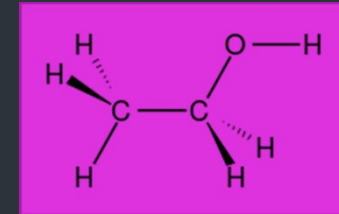




Wine Wednesday

2019 Lundquist

What's in the cup?



If 21+, drinks are a solution

► water + flavors + ethanol

Ethanol = alcohol

In USA concentration of
alcohol $\times 2 =$ proof

Rum_{usually} = 40 proof

so 20% by volume for every 10 cups
there are 2 cups of ethanol

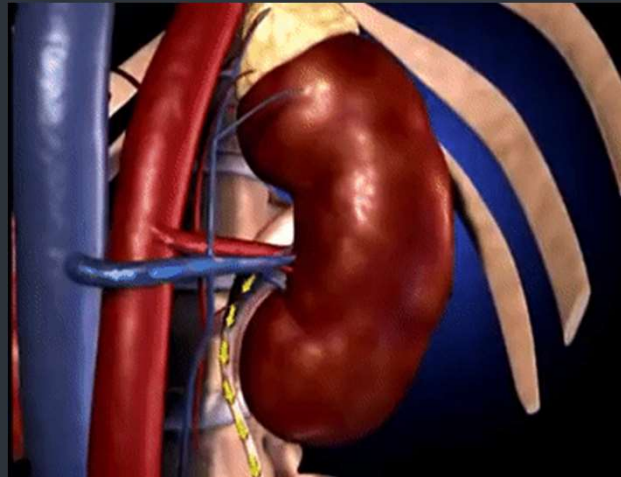


When you drink a lot

- ▶ You tend to pee a lot
- ▶ This is because alcohol affects the pituitary gland
- ▶ Secretes hormones responsible for:
 - ▶ When you wake up
 - ▶ Go thru puberty
 - ▶ When you pee



How it works



- ▶ One of the hormones produced by the pituitary gland is **Antidiuretic Hormone (ADH)**
 - ▶ Which travels the body and is picked up by the kidneys
- ▶ Kidney
 - ▶ Regulate water retention
 - ▶ ADH informs the kidneys that water is low and to rehydrate the body
 - ▶ Thus *stopping your diuretics*
(anti-) (-diuretic)

How it works

- ▶ Alcohol inhibits your pituitary from making ADH
- ▶ Less ADH means your kidneys release fluid into your bladder and you pee



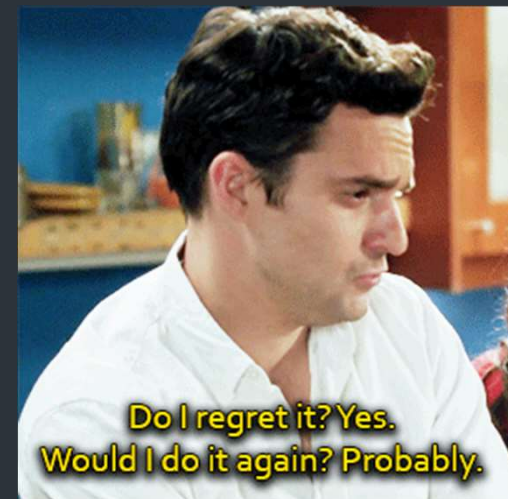
Alcohol also affects your brain directly

- ▶ The brain works much like a game of “Telephone”
 - ▶ One cell passes a signal to another (excitation) via neurotransmitters
 - ▶ The more a signal is passed the stronger the reaction

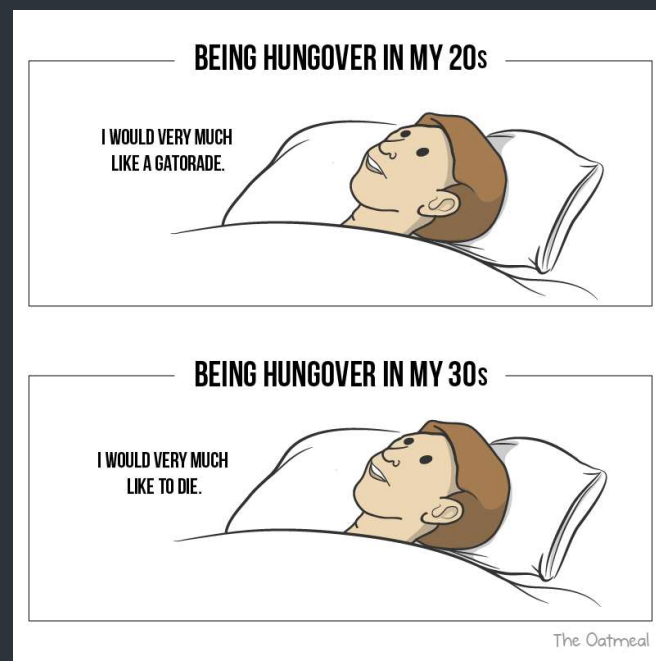


Alcohol also affects your brain directly

- ▶ Alcohol dilutes these neurotransmitters
(it's a little more complicated than that but good enough)
- ▶ So only the strongest signals get through
- ▶ This is why people who have been drinking tend to fixate on a single idea



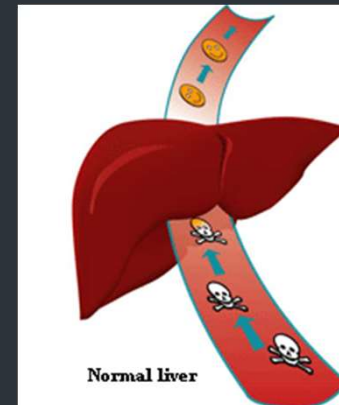
After Drinking... Death



- ▶ All that peeing dehydrates you & you lose electrolytes & sugars
- ▶ So your body steals water from whichever organs it can
 - ▶ Your brain is 75% water

After Drinking... Death

- ▶ Alcohol is a poison, we use it in hand sanitizer
(not the same stuff but similar enough for this transition)
- ▶ Your body handles toxins by having your liver break them down
- ▶ Uses specialized proteins called enzymes to neutralize dangerous materials



After Drinking... Death



- ▶ Ethanol reacts in the body to produce acetaldehyde
 - ▶ 10-30x more toxic than ethanol
- ▶ Your liver uses an enzyme called **glutathione** to convert acetaldehyde into harmless acetate

After Drinking... Death

- ▶ Problem is you only have so much glutathione in your liver and while it is busy acetaldehyde is free to roam your body
 - ▶ Causes: headaches & nausea



So how do you stop it?

TIPS TO:

HELP

HANDLE

HANGOVER