

In the name of God



Varastegan Institute for Medical Sciences

# English for IT1

## Session 7

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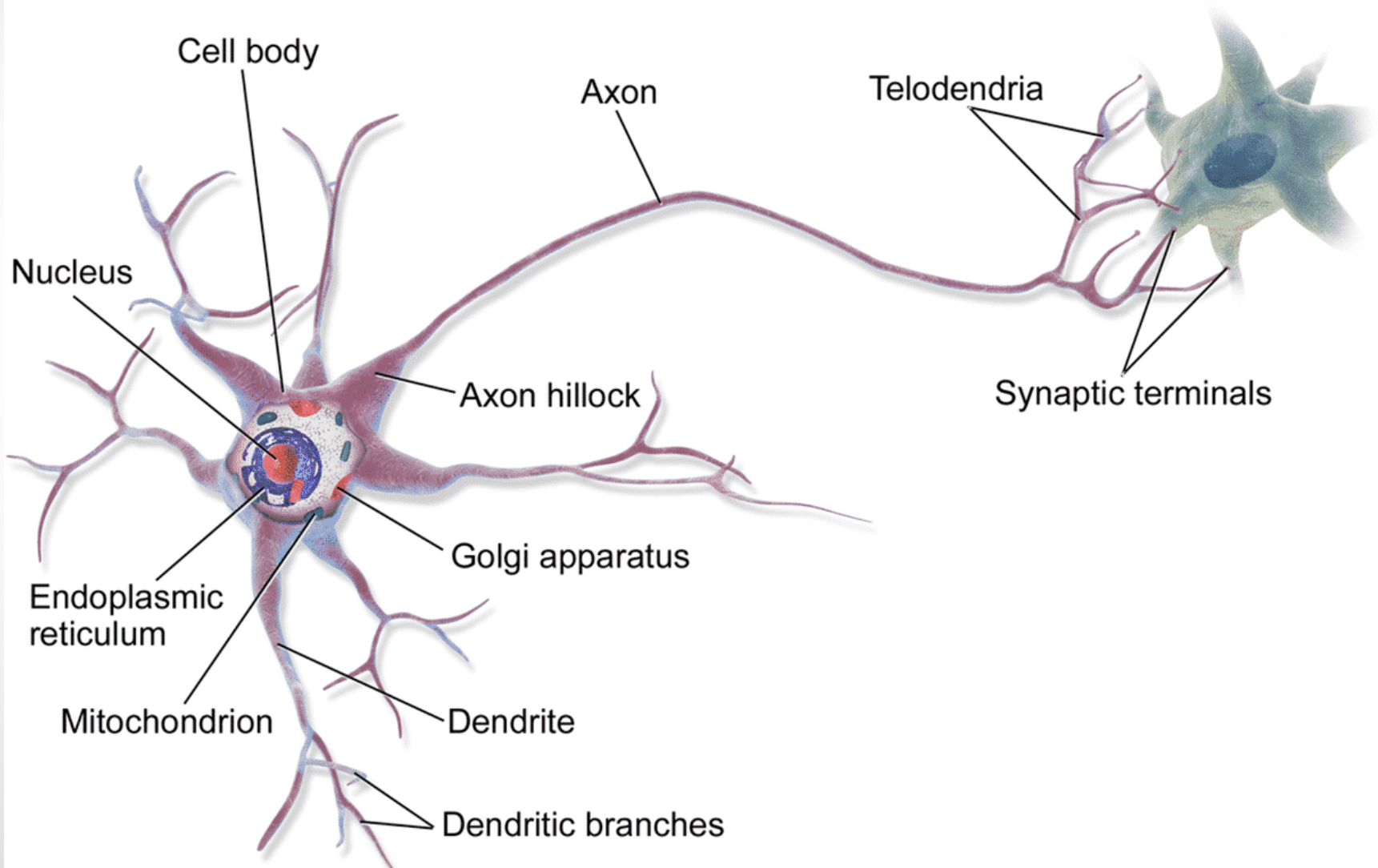
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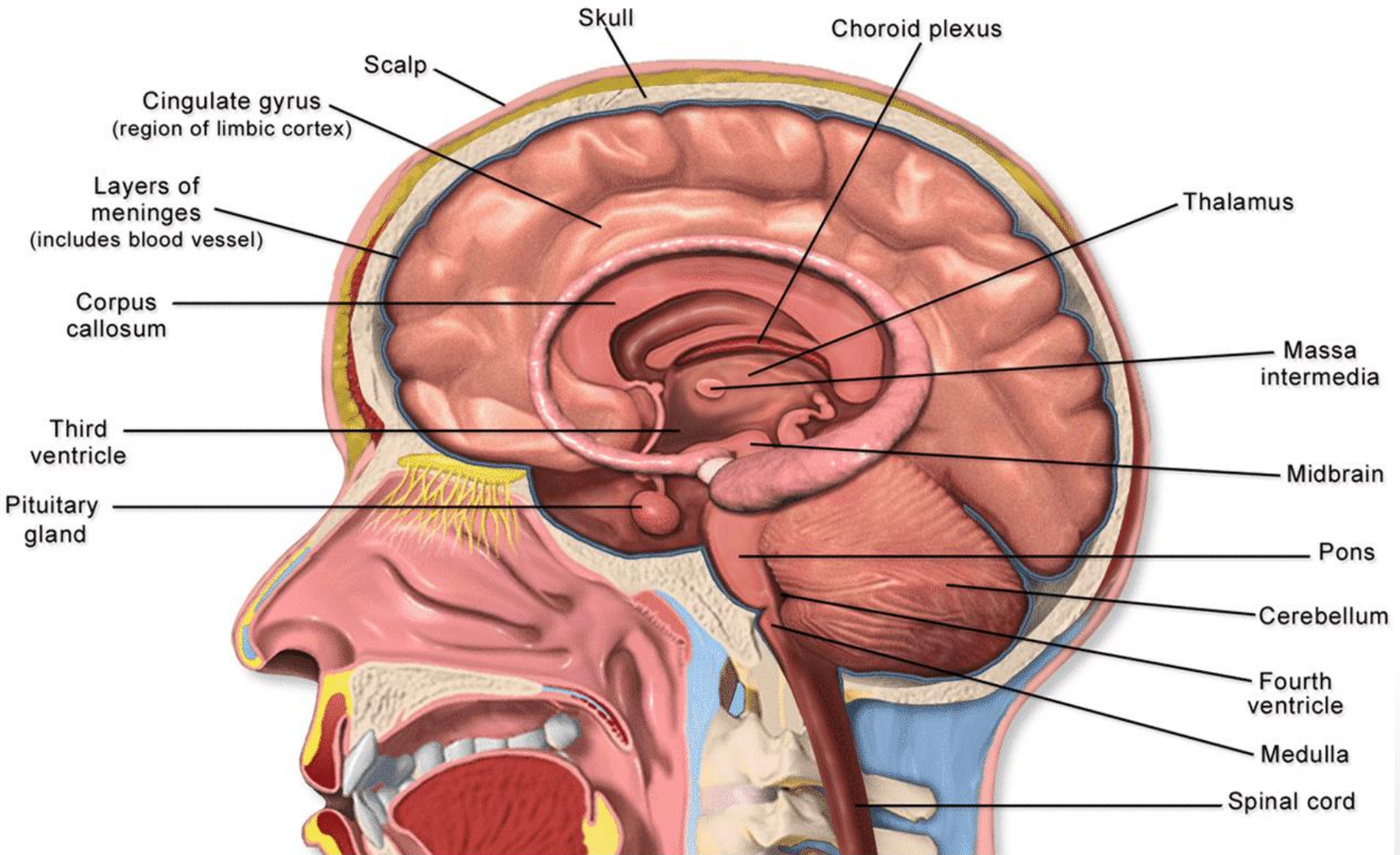
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# Vocabulary

# Neuron



# Brain Anatomy



# What does the nervous system do?

## The nervous system controls:

**Sensations (such as touch or hearing)**

**Perception**

**Thought and emotions**

**Learning and memory**

**Movement, balance, and coordination**

**Sleep**

**Healing and rehabilitation**

**Stress and the body's responses to stress**

**Aging**

**Breathing and heartbeat**

**Body temperature**

**Hunger, thirst, and digestion**



Reading

# Disorders of the brain and nervous system

- Intellectual and developmental disabilities, such as Down syndrome and Fragile X syndrome
- Behavioral disorders, such as attention deficit/hyperactivity disorder and autism spectrum disorders
- Learning disabilities and reading disorders
- Mental health problems, such as schizophrenia, obsessive-compulsive disorder, and addiction
- Degenerative diseases, such as Alzheimer's disease, Parkinson's disease, and Niemann-Pick disease

# Disorders of the brain and nervous system

- Musculoskeletal disorders, such as muscular dystrophy and stroke
- Structural defects, such as neural tube defects, which include spina bifida, hydrocephaly, and myelomeningocele
- Injuries, including traumatic brain injury and spinal cord injury, as well as how the body processes pain
- Cancers, including brain tumors such as paragangliomas
- Immune system disorders, such as HIV/AIDS
- Epilepsy, seizures, and stroke



# Translation

# Alzheimer's disease care and management: Role of information technology

- Information technology role on Alzheimer's disease has already begun.
- In 2003, Intel entered in to a consortium with the Alzheimer's association, granting \$1 million in Information technology research to be directed towards AD patients.
- Technology such as sensor networks is being used to study the habits of Alzheimer's disease patient behavior in hopes of finding ways to learn more about AD and to make it more livable.
- This is an example of how Information technology can work for AD patients.
- Scientist Hans Moravec has suggested that someday, entire human brains and the consciousness's they hold will be able to be downloaded into a computer.

# Alzheimer's disease care and management: Role of information technology

- This would certainly avoid the problem of neuronal deterioration, but it's possible that by the time, we have the technology to move minds into machines, we will know enough about AD to make it a livable or curable illness.
- The early stage of AD primarily causes memory problems.
- At this stage a person can live independently and only requires assistance in remembering certain tasks.
- Cognitive prosthetics are helpful in aiding a person to remember such tasks.

# Alzheimer's disease care and management: Role of information technology

- A pager was used to help a person remember the tasks during the early stage of AD.
- The Pager was able to record 80 letter alphanumeric message and then display the message at scheduled time.
- The person was able to perform the tasks independently within a week by using the pager.
- The functional memory of the person had improved after using the pager for six months.