving in traffic)
 - To ourselves (e.g., guiding our hands to reach for a cup)

The sense & the brain

- Our senses tell the brain about the world
- The senses and the brain work together so we can live our lives optimally
- Hearing and vision difficulties make it harder for the brain to do its job

Cognitive changes in aging



Leonard Cohen

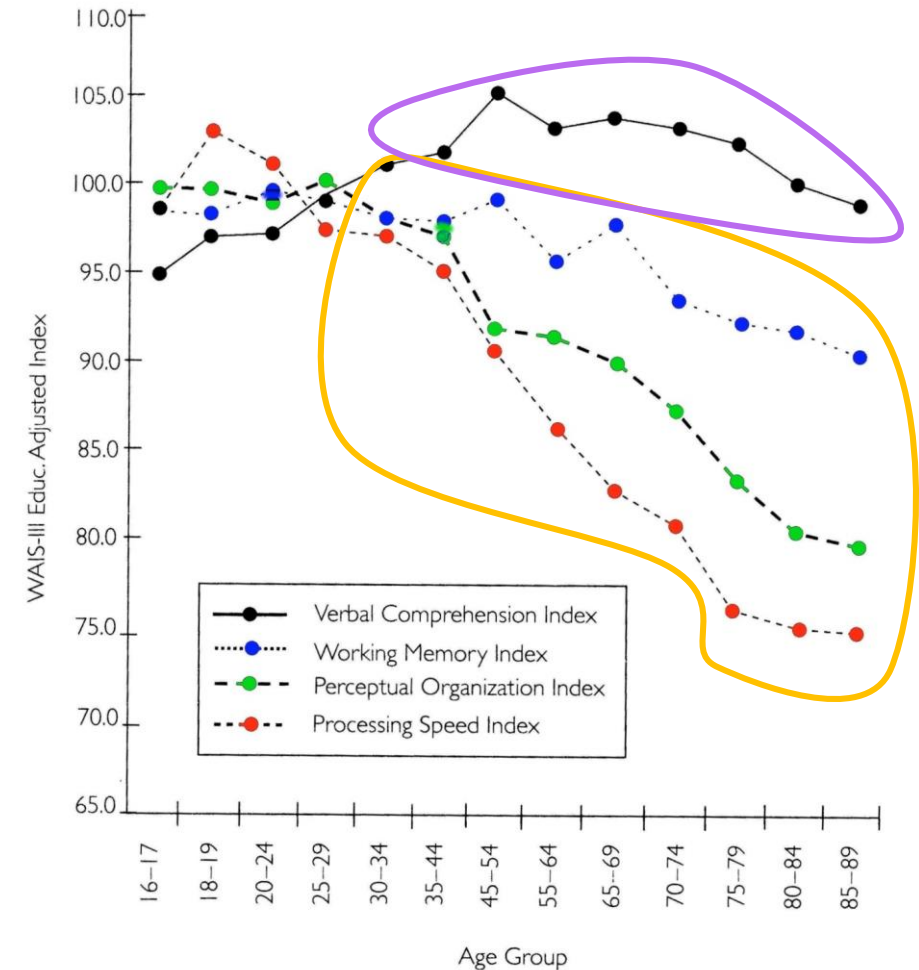


Margaret Atwood

- The majority of older adults maintain their cognitive function
- Mild changes in cognition as we get older are *normal*

Cognitive changes in aging

- Changes include **losses** but also **gains**

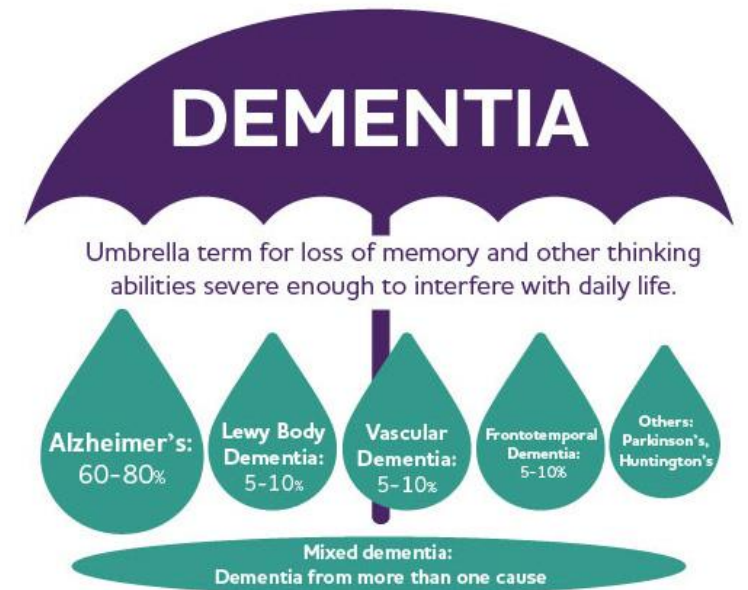


What is Dementia?

Dementia

- Impairment in two or more areas of cognition or behavior
- A decline from previous levels of functioning
- Symptoms interfere with everyday functional activities

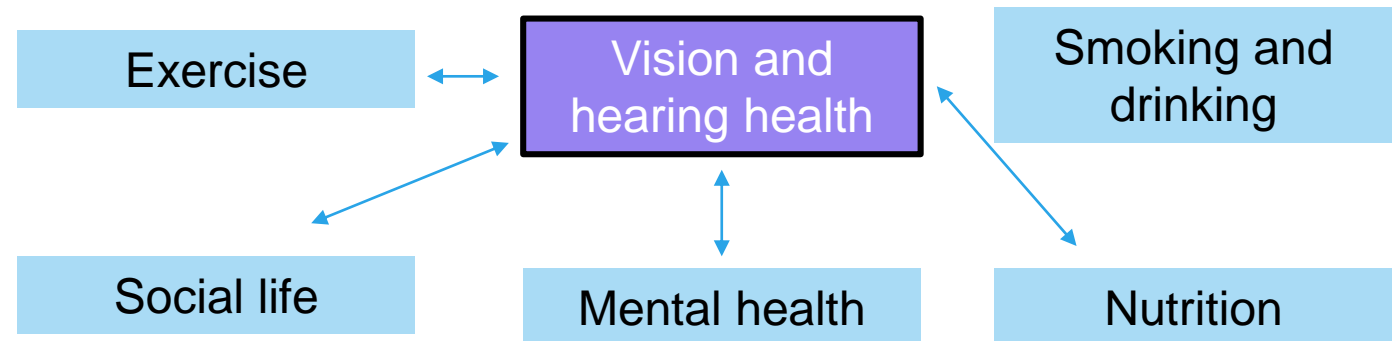
Dementia is due to different diseases in the brain (e.g., Alzheimer's disease)



Age is the biggest risk factor but dementia is *not* the same thing as aging

Dementia: Reduce the risk

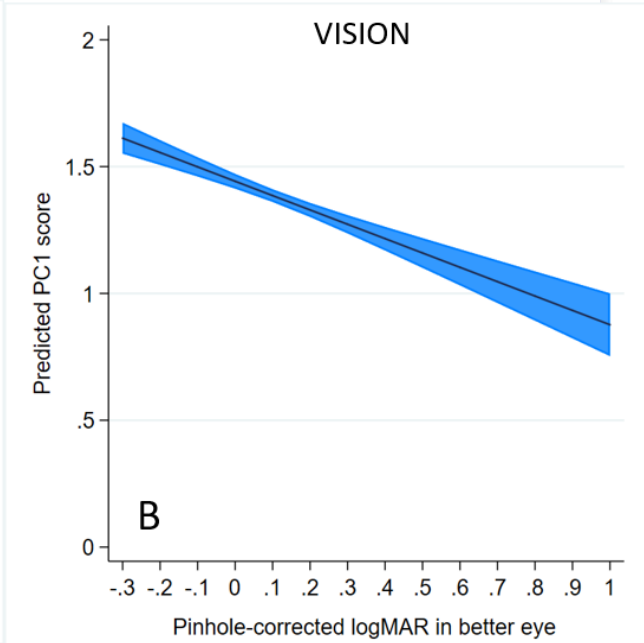
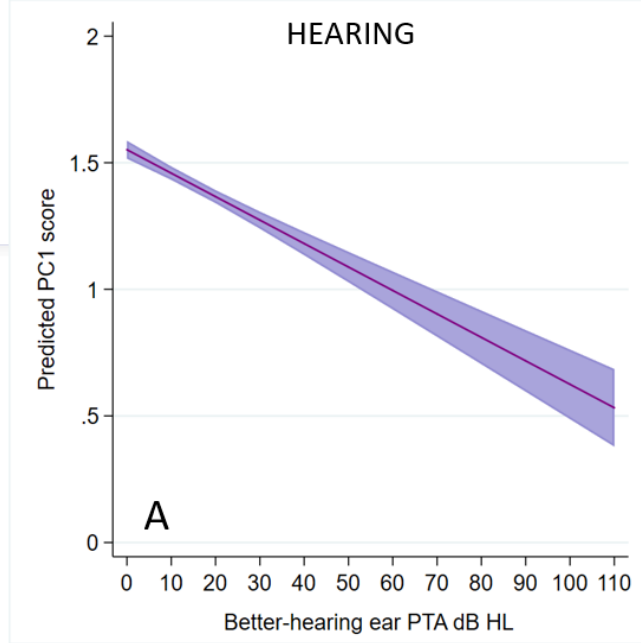
“40% of dementia is attributable to the combination of 12 modifiable risk factors.”



Why would this be?



EXECUTIVE FUNCTION



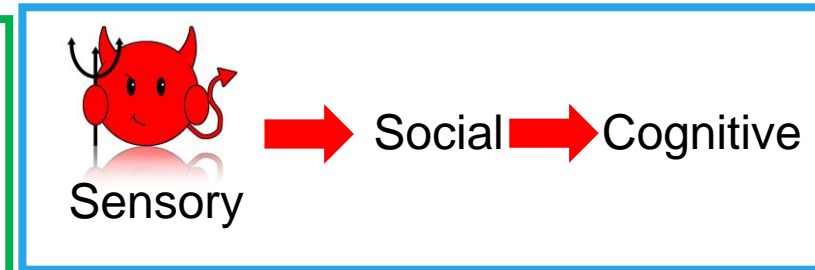
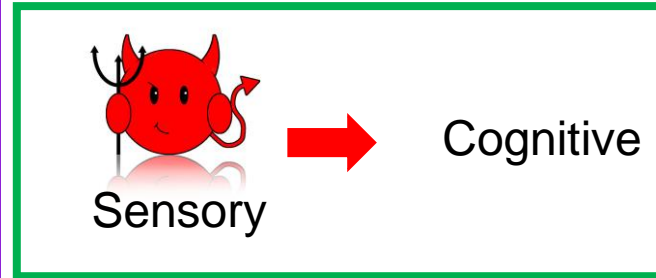
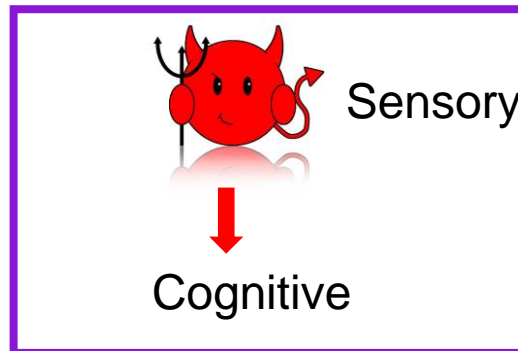
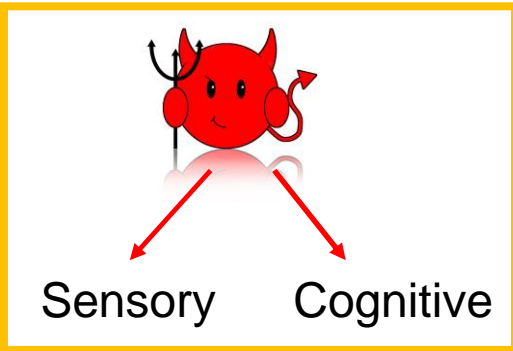
Consider Sally and Joan who are the same age, sex, education, health status, etc. However, Joan has a moderate hearing loss.

*Joan will have a harder time on tests of problem solving and multi-tasking; in fact, she would perform as if she is **five years older** than Sally.*

She will have more difficulty remembering information, too.

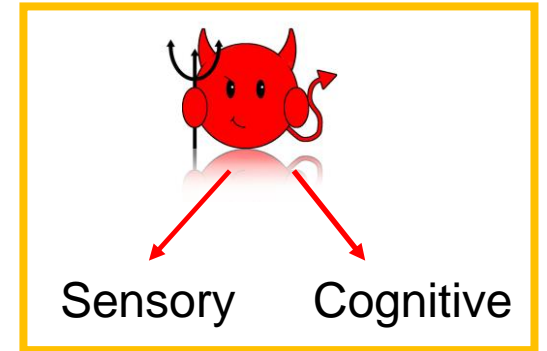
Why might sensory health and brain health be related?

There could be a few reasons



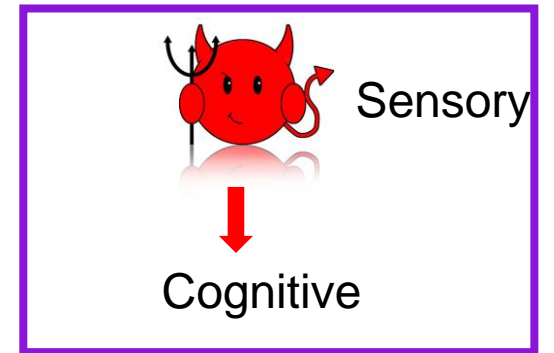
Why might sensory health and brain health be related?

1. Aging, in general, causes changes in both the cognitive and sensory domain
(**Common Cause Reason**)



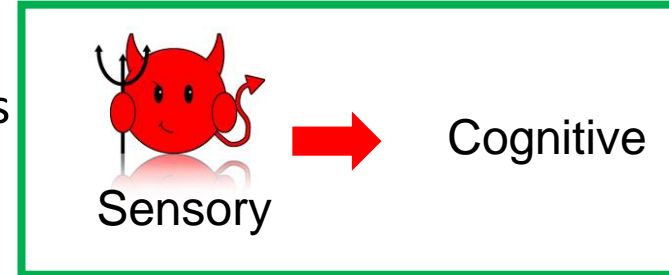
Why might sensory health and brain health be related?

2. Sensory loss causes immediate difficulties for cognitive tasks
(**Information Loss Reason**)



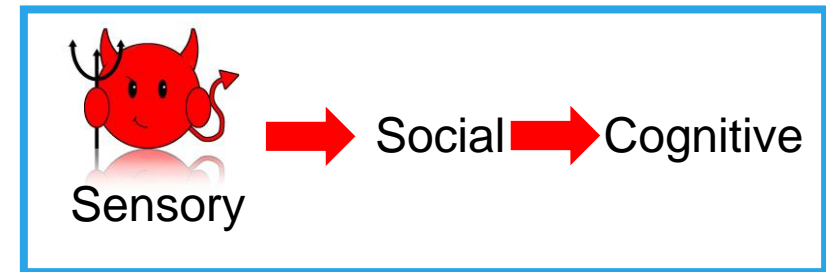
Why might sensory health and brain health be related?

3. Long-term sensory loss causes later cognitive difficulties
(Sensory Cascade Reason)

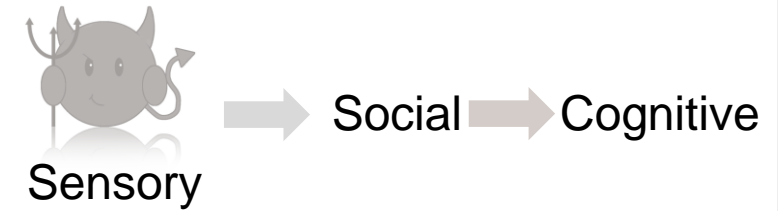
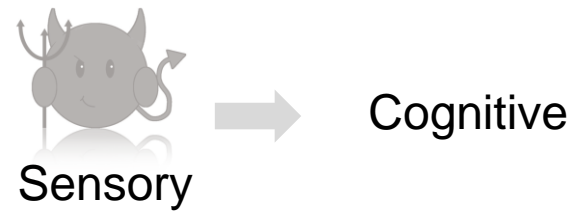
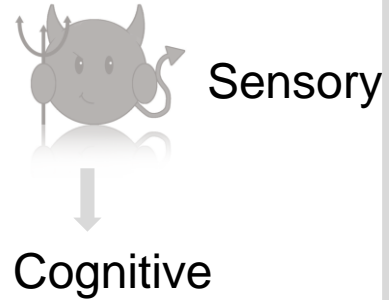
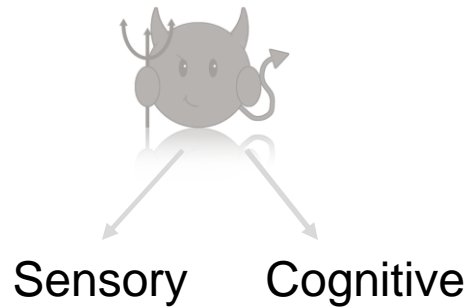


Why might sensory health and brain health be related?

4. Sensory loss reduces social participation and increases social isolation; social difficulties cause cognitive decline
(**Social Loss Reason**)

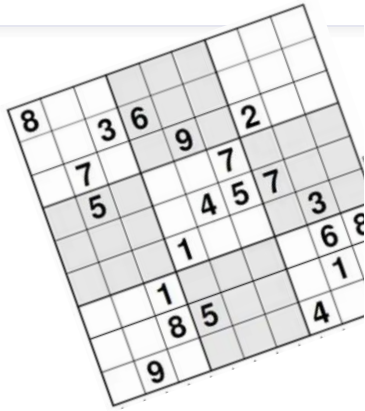


Why might sensory health and brain health be related?



Regardless of the reason, addressing hearing and vision difficulties can only be helpful for our lives

To be mentally active



- Better eyesight = easily solve crossword puzzle clues, read your favorite books
- Better hearing = attend that lecture you saw online and listen easily



To be physically active



- Better eyesight = feel safe while walking, see the difference between a shadow and gap on the sidewalk



- Better hearing = have better balance

To be socially active



- Better eyesight = easier to recognize faces and emotions



- Better hearing = easier to meet your friends and family and have conversations

What can you do?

- Even if all seems OK, it is still a very good idea to
 - Have your eyes checked every 1 to 2 years
 - <https://opto.ca/find-a-doc>
 - Have your hearing checked every 1 to 2 years
 - FindAnAudiologist.ca



Your brain will thank you for it!

- Thank You!

