

# Brain imaging

Psychology



**ASSIGN  
BUSTER**

Brain Imaging Brain Imaging How do the brains of children and adults differ with regard to energy consumption? Energy consumption of the brain in children is higher than that of adults because the brain gobbles more glucose when the body experiences slow growth. At 4 years, the brain burns glucose at a rate of 66 percent of what the whole body uses at rest because high fraction of the body's resources are halted during brain development (Shulman 2013). On the other hand, the brain of adults do not consume a lot of energy since the body uses most of the energy to enhance higher body growth since the brain is fully developed during adulthood.

2. In what ways do brain waves change as a person falls asleep?

Sleep is always characterized by changes in brain wave activity. In this case, different physiological activities are active during REM sleep while others are less active during NREM sleep. All the processes occur in stages. For instance, in stage 2 when an individual goes to sleep, the brain experiences slow fluctuations of electrical activity that is measured by electrodes that are accompanied by bursts of rapid waves known as sleep spindles. Also, in stage 3 delta waves form and compute with faster waves leading the person into deep sleep.

In which part of the brain has a stroke patient experienced a disruption of blood flow?

The cerebrum is the part of the brain that is affected when a stroke patient experiences a disruption of blood flow. In this case, the cerebrum consists of the left and right hemispheres that require blood flow at all times. In case, there is a clot or plaque that disrupts flow of blood to the cerebrum, a person might suffer a stroke.

How can brain structures be examined without exposing a patient to

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radiation?

Brain structures can be examined using brain imaging where practitioners generate computerized images of the brain without exposing the patient to x-ray radiation. In this case, imaging tests called neuroradiological tests are done using computer-assisted brain scans (Shulman 2013).

#### References

Shulman, Robert G.. (2013). Brain Imaging: What it Can (and Cannot) Tell Us About Consciousness. London: Oxford University Press.