

Consciousness, Rhythms, and States of Being (Beginning of Unit 5)

*thanks given to Mr. Duez for all the imagery!

What is consciousness?

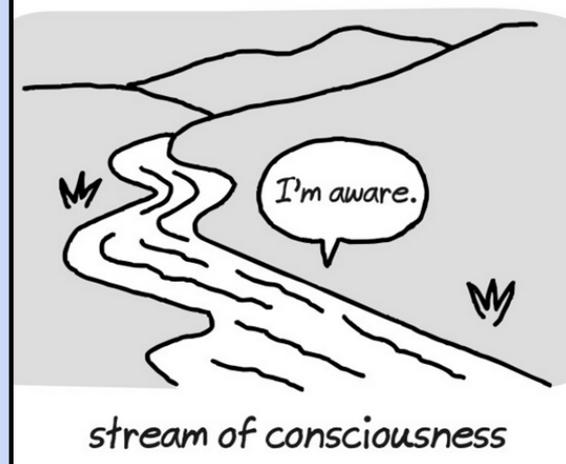
You are aware of you... right?

Individual awareness of your unique thoughts, memories, feelings, sensations & environment. Conscious experiences are constantly shifting & changing.

One moment you may be focused on these notes. Your consciousness may then shift to the memory of a conversation you had earlier with a friend. Next, you might notice how uncomfortable your chair is or maybe you are day-dreaming about dinner.

This ever-shifting stream of thoughts can change dramatically from one moment to the next, but your experience of it seems smooth and effortless.

Stream of Consciousness



Thanks to technology **Consciousness** is making a scientific come back

Early psychologist (& freaking genius) **William James**: very interested in function of **consciousness**. *However, how would one do that?*

Today thanks to sophisticated **brain imaging tools** & increased emphasis on **cognitive psychology**... *consciousness is back!*



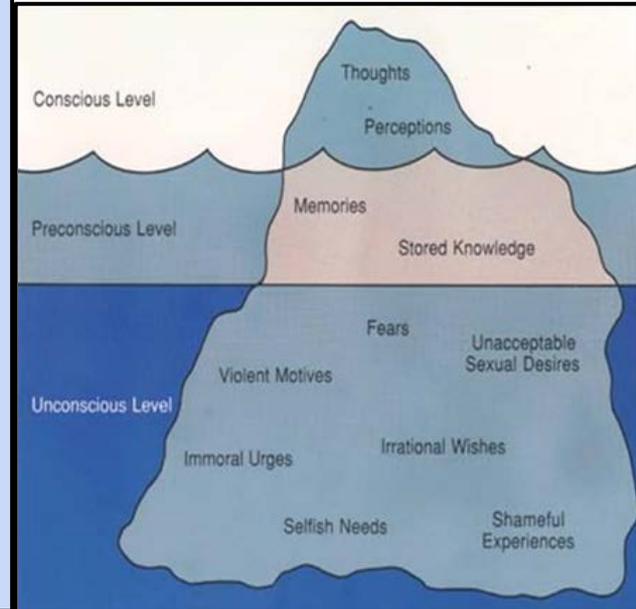
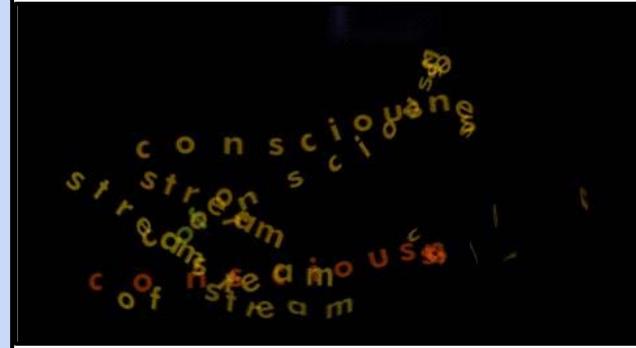
**WILLIAM JAMES
ON THE STREAM
OF CONSCIOUSNESS**

All the Evidence

"The greatest
weapon against
stress is our ability
to choose one
thought over
another."

William James

Consciousness



Consciousness: our level of **awareness** about ourselves and the environment.

--**NOT** like an on/off switch.

--**We are NOT** conscious or unconscious.

Psychologists refer to different levels & states of consciousness.

--*we experience states of consciousness... without being fully aware that we are experiencing them!*

There are generally four different areas of consciousness on which researchers agree.

Conscious Level - What you are currently aware of, including yourself & environment.

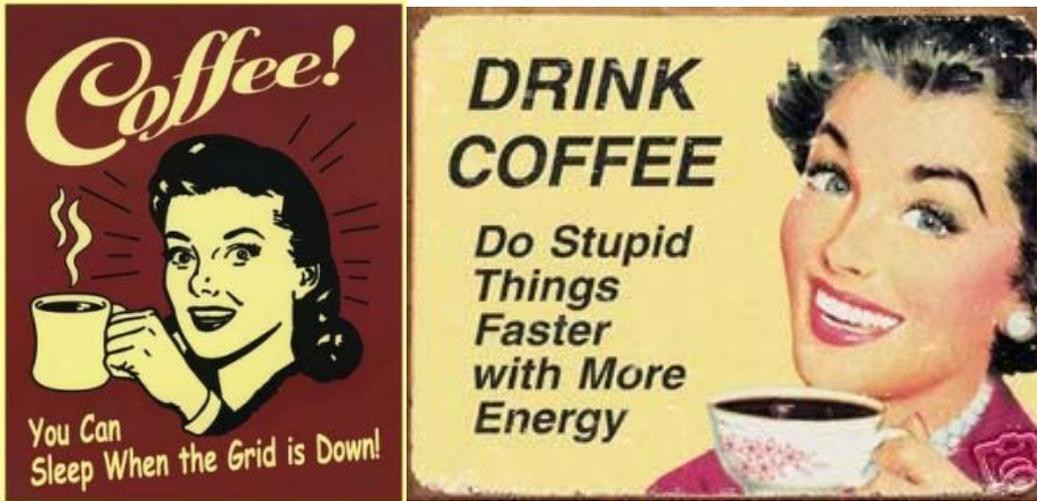
Nonconscious Level - Body processes controlled by your mind that are not usually (or ever) aware of... Heartbeat, respiration, digestion, etc.

Preconscious Level - Information about yourself & environment that you are NOT currently thinking about, but could be. You aren't currently thinking about your favorite toy as a child, but if asked about it, you would be.

Subconscious Level - Information we are not currently aware of, but we know must exist due to behavior. (Great example: Mere Exposure Effect - when we prefer stimuli we have seen before over novel/new stimuli, even if we do not consciously remember seeing the old stimuli.)

Unconscious Level - Psychoanalytic psychologists believe some events & feelings are unacceptable to our conscious mind & are repressed. (Many psychologists object to this concept as difficult or impossible to prove)

Waking and Sleeping Rhythms



"I'm sorry I'm bugging you. But you know what they say, the early bird annoys the night owl."





"I didn't have any choice — she was raising her consciousness."

When we are awake, we are in a state of consciousness.

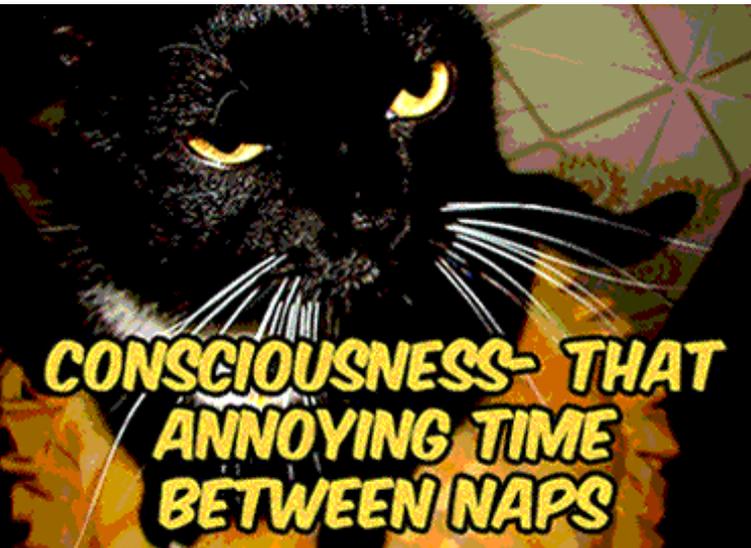
Consciousness refers to the active processing of information in the brain.

It could be thought of *as a form of short-term memory & attention combined.*

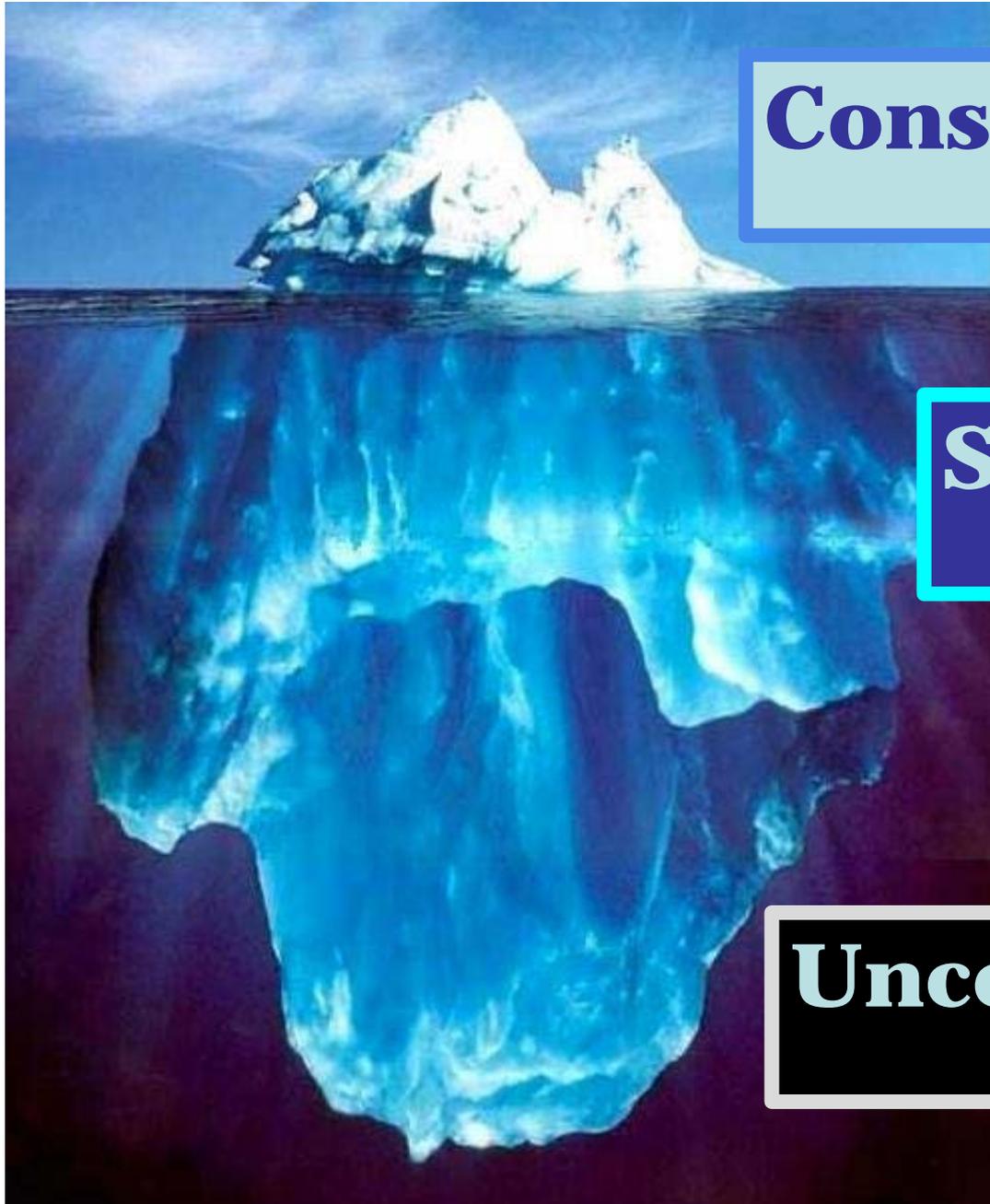
It is the activity running through our heads or minds.

(stream of consciousness)

Brain activity can be measured by using an **EEG**.



Great analogy of conscious behavior:



Conscious

Subconscious

Unconscious

D
A
Y
D
R
E
A
M
S

Unfortunately, my daydreams about being skinny are always interrupted by the sound of my own chewing.



your eCards
someecards.com

*What are some common
Day Dreams & Fantasies?*

F
A
N
T
A
S
I
E
S



*I was trying to daydream,
but my mind kept wandering.*
- Steven Wright



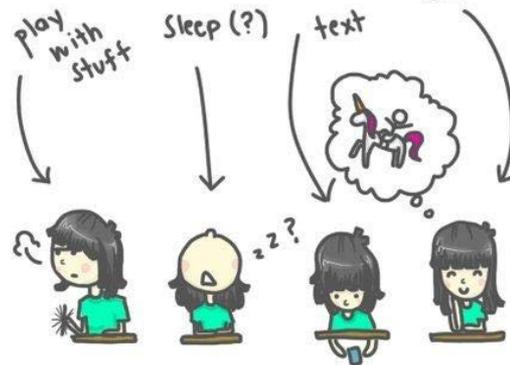
Dreams can help us prepare for future events

- ★ nourish our social development
- ★ substitute for impulsive behavior



Why do we daydream?

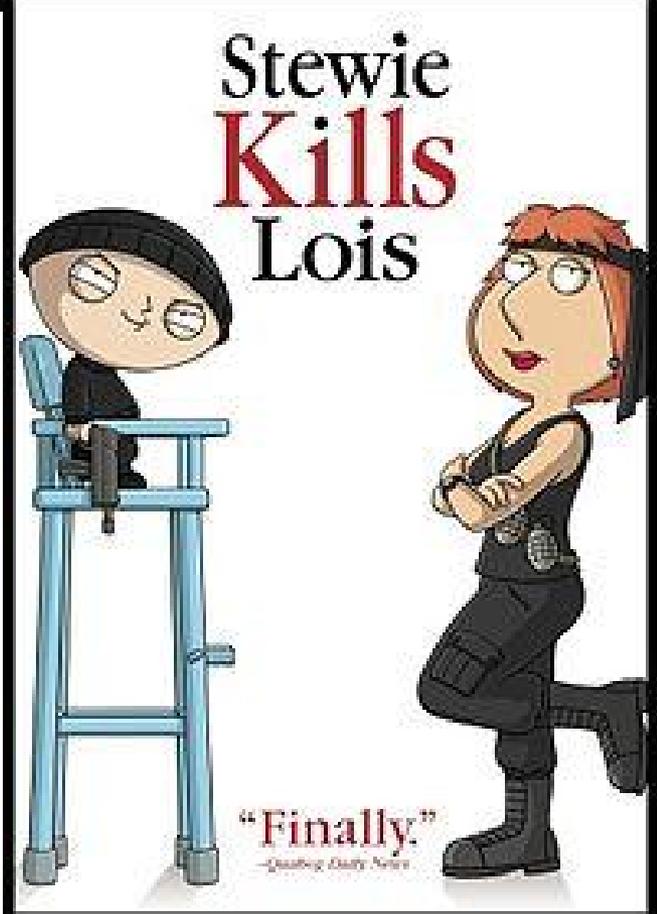
Stuff I do in CLASS



Fantasy Prone Personalities:



Someone who imagines and recalls experiences with lifelike vividness & who spends considerable time fantasizing.



Biological Rhythms

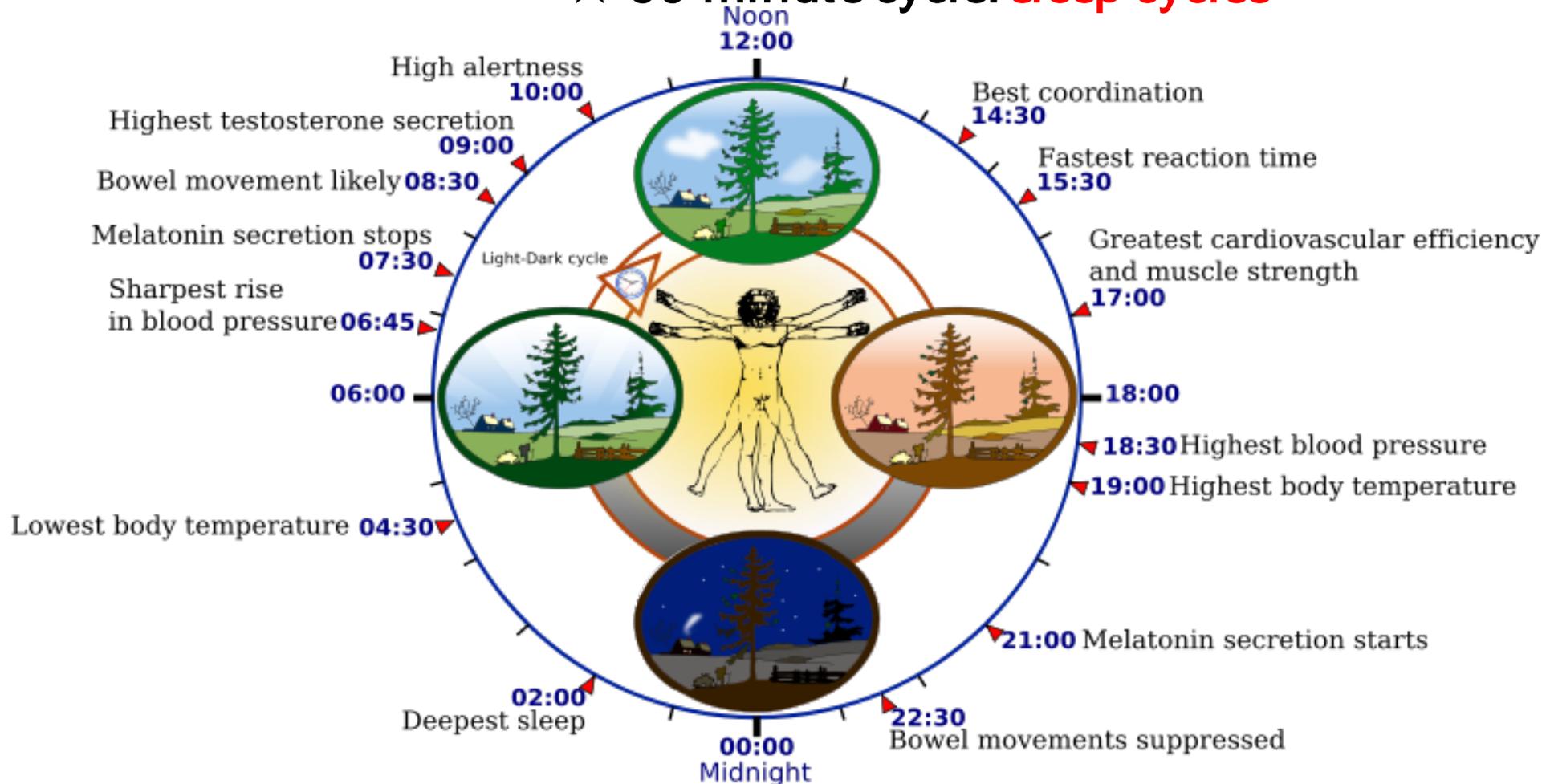
Annual Cycles: seasonal variations

(examples: bears hibernation, seasonal affective disorder)

★ 28 day cycles: **menstrual cycle**

★ 24 hour cycle: **our circadian rhythm**

★ 90 minute cycle: **sleep cycles**

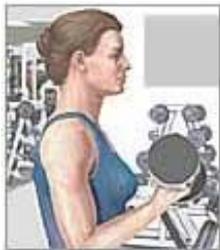
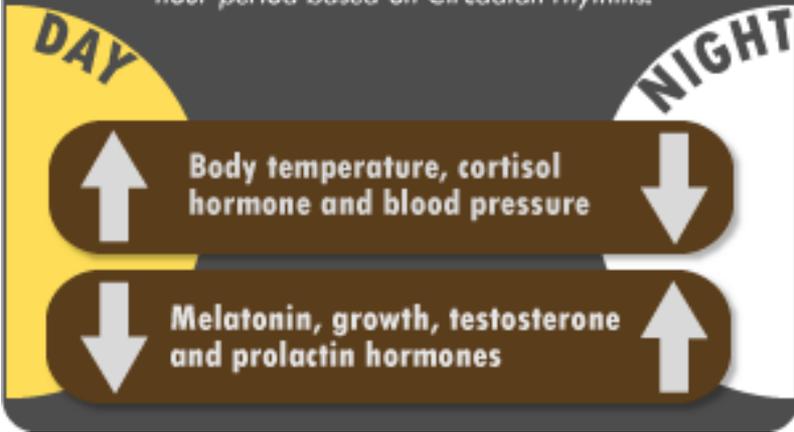


Biological Rhythms/Circadian Rhythms

- Let's let Hank tell us a few things.

Circadian Rhythms and the Body

Different body functions rise and fall over a 24 hour period based on Circadian rhythms.



Factors such as maintaining a regular sleep schedule, exercising, avoiding naps and avoiding dehydration can prevent the effects of jet lag



Circadian Rhythm

Circadian 24 hour biological processes that may be interrupted by exposure to light

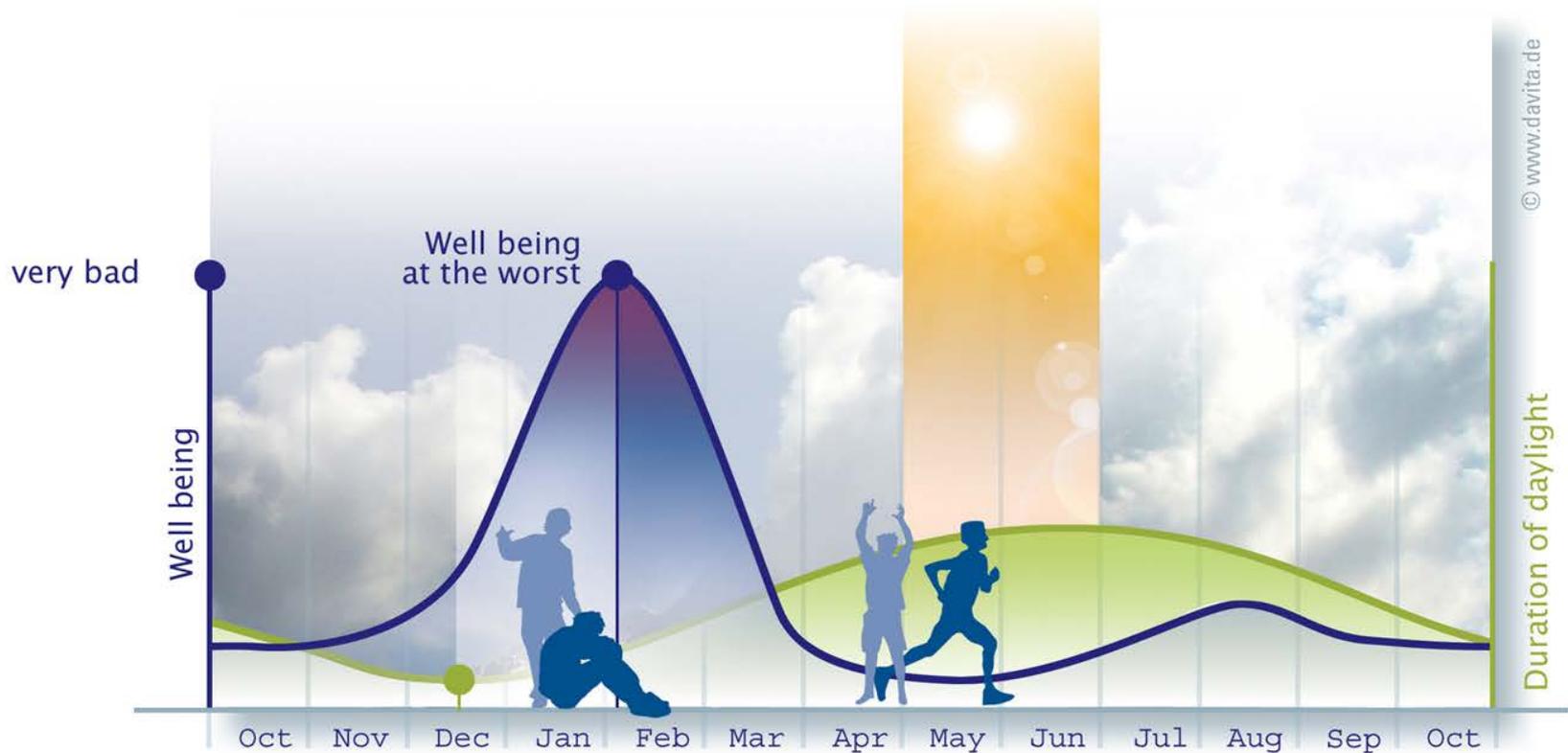
Resets biological clock by affecting suprachiasmatic nucleus and pineal gland which secretes **melatonin**.

Jet lag & shift work can also knock circadian rhythms out of sync.

- ★ *Our 24 hour biological clock.*
- ★ *Our body temperature & awareness changes throughout the day.*
- ★ *It is best to take a test or study during your circadian peaks.*

*How can the circadian rhythm help explain **jet lag**?*

INFLUENCE OF DAYLIGHT ON THE WELL BEING OF THE POPULATION



Shortest duration of daylight

Modified according to Kasper, S.:
Season and mental state in the general population,
Berlin-Heidelberg 1991

© www.davita.de

Duration of daylight

SEASONAL AFFECTIVE DISORDER (SAD):

Diagnostic and Statistical Manual of Mental Disorders DSM-IV & DSM-5: Recurrent major depressive disorder that occurs at a specific time of the year & fully remits otherwise.

Must meet 4 criteria:

1. Depressive episodes at a particular time of the year;
2. Remissions or mania/hypomania at a characteristic time of year;
3. Patterns must have lasted 2 years with no nonseasonal major depressive episodes during that same period;
4. Seasonal depressive episodes outnumber other depressive episodes throughout the patient's lifetime.

Prevalence in the U.S. ranging from 1.4% in Florida to 9.7% in New Hampshire.

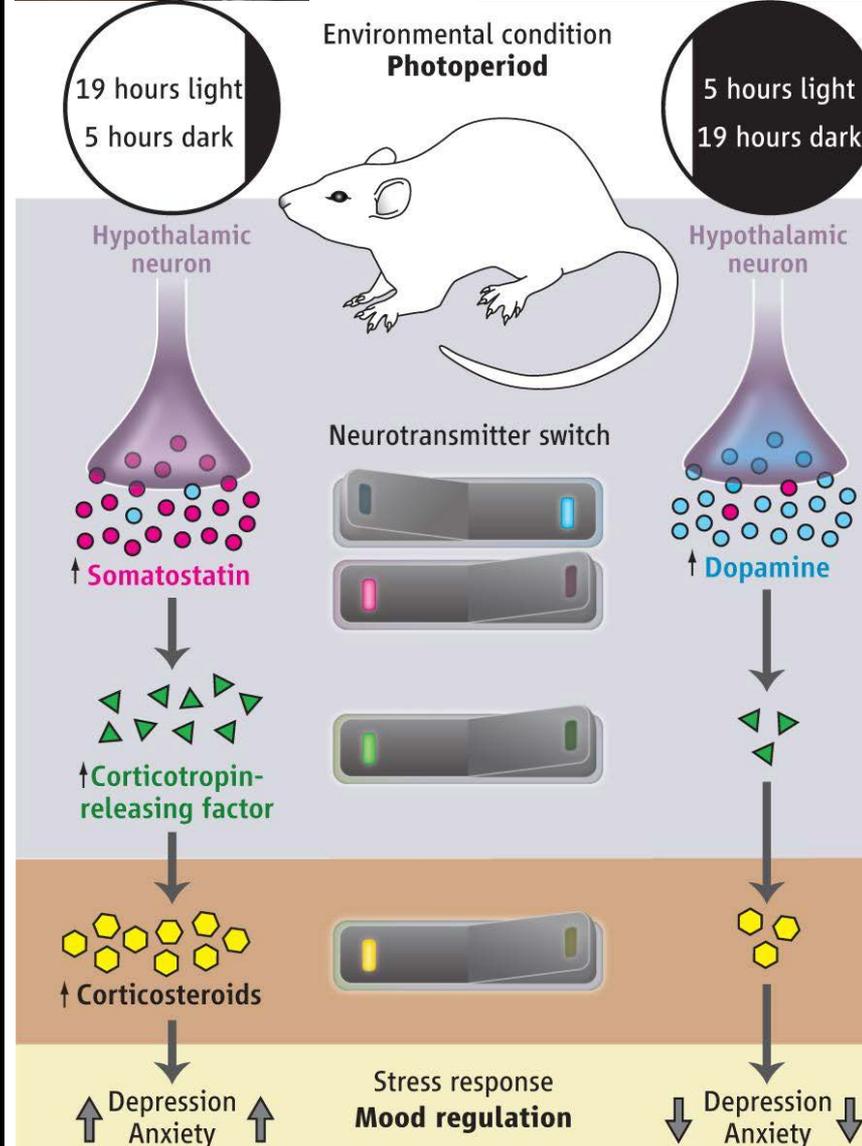
Symptoms of SAD:

- ★ difficulty waking up in the morning
- ★ morning sickness
- ★ tendency to oversleep
- ★ over eating
- ★ especially a craving for carbohydrates, which leads to weight gain.

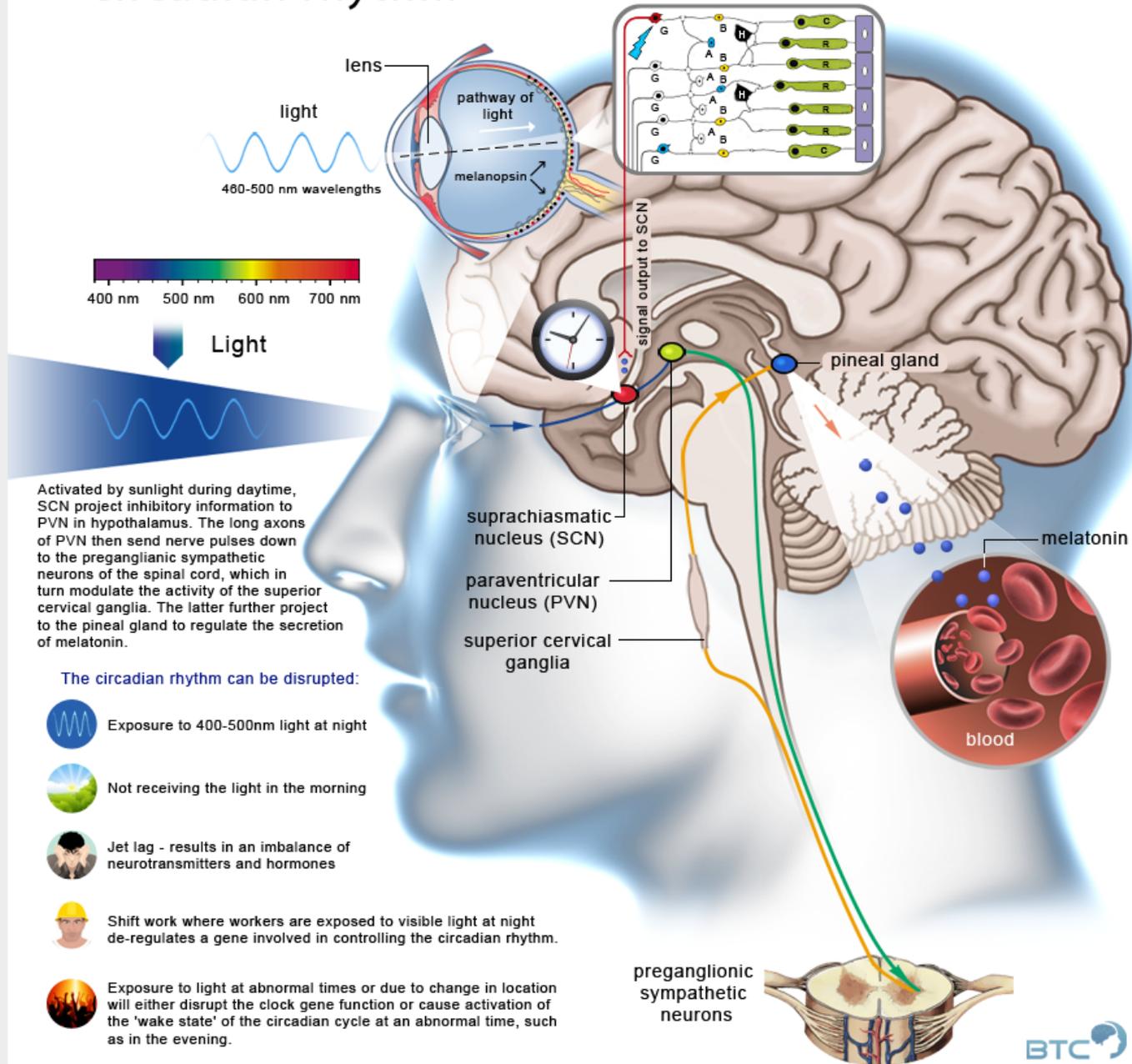
Other symptoms include a lack of energy, difficulty concentrating on or completing tasks, withdrawal from friends, family, and social activities, and decreased sex drive.

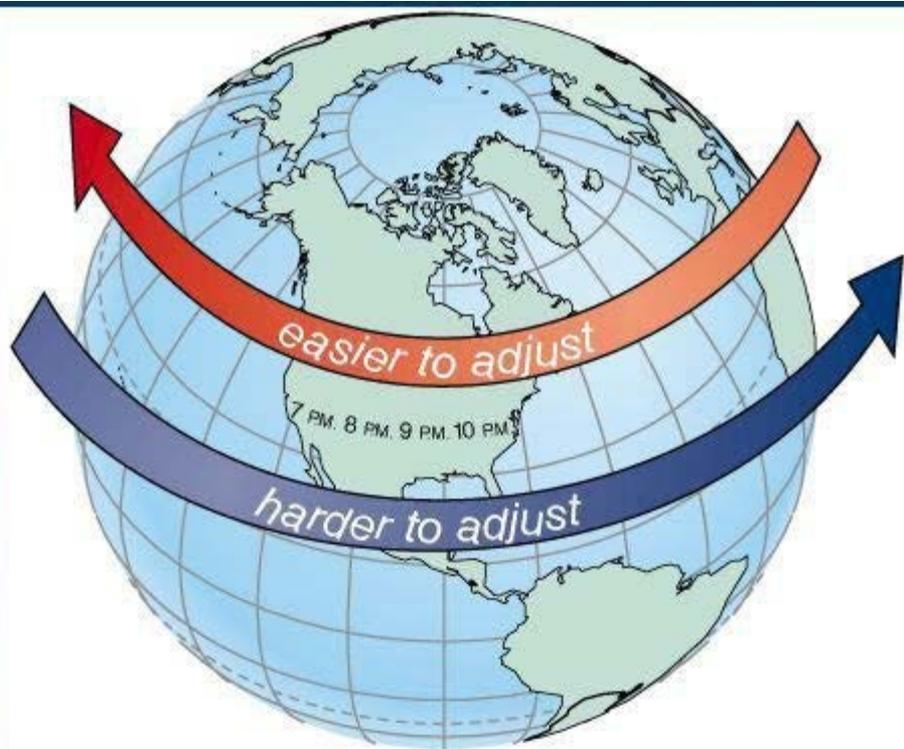


“Beating the Winter Blues”
Seasonal Affective Disorder (SAD)



circadian rhythm





3 Types of Rhythms:

1. Circadian - 24 hour daily cycle.

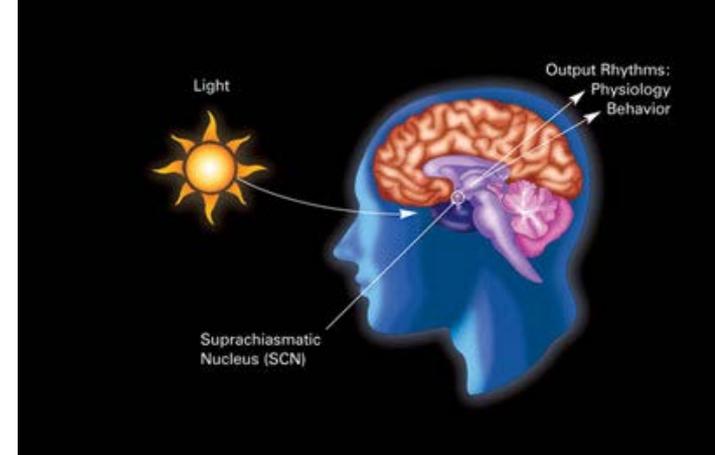
2. Infradian - Longer than 1 day:

- ★ Menstruation
- ★ Breeding
- ★ Tidal Rhythms
- ★ Seasonal Rhythms

3. Ultradian - Repeated throughout the day. Multiple times.

Includes:

- ★ **Sleep cycle** (90 -120 min)
- ★ **Hormonal Rhythms**
- ★ **Thermoregulation** (hot/cold)
- ★ **Urinary/Bowel Movements** (predictable patterns)



Circadian (Latin “circa dies”)

- Follow roughly a 24-hour cycle
- Wake/sleep cycle
- Superchiasmatic Nucleus (SCN)—master clock
- Pineal Gland → Melatonin