BOYLE - COGS17 - Study Guide and HW 2-Part E-Sleep, Alzheimers and the Glymphatic System Worksheet.

PID: _____ Name: (Last)_____ (First)_____ Date: ____

Answer	Definition	General Principle
	How does the suprachiasmatic nucleus respond to daylight and darkness?	Circadian Rhythm
	What are some examples of circadian clock disruptors?	
	What are the consequences of metabolic disruption?	Relationship between metabolism and cognition.
	What are the appropriate daytime activities? Nighttime activities or restrictions?	Organization of function according to circadian
	Describe how insulin is sensitive to time of day. How does insulin follow a 24 hour day?	Circadian rhythms regulate hormonal functionality
	What is meant when we say that food is a zeitgeber?	The relationship between habits and metabolism
	Detail how insulin and glucagon regulate blood glucose levels.	Bio basics
	What role does insulin play in the CNS? What areas of the CNS are insulin sensitive?	Bridging CNS and metabolism
	What is the relationship between diabetes and AD?	
	Who was Auguste D.? What aspects of her behavior indicate that she had sleep disturbances?	Dementia

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	What are the differences between early familial Alzheimer's disease and late-onset Alzheimer's disease?	Alzheimer's basics
	Describe the disease processes that are in place long before symptoms of dementia are evident?	
	How does excessive amyloid interfere with neuronal signaling?	
	What are the toxic tangles associated with AD?	
	What is the effect on insulin sensitivity when there is sleep (e.g. partial night sleep?)	Sleep deprivation
	What is the glymphatic system?	Glymphatic system
	When is the glymphatic system most effective?	
	From this hypnogram illustrating the typical stages of sleep, when is deep sleep most likely to occur? REM sleep?	