





















CH₂OH OH OH OH

 α -D-Glucose

D-Fructose

ÓН

CH₂OH

НÒ

Ο

HO

ĊH₂OH

Sucrose (Table Sugar)







In BNA and DNA -> The aromatic base is linked to the D-ribose or D-2'-deoxyribose through a glycosidic bond!



Steroids -> Rigid multiring structures that inportant signals > Bind to specific receptors that cause many genes to be turned on or off > Rigid structure ensures high degree of specificity for these critical functions





Phospholipid membrane bilayers The Z double bonds and cholesterol combine to make the membranes fluid enough to operate effectively



So what holds membranes together?

The fatty acid choins are not soluble in water - The strong hydrogen bonds in water prevent the alky chains from "dissolving" into the water -> Only things that can interact strongly with polar water molecules dissolve in water. -> To break up mater-water hydrogen bonds a molecule must be charged and/or be Capable at strong hydrogen bouds "Like likes like" -> Key rule at solvents

The alky chains cannot interact with water so they must therefore associate together provinding the driving force to hold membranes together

How do energy drinks work?







Amount Per Serving	40
Calories	10
%[Daily Value
Total Fat Omg	0%
Sodium 5mg	0%
Total Carbohydrate Omg	0%
Protein Omg	
Calcium 50mg	4%
Vitamin C 60mg	70%
Riboflavin 1.7mg	130%
Niacin 20mg	130%
Vitamin B6 2mg	120%
Vitamin B12 6mcg	250%
Biotin 300mcg	1000%
Pantothenic Acid 10mg	200%
Chromium 50mcg	140%
Not a significant source of sat fat, trans fat, ch fiber, total sugar, added sugars, vitamin D, iron	nolesterol, dietary n, and potassium
The % Daily Value (DV) tells you how much a serving of food contributes to a daily diet. 2,0 is used for general nutrition advice.	nutrient in a 00 calories a da

CONTAINS NO FAULT JUICE Nutrition Facts Serving size 1 can Amount per serving Calories 0 Total Fat 0g 0% Sodium 40ng 2% Total Carbohydrate 2g 1% Total Sugars 0g Includes 0g Added Sugars 0% Protein 0g Potassium 90mg 2% • Vitamin E 30%

US BANG ENERGY BLUE RAZZ 160Z. CAN

 Vitamin B12 60%
 Magnesium 2%

 Nar a significant source of salurated fat, trans fat, cholesterni, diversitaria, cholesterni, cholesterni, dintervistaria, cholesterni, cholesterni, diversita

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CAFFEINE IN ENERGY DRINKS



Coffee and tea drinks (coffee shops)	Serving size	Caffeine (mg)
Starbucks Coffee	20 oz. venti	390-490
Dutch Bros 9-1-1 Blended Freeze	large	440
Starbucks Coffee	16 oz. grande	315-390
Starbucks Iced Coffee	30 oz. trenta	320
Caribou Coffee	medium	305
Dunkin' Frozen Coffee	medium	295
Starbucks Coffee	12 oz. tall	235-290
Dunkin' Coffee	20 oz. large	270
Starbucks Caffè Americano	16 oz. grande	225
Dunkin' Coffee	14 oz. medium	210
Starbucks Cold Brew	16 oz. grande	205
Starbucks Flat White	16 oz. grande or 20 oz. venti	195

Caffeine > Turns off your "drowsiness" switch because it Antagonist binds where adenosine binds to signal low ATP and therefore drowsiness.

Vitamins B6 and B12 -> stimulate production of ATP in your body so you have energy available



Repeat as necessary then remove from resin. Can add up to 100 amino acids this way.





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Solid Phase Synthesis of DNA





HEALTH

Why fentanyl is deadlier than heroin, in a single photo

By Allison Bond Sept. 29, 2016



DEA

Reprints



DEA Fentanyl Seizures in 2024

In 2023, DEA seized more than 79.5 million fentanyl-laced fake pills and nearly 12,000 pounds of fentanyl powder. The 2023 seizures are equivalent to more than 376.7 mill on lethal doses of fentanyl.

The 2024 fentanyl seizures represent over 93.7 million deadly doses. *

17,900,000+

1,813+ lbs.

Millions of Fentanyl Pills Seized

Pounds of Fentanyl Powder Seized

* 2 mg of fentanyl equates to a potentially deadly dose

Menu