

SOFT TYRES AND HARD TYRES

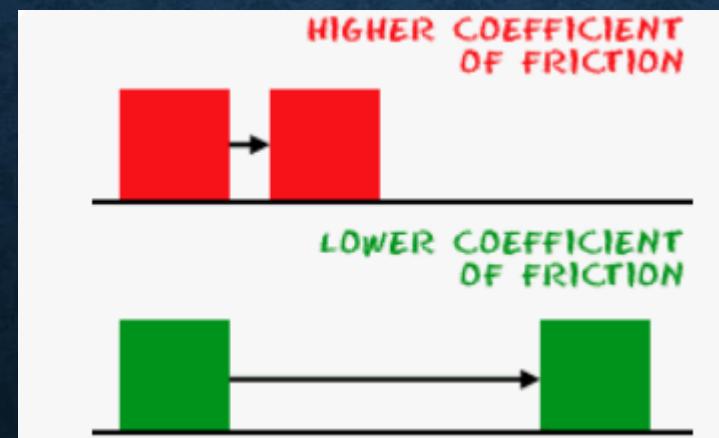
INTRODUCTION

Soft Tyres

- Soft Tyres are soft in nature
- Soft tyres are less durable
- Soft tyres are softer compound of rubber with a higher coefficient of friction
- It deforms and provides better cornering

Hard Tyres

- Hard Tyres are Hard in nature
- Hard Tyres are more durable
- Hard tyres are harder compound of rubber with a lower coefficient of friction
- It provides lesser cornering compared to soft tyres





SOFT TO HARD TYRES

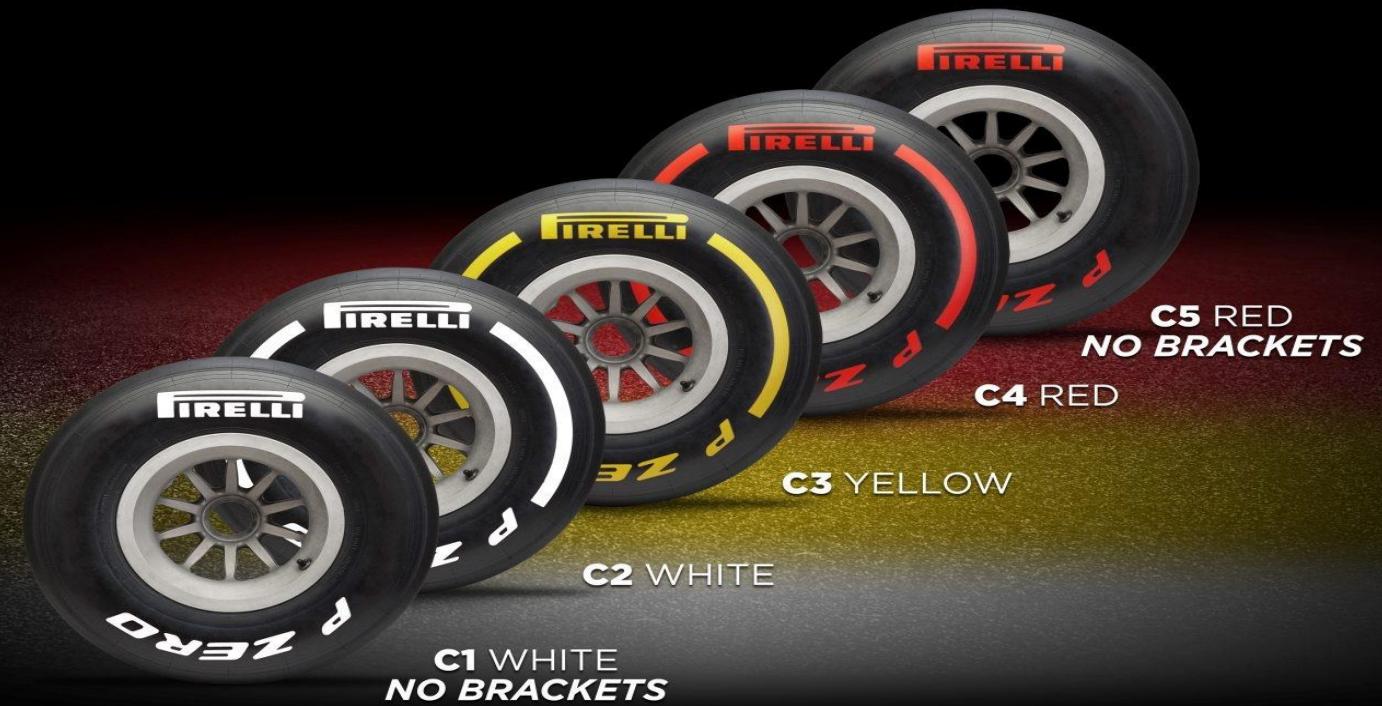


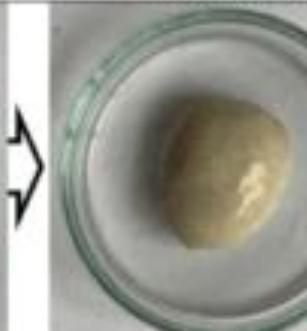
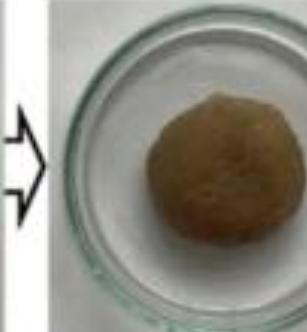
2019 FORMULA 1 PRE-SEASON AND IN-SEASON TESTS
THREE COLOURS AND FIVE COMPOUNDS

HERE'S HOW TO TELL
THE FIVE 2019 COMPOUNDS APART IN TESTING

C1 THE HARDEST

C5 THE SOFTEST



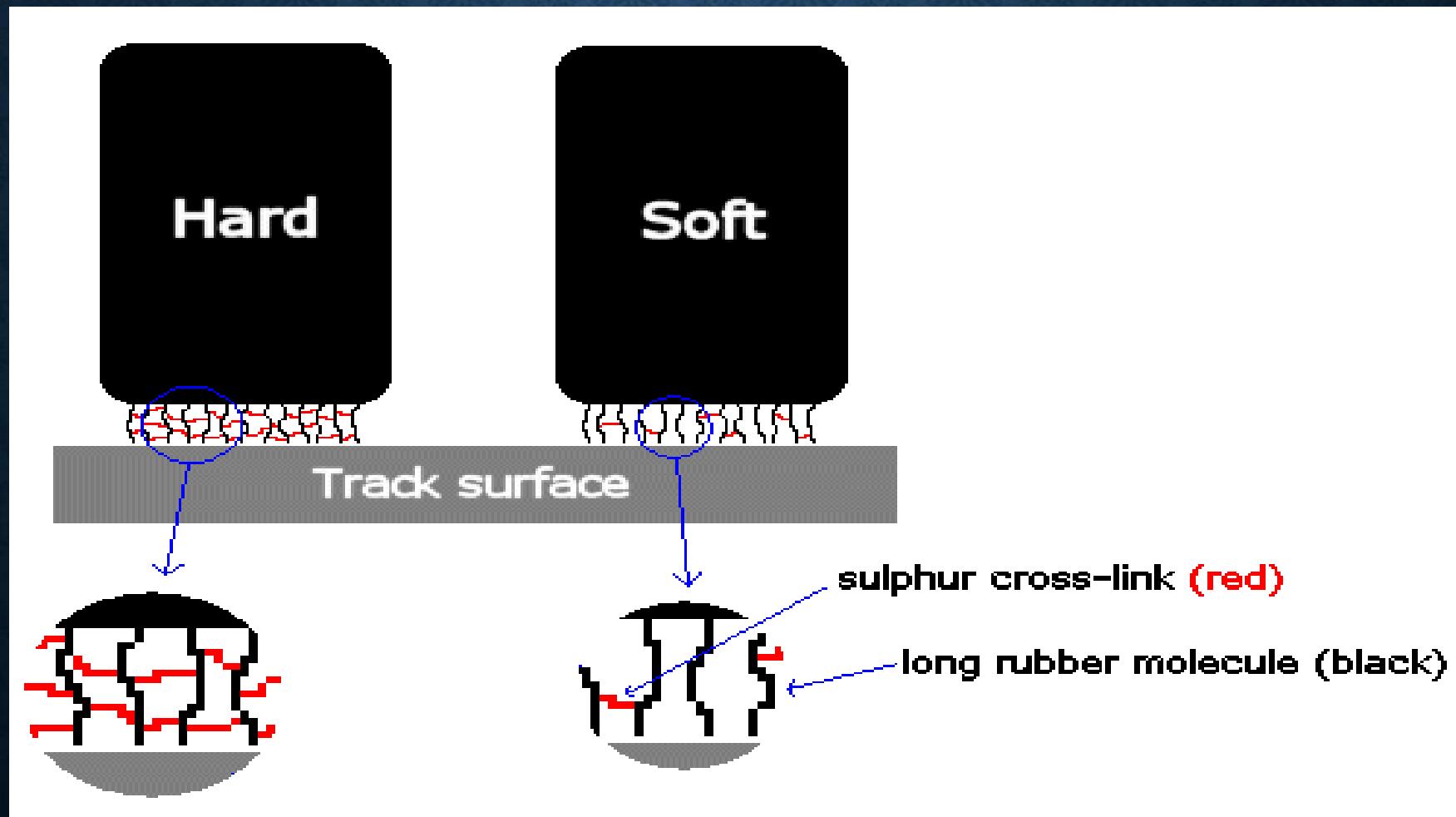
Cereal	Grain	Flour	Dough	Gluten
Wheat				
Rye				
Barley				



... BBC
Are flours made with pulses better for ...

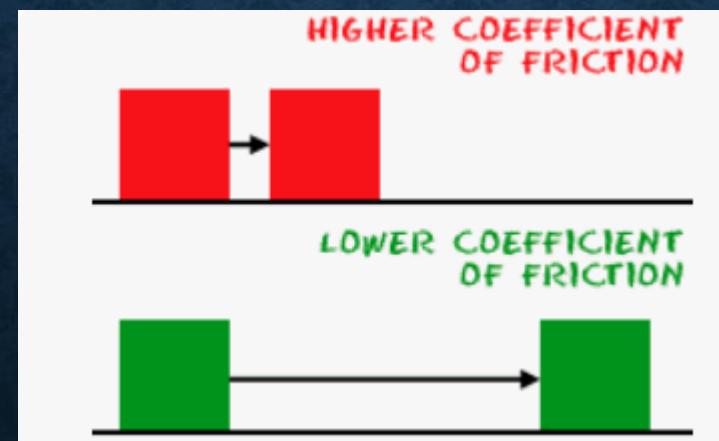


COMPOUNDS OF SOFT AND HARD TYRES



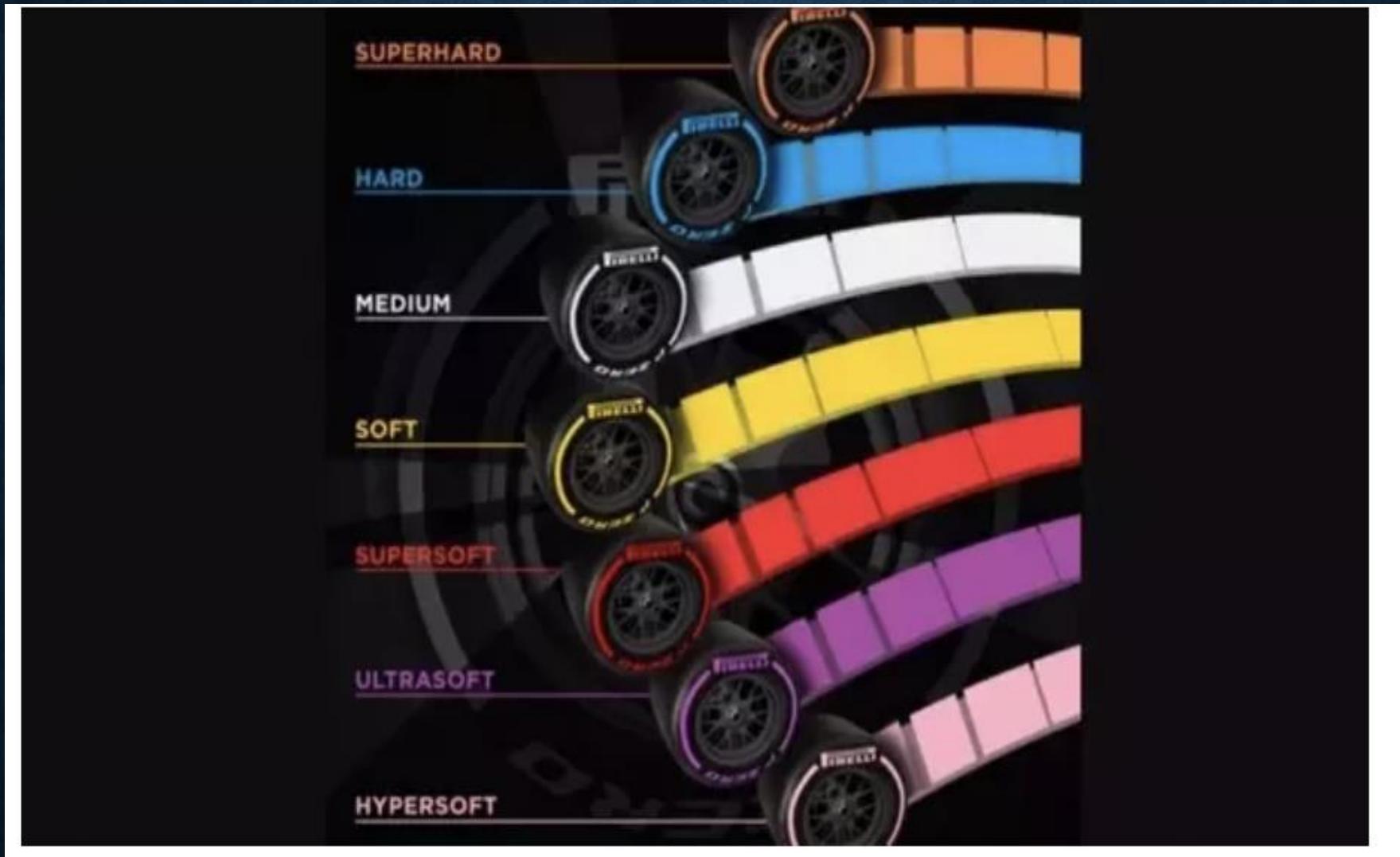
SOFT TYRES

- As shown in the previous slide Soft Tyres have fewer cross links therefore a greater length of rubber molecule can interact with surface
- So the acceleration will be more as the friction is more.
- Soft tyres will give more acceleration but they wear out more early than hard tyres.
- During high acceleration or at corners soft tyres deform to provide greater grip, But they leave more Rubber on road so we need to change the tyres more frequent.
- In F1 races tyres need to change for every 15 laps.



HARD TYRES

- As shown previously that we have more crosslinks in the hard tyres compared to soft tyres.
- Since the grip is less between the tyre and the road they lasts longer when compared to soft tyres
- Harder compound provides lesser grip so they may not be quick enough.
- Acceleration will not be as quick as in the case with soft tyres



The indicates different variants of the slick tyre from Hypersoft to SuperHard

- The below picture shows all the different tire compounds that tire manufacturer and current Formula 1 tire supplier Pirelli produces.



- From left: we have Immediates, wets, Super softs, softs, mediums, Hard types of tyres which are used in different race tracks and different conditions.
- First 4 from right are called slick tyres(Super Soft to Hard tyres) are used in dry conditions.
- In wet conditions we cannot use these slick tyres as there will be a layer of water beneath the road and tyre which causes skidding



GREEN TEA

CONTENTS

- What is Green Tea? 01 
- Nutritional values in Green Tea 02 
- Flavor and Taste of Green Tea 03 
- Green Tea as an Antioxidant 04 
- Health Effects of Green Tea 05 

WHAT IS GREEN TEA?

“*Green tea is a type of tea that is made from the leaves and buds of **Camellia Sinensis** plants that have not undergone the same withering and oxidation process used to make oolong teas and black teas.*”



*Several varieties of green tea exist, which differ substantially based on the variety of *C. sinensis* used, growing conditions, horticultural methods, production processing, and time of harvest.*

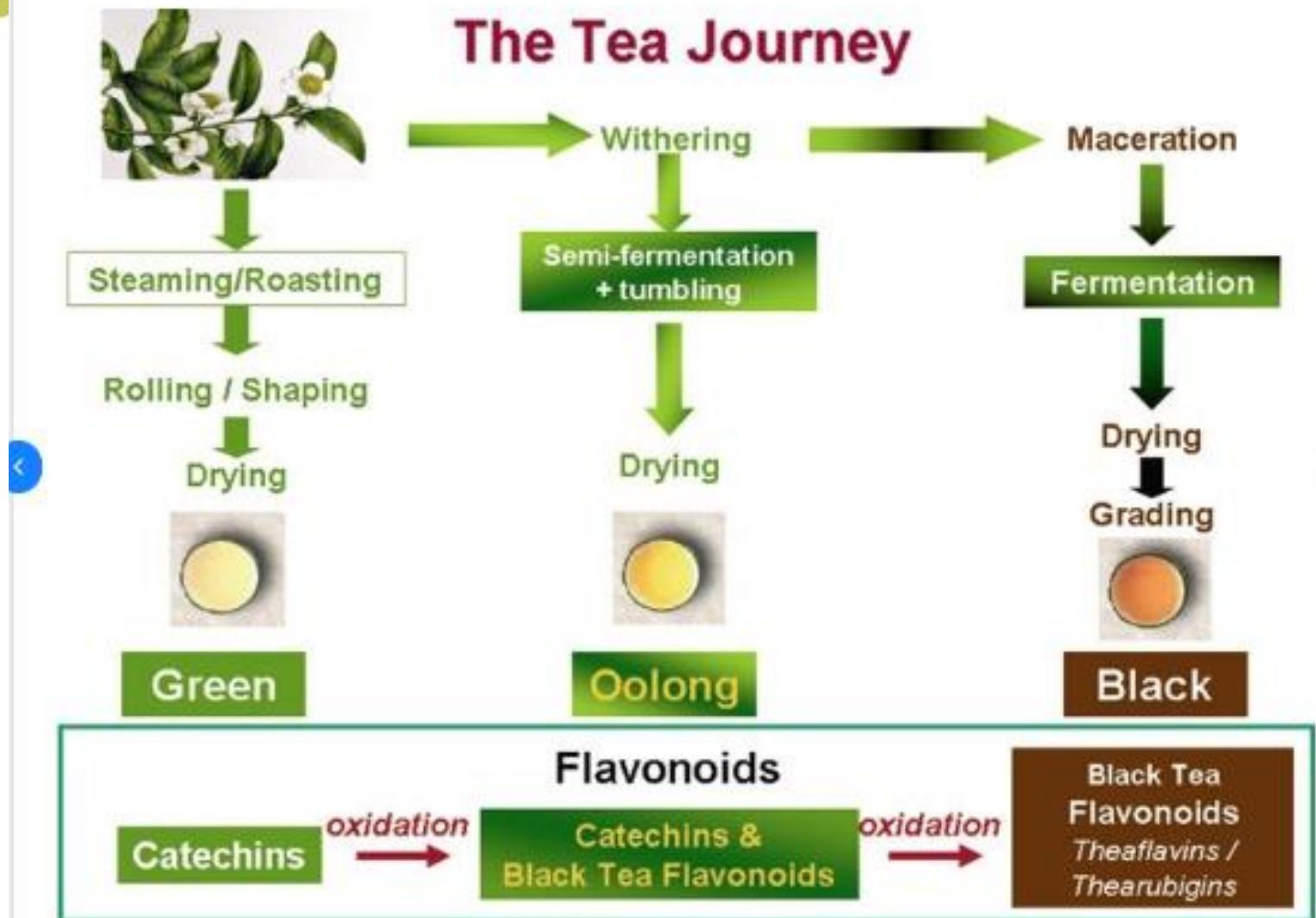
Do you know?

*Tea consumption has its legendary origins in **China** during the reign of mythological Emperor Shennong.*

Tea Manufacturing Process Flow Chart



The Tea Journey



WHICH PLANT PRODUCES GREEN TEA?



*There are two principal varieties of the *Camellia sinensis* tea plant from which the tea we drink is produced:*

CAMELLIA SINENSIS SINENSIS:

This is a smaller-leaved variety native to China that is typically used to make green and white teas. It evolved as a shrub growing in sunny regions with drier, cooler climates.

It has a high tolerance for cold and thrives in mountainous regions.



CAMELLIA SINENSIS ASSAMICA:

This is a larger-leaved variety first discovered in the Assam district of India and has typically been used to produce strong black teas. Its leaves grow large in warm, moist climates and it is very prolific in sub-tropical forests.

Nutritional Value

per serving (100 ml)



Protein	0.2g
Vitamin C	6mg
Calcium	3mg
Iron	0.2mg
Vitamin B2	0.05mg
Vitamin B3	0.2mg
Vitamin B6	0.01mg
Vitamin C	0.6mg
Magnesium	2mg
Copper	0.01mg
Manganese	0.31mg
Sodium	3mg
Potassium	27mg

GREEN TEA: FLAVOUR AND TASTE?



The characteristic taste of green tea extract is made up of a mixture of bitterness, astringency, meaty (“umami”) taste, sweetness and slight sourness.

The compounds, which contribute to, characteristic tea taste, are polyphenolic compounds, amino acids and caffeine .

Volatile compounds such as terpenoids, alcohols and carbonyl compounds contribute to the aroma of tea.



GREEN TEA AS ANTIOXIDANT

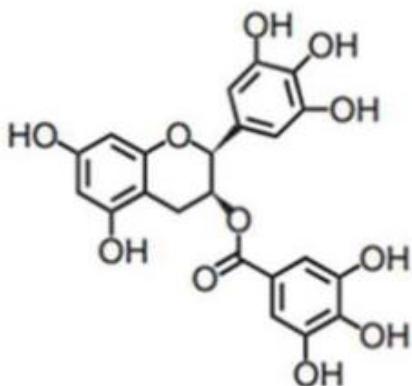
An antioxidant is a substance that retards lipid oxidation either by inhibiting initial free radical formation or by preventing them from producing more free radicals which can disseminate the oxidation reaction.

Lipid oxidation and development of rancidity is a major challenge for food manufacturers, reducing shelf-life and altering the quality and nutritional value of their products.

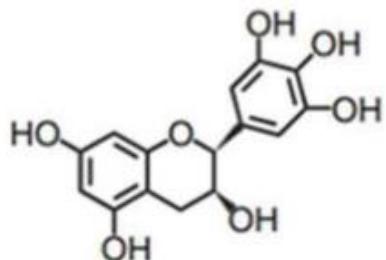
Green tea extract contains several polyphenolic components with antioxidant properties, but the predominant active components are the flavanol monomers known as catechins.

Epigallocatechin-3-gallate and epicatechin-3-gallate are the most effective antioxidant compounds.

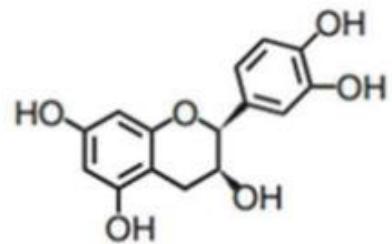




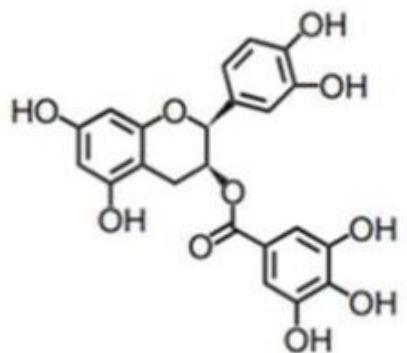
Epigallocatechin-3-gallate (EGCG)



Epigallocatechin (EGC)

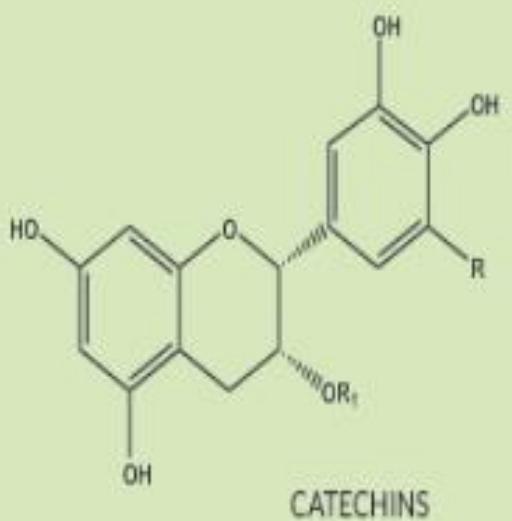


Epicatechin (EC)



Epicatechin-3-gallate (ECG)

THE EFFECT OF MILK ON POLYPHENOLS



The compounds in tea derived from catechins can have antioxidant effects on the body - research has shown these could have beneficial effects on cardiovascular health.

It has been suggested that casein proteins in milk could bind to polyphenols and as a result prevent their antioxidant effects, but research on this subject remains conflicted.

A woman with long dark hair, wearing a pink top, is smiling and holding a small glass of green tea towards the camera. She is leaning against a yellow surface. In the background, there's a blurred view of what might be a shop or a market.

The image is a composite of five photographs related to tea. At the top, a woman with long dark hair is smiling while holding a small cup of tea. To her left, a green circular graphic contains the number '5x' and the words 'TEA FLAVOUR'. In the middle-left, there's a photograph of a silver tea pot and a white saucer with a cup of tea. Middle-right shows a close-up of a green tea bag labeled 'Tetley' being held over a glass. Bottom-left shows several Tetley tea bags in their packaging. Bottom-right is a close-up of a hand pouring tea from a green teapot into a cup.

A photograph of actress Deepika Padukone. She has long, wavy brown hair and is wearing a white lace-trimmed top. She is holding a small glass of tea in her right hand and looking directly at the camera with a slight smile. The background is a plain, light color.



A woman with dark hair tied back, wearing a light blue tank top, is smiling and holding a clear glass filled with green tea. In the bottom left corner, there is a box of Lipton Greentea bags. The background is a soft-focus green and yellow gradient.

HEALTH EFFECTS OF GREEN TEA



Regular green tea is 99.9% water, provides 1 kcal per 100 mL serving, is devoid of significant nutrient content, and contains phytochemicals such as polyphenols and caffeine.

Numerous claims have been made for the health benefits of green tea, but human clinical research has not found good evidence of benefit.

- **Reduces risk of Cancer:** Numerous human studies have yielded inconsistent results and limited evidence of the benefit of drinking green tea on the overall risk of cancer.
- **Reduce Inflammations:** Green tea has anti-inflammatory properties. A review of human clinical studies on both cellular and animal experiments found that green tea and its major component, **epigallocatechin-3-gallate (EGCG)**, have demonstrable anti-inflammatory effects. The use of tea extract use in cosmetics supported this.
- **Reduces risk of heart related disease:** A meta-analysis of observational studies reported an increase in one cup of green tea per day was correlated with slightly lower risk of death from cardiovascular causes.

HEALTH EFFECTS OF GREEN TEA



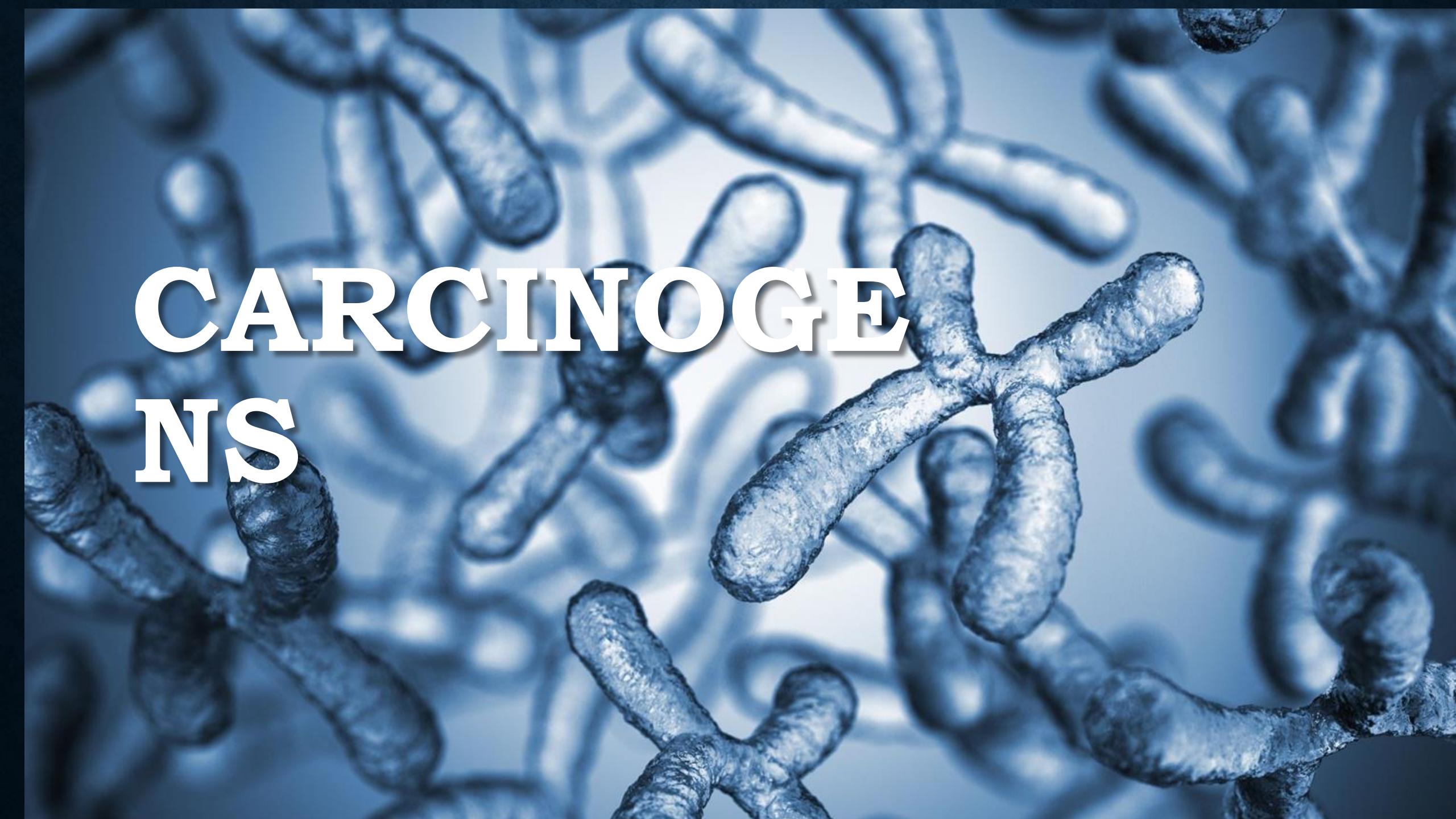
- **Weight loss:** the impact of drinking green tea on weight loss is unlikely to be of clinical importance. Most studies that have shown small changes in metabolism used green tea extracts with extremely high concentrations of catechins.
- **Lowers cholesterol:** A research in 2011 found that consuming green tea, either as a beverage or in capsule form, was linked to significant but modest reductions in total low-density lipoprotein cholesterol.
- **Glycemic control:** Green tea consumption lowers fasting blood sugar but in clinical studies the beverage's effect on hemoglobin A1c and fasting insulin levels was inconsistent.
- **Working memory:** A 2016 meta-analysis of observational studies suggested that daily tea drinking is associated with a decreased risk of cognitive impairment and mild cognitive impairment.



HEALTHY LIFESTYLE KI AADAT DAAL LO



Studies, a reduction in waist circumference has been observed upon daily consumption of approx. 600mg catechins over a period of 8-12 weeks approx. 600mg of catechins. To be consumed as part of a balanced diet and active lifestyle. Expectant and nursing mothers should limit caffeine intake from all sources to a maximum of 200mg caffeine per day. Lipton Green Tea contains approx. 20-30mg caffeine per cup. Studies approx. 200mg caffeine.



CARCINOGENS

CONTENTS

1. Introduction

2. How they cause cancer

3. Identifying Carcinogens

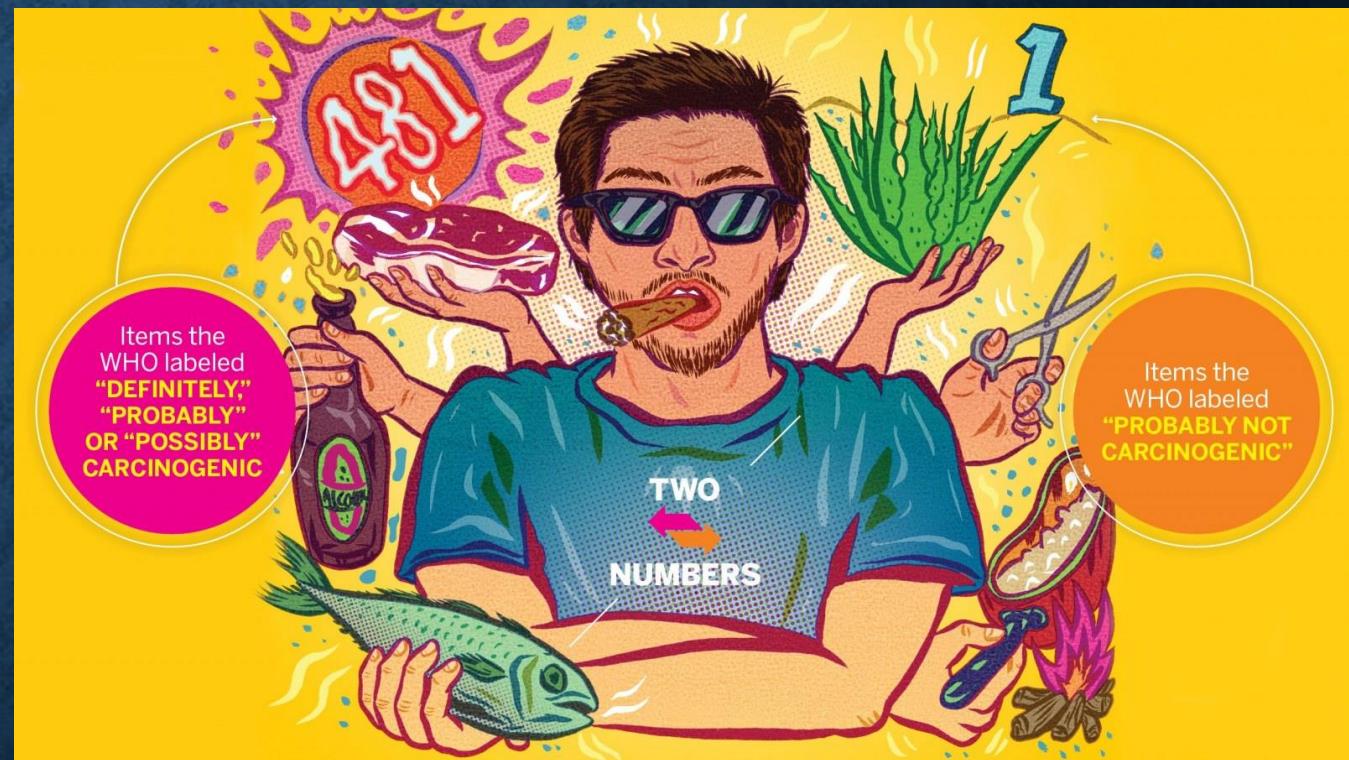
4. Types of Carcinogens

5. Exposure and Your Risk

6. Safety Precautions

INTRODUCTION

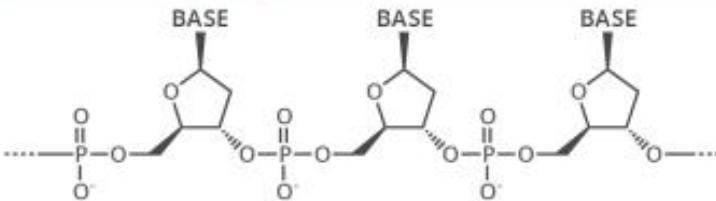
- + A carcinogen is an agent with the capacity to cause cancer in humans.
- + It is important that we know about carcinogens because study shows approximately **13% of cancers diagnosed in 2018 globally were attributed to carcinogenic infections.**
- + Carcinogenic substances are present in home and workplace chemicals, environmental or medical radiation, smoke, and even some viruses and medications.
- + While it's impossible to eliminate carcinogen exposure, you can and should take steps to reduce what you come in contact with.



What makes up the chemical structure of DNA?

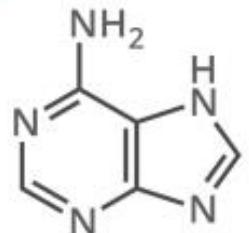


The sugar-phosphate backbone

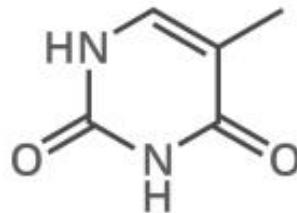


DNA is a polymer made up of units called nucleotides. The nucleotides are made of three different components: a sugar group, a phosphate group, and a base. There are four different bases: adenine, thymine, guanine and cytosine.

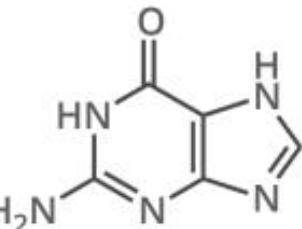
A Adenine



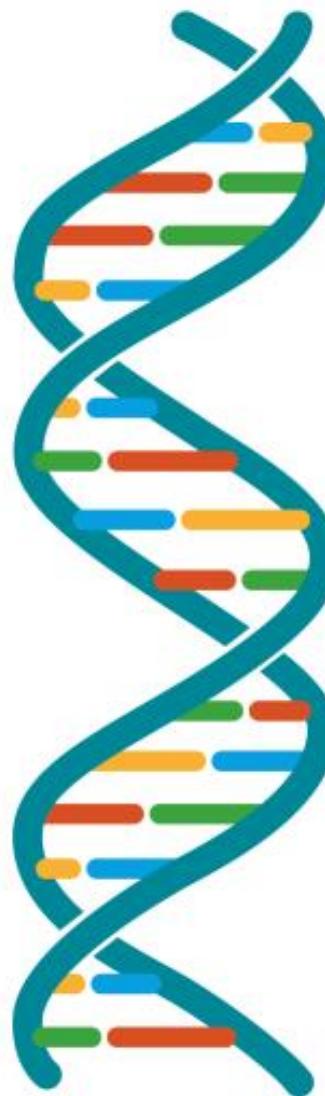
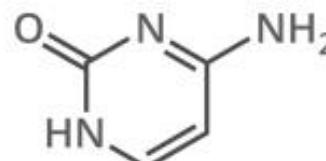
T Thymine



G Guanine

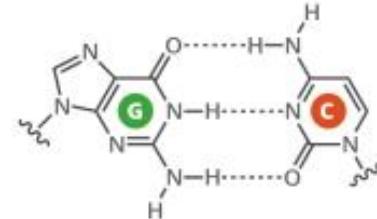
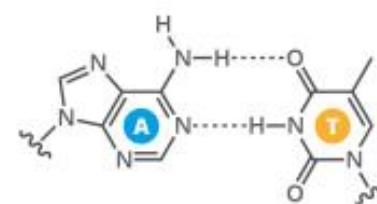


C Cytosine



What holds DNA strands together?

DNA strands are held together by hydrogen bonds between bases on adjacent strands. Adenine (A) always pairs with thymine (T), while guanine (G) always pairs with cytosine (C). Adenine pairs with uracil (U) in RNA.



From DNA to proteins

The bases on a single strand of DNA act as a code. The letters form three letter codons, which code for amino acids - the building blocks of proteins.



An enzyme, RNA polymerase, transcribes DNA into mRNA (messenger ribonucleic acid). It splits apart the two strands that form the double helix, then reads a strand and copies the sequence of nucleotides. The only difference between the RNA and the original DNA is that in the place of thymine (T), another base with a similar structure is used: uracil (U).

DNA sequence

T T C C T G A A C C C G T T A

mRNA sequence

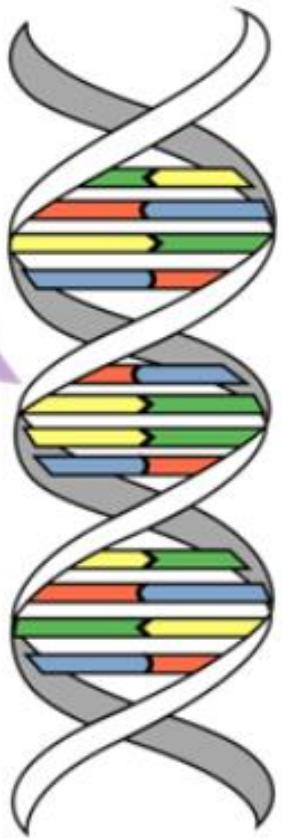
U U C C U G A A C C C G U U A

Amino acid

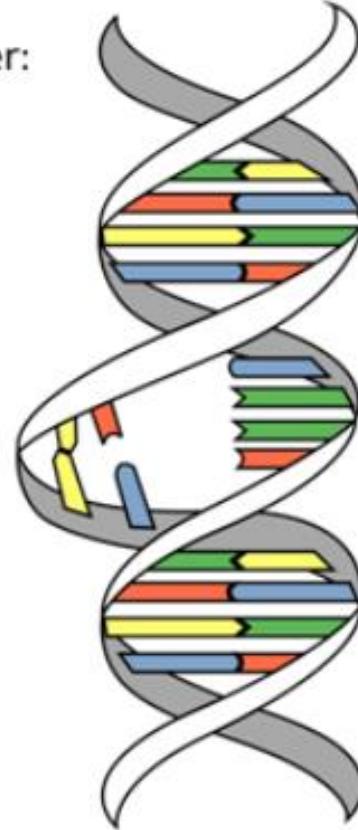
Phenylalanine Leucine Asparagine Proline Leucine

In multicellular organisms, the mRNA carries genetic code out of the cell nucleus, to the cytoplasm. Here, protein synthesis takes place. 'Translation' is the process of turning the mRNA's 'code' into proteins. Molecules called ribosomes carry out this process, building up proteins from the amino acids coded for.

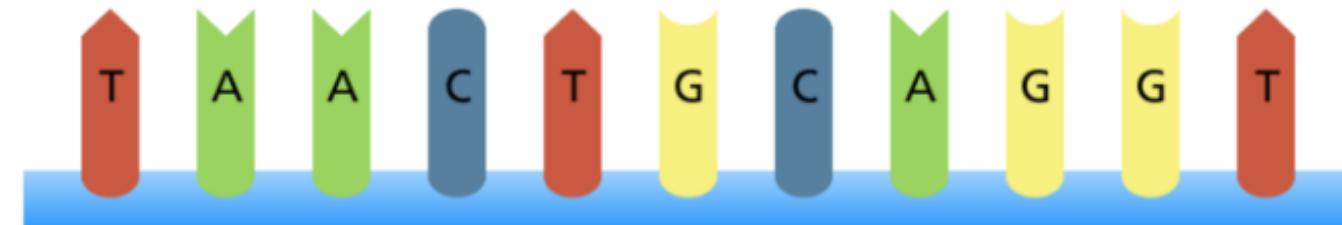
Before:



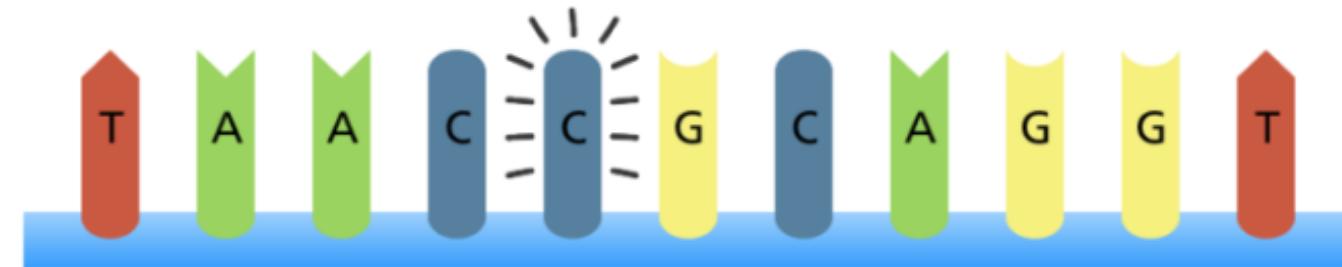
After:



Original sequence

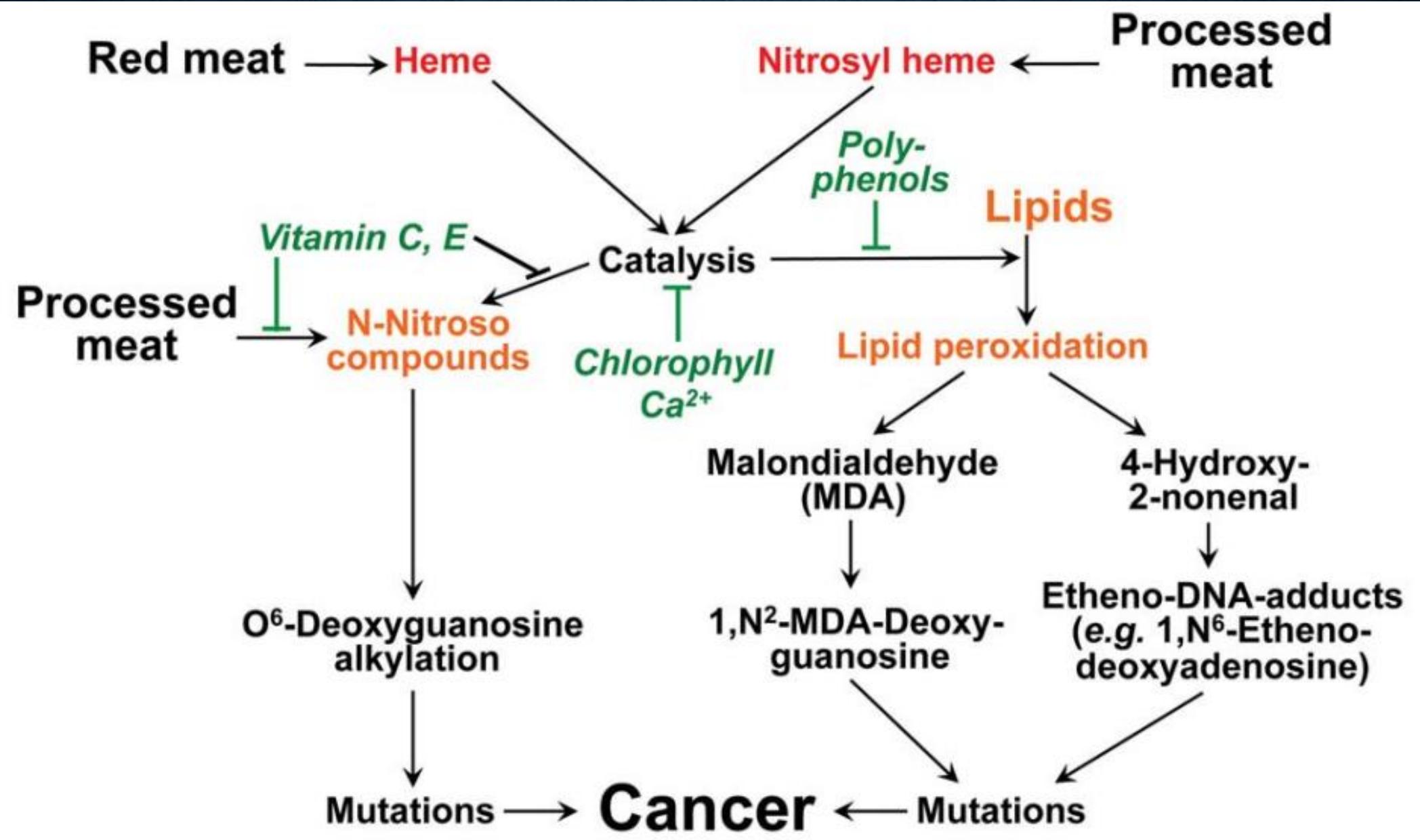


Point mutation



HOW THEY CAUSE CANCER?

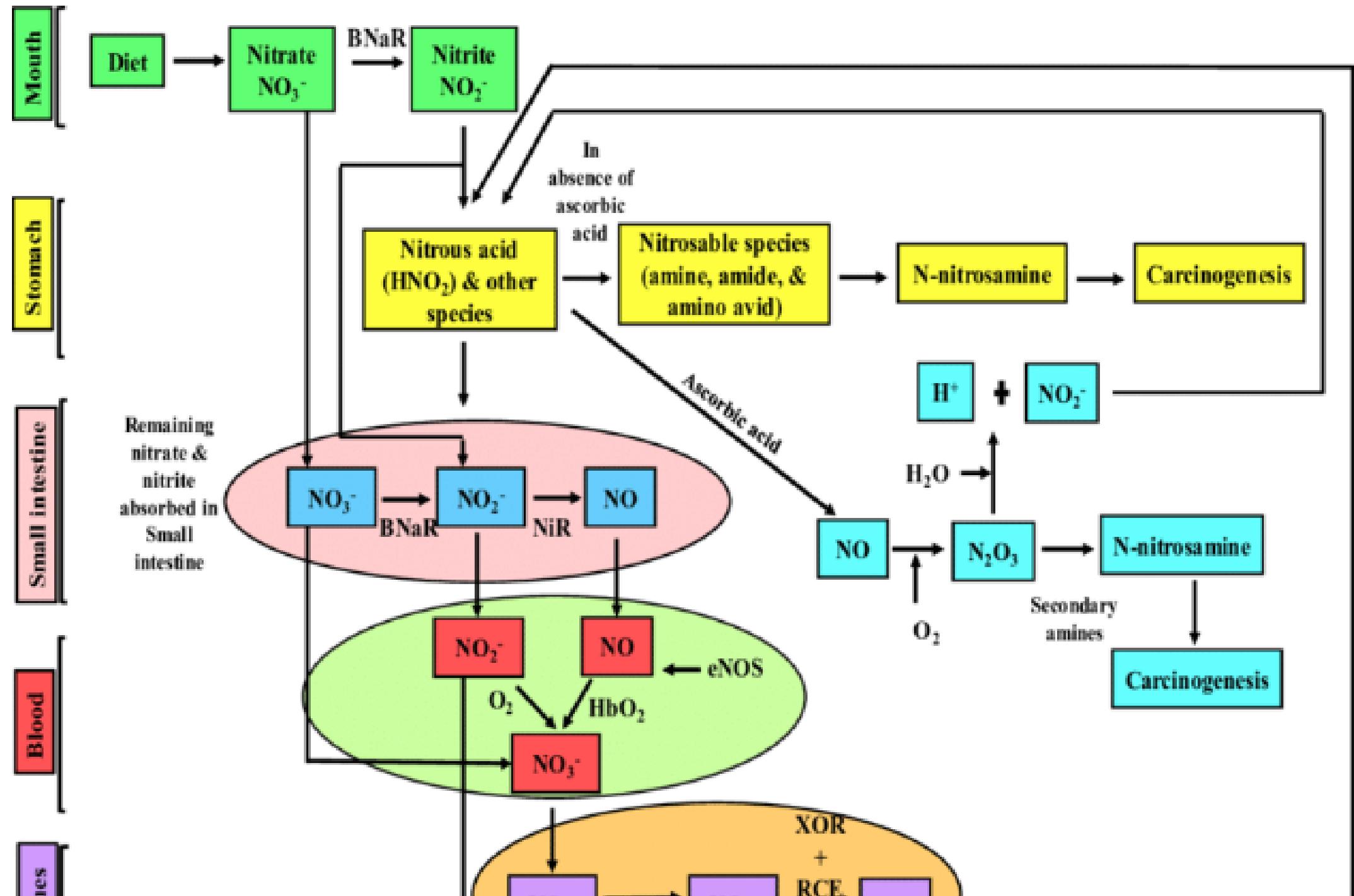
- i. Carcinogens cause cancer by damaging DNA, which carries **genetic information in your cells**.
- ii. A carcinogen can directly damage DNA and cause changes called **mutations**. These lead to a disruption in the normal process of growth and cell division.
- iii. Other times a carcinogen may cause damage and inflammation, which results in the **cells dividing more rapidly**. There is always a chance that a mutation will occur when this happens, which in turn increases the chance of **developing cancer**.
- iv. Carcinogens do not cause cancer in every case, all the time.
- v. Substances labeled as carcinogens can have **different levels of cancer-causing potential**.
- vi. The risk of developing cancer depends on many factors, **including how they are exposed to a carcinogen, the length and intensity of the exposure, and the person's genetic makeup**.

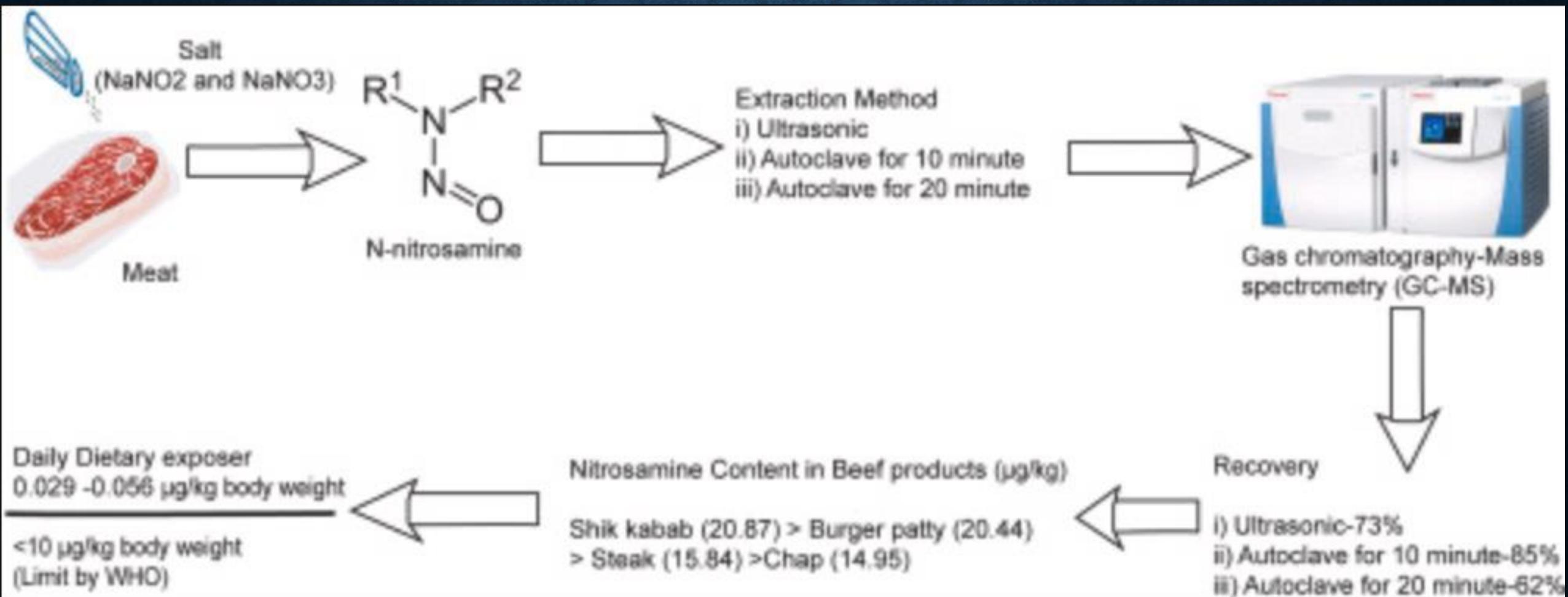


Mechanism of red and processed (strongly-heated) meat that contributes to cancer formation

Causes of N-Nitroso compound





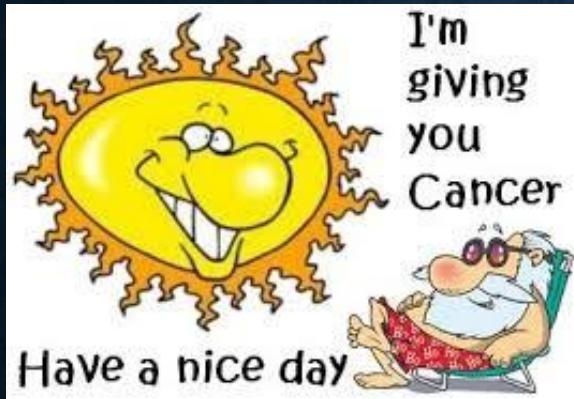


IDENTIFYING CARCINOGENS

- It is not always easy to determine if a substance or an exposure is a carcinogen.
- Not only are **there millions of possible carcinogens** both in nature and industry, it's simply not practical or ethical to test every chemical on hundreds of thousands of people to see if they get cancer.
- Many studies to evaluate whether or not a substance is a carcinogen—and if so, to what extent—are done on animals using high exposures. Unfortunately, the results of **animal studies** cannot automatically be applied to humans.
- It is also sometimes complicated by long latency periods, which is the time between an exposure and the development of a cancer. **A good example of this is smoking.** It took many years of research and millions of dollars to determine its relationship to lung cancer.
- So, scientists use what is already known about chemical structures, results from other types of lab tests, the extent of human exposure, and other factors to select chemicals for testing.

TYPES OF CARCINOGENS

Carcinogens exist in a range of indoor or outdoor environments. They include chemicals, viruses, medications, and pollutants.



Environmental
Radiation



Medical Radiation



Viruses



Air pollution



Home and Workplace Chemicals

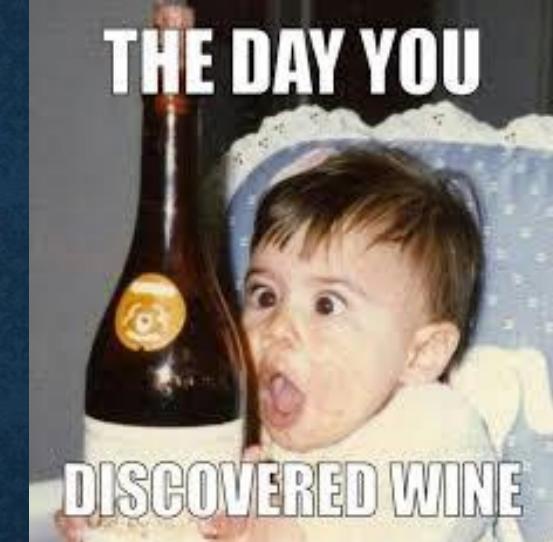
THERE ARE A VARIETY OF LIFESTYLE FACTORS THAT CAN CONTRIBUTE TO
MUTATIONS THAT RESULT IN CANCER.
LIFESTYLE-RELATED CARCINOGENS INCLUDE:



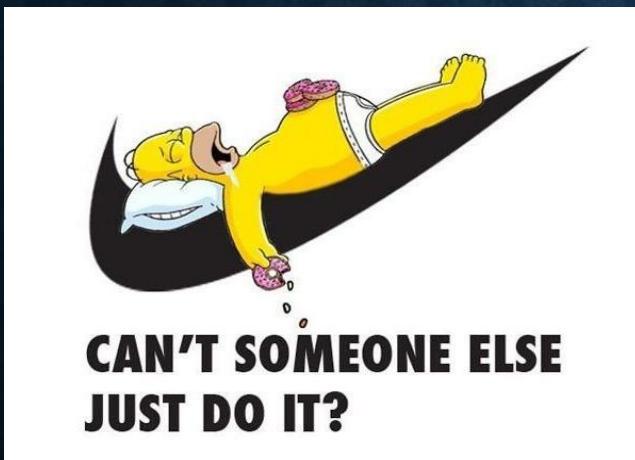
Smoking



Processed meat



Alcohol



Lack of physical activities

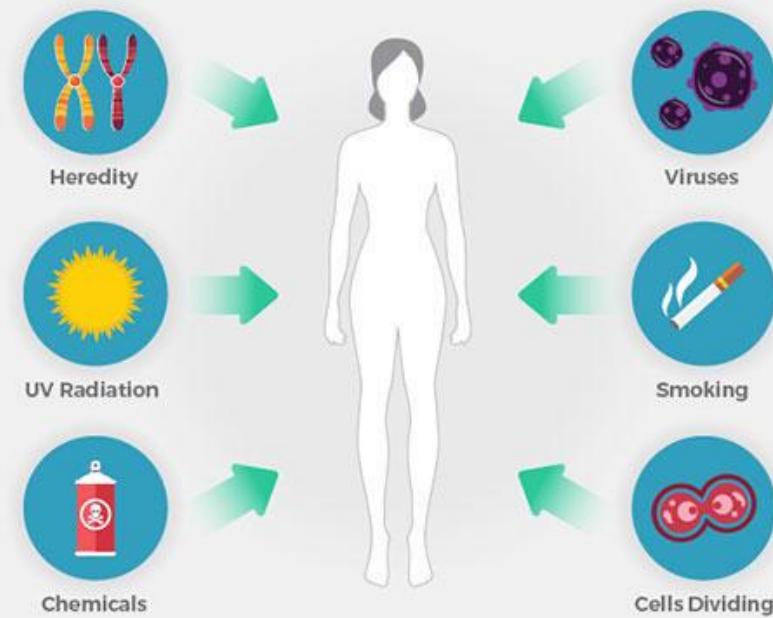


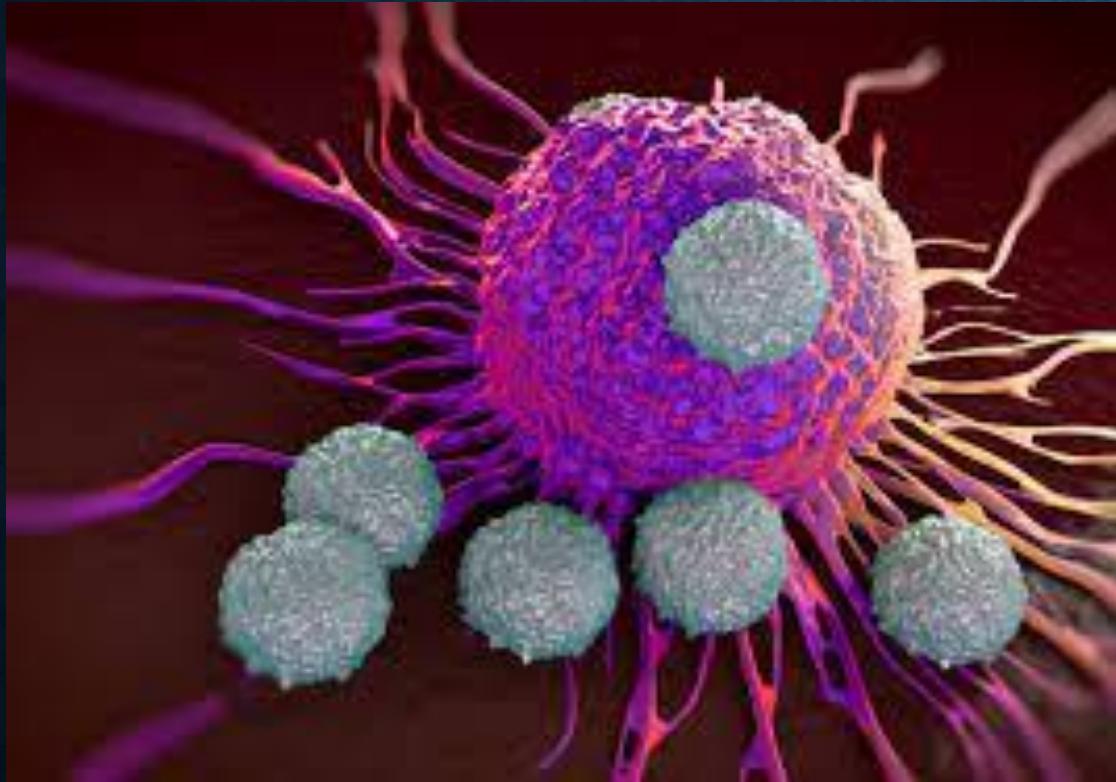
Chewing pens

EXPOSURE AND YOUR RISK

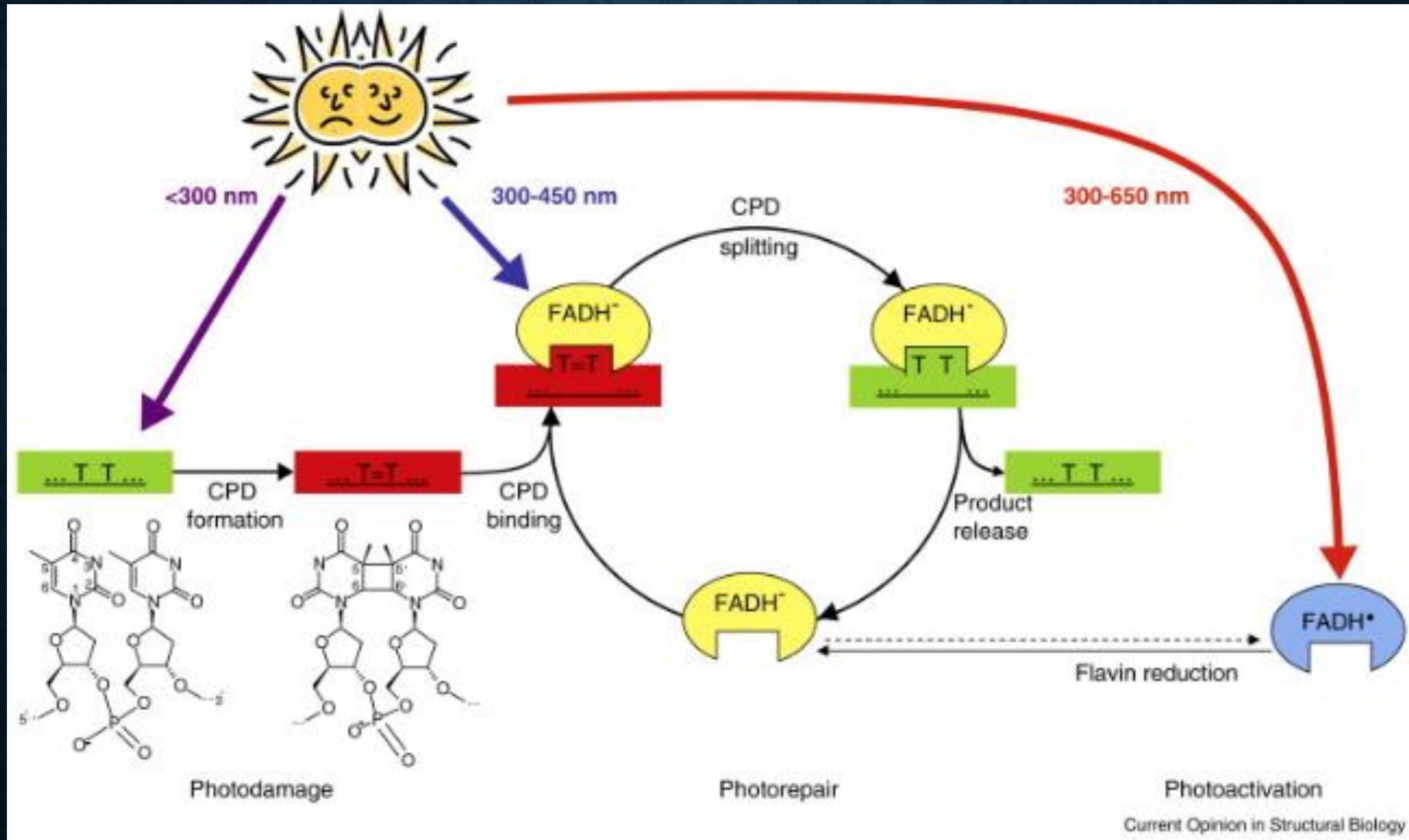
- Carcinogen exposure may cause cancer, but that doesn't mean that it necessarily will. The ability of a carcinogen to cause cancer depends on various factors such as.
 1. The amount and length of exposures to carcinogen.
 2. The tendency to develop cancer may be inherited as part of your set of genes, or genome. Known as a genetic predisposition.

8 OF 10 | What Causes Genetic Changes?





- It's also important to note that cancer is most often caused by an accumulation of mutations, rather than a single insult. For this reason, a number of factors may work together to either increase or decrease the risk of developing cancer.
- Even when damage to DNA occurs, your body can produce proteins that either repair damaged DNA or eliminate damaged cells before a normal cell is transformed into a cancer cell. There are tumor suppressor genes that slow down cell division and do repairs.



Reaction mechanisms of DNA photolyase

Current Opinion in Structural Biology

SAFETY PRECAUTIONS

As every substance that may be a carcinogen has not been tested, so it's important to practice discretion with any potential carcinogens that we may be exposed to such as

1. Follow directions for safe handling of chemicals
2. If you wouldn't eat it, use gloves to handle it
3. Follow recommended procedures at work when handling chemicals on the job
4. Consider alternatives to substances with long lists of ingredients.
5. Read labels



**Wear chemical
goggles, face shield
& rubber gloves when
handling chemicals.**

CARCINOGENS IN BARBECUE

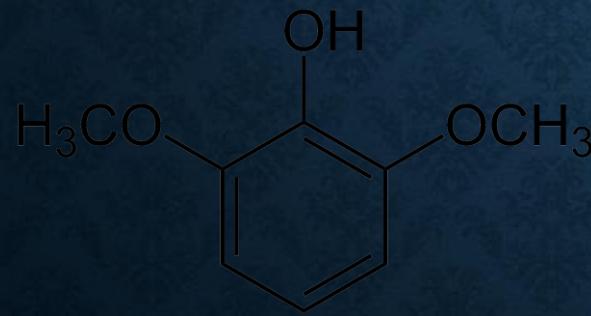
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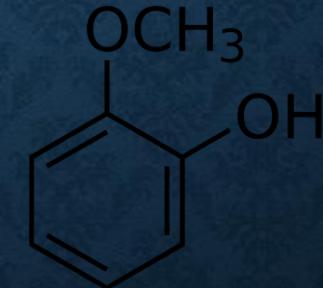
- For some of our vegetarian friends, Barbecue (or Barbeque) is a term used with significant regional and national variations to describe various cooking methods which use live fire and smoke to cook the food.
- **Barbecuing** encompasses multiple types of cooking techniques. The original technique is cooking using smoke at low temperatures—usually around 240–280 °F or 115–145 °C—and significantly longer cooking times (several hours), known as *smoking*.
- Another popular technique is **Grilling** which is done over direct, dry heat, usually over a hot fire over 500 °F (260 °C) for a few minutes. Grilling may be done over wood, charcoal, gas, or electricity also.

SMOKY TASTE AND FLAVOR

- When charcoal burns, phenolic compounds form. **Syringol** is a major contributor to barbecue's smoky aroma, and **Guaiacol** plays a big part in its smoky taste.



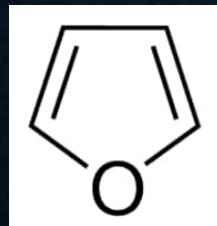
Syringol



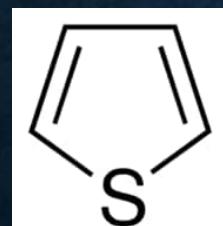
Guaiacol

CHEMISTRY BEHIND THE FLAVOR

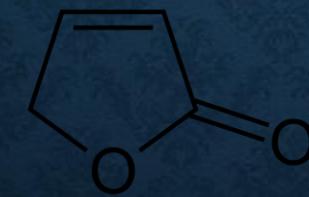
- The **Maillard Reaction** is responsible for the delicious flavors of the barbecues meat. Sugars and amino acids in the meat react to form a range of products.
- Temperature, acidity and type of meat, all affect the compounds produced. Base structures of some general families of these compounds are listed below:



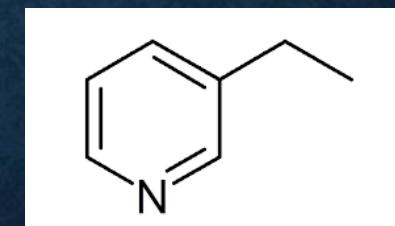
Furan



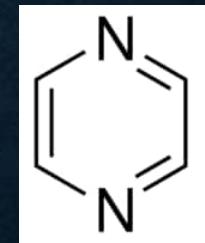
Thiophene



Furanone



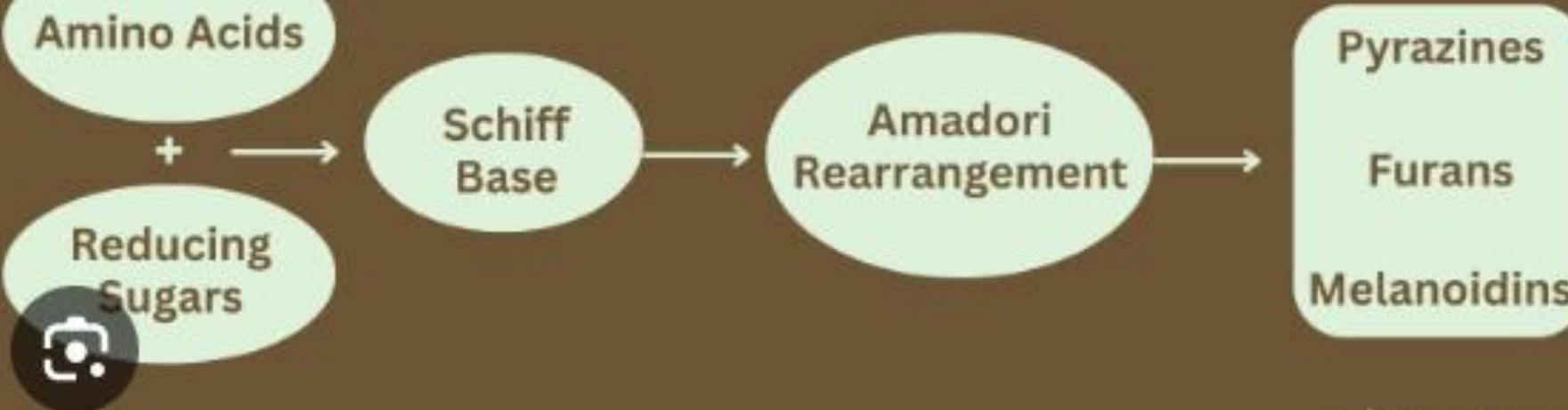
Alkylpyridine



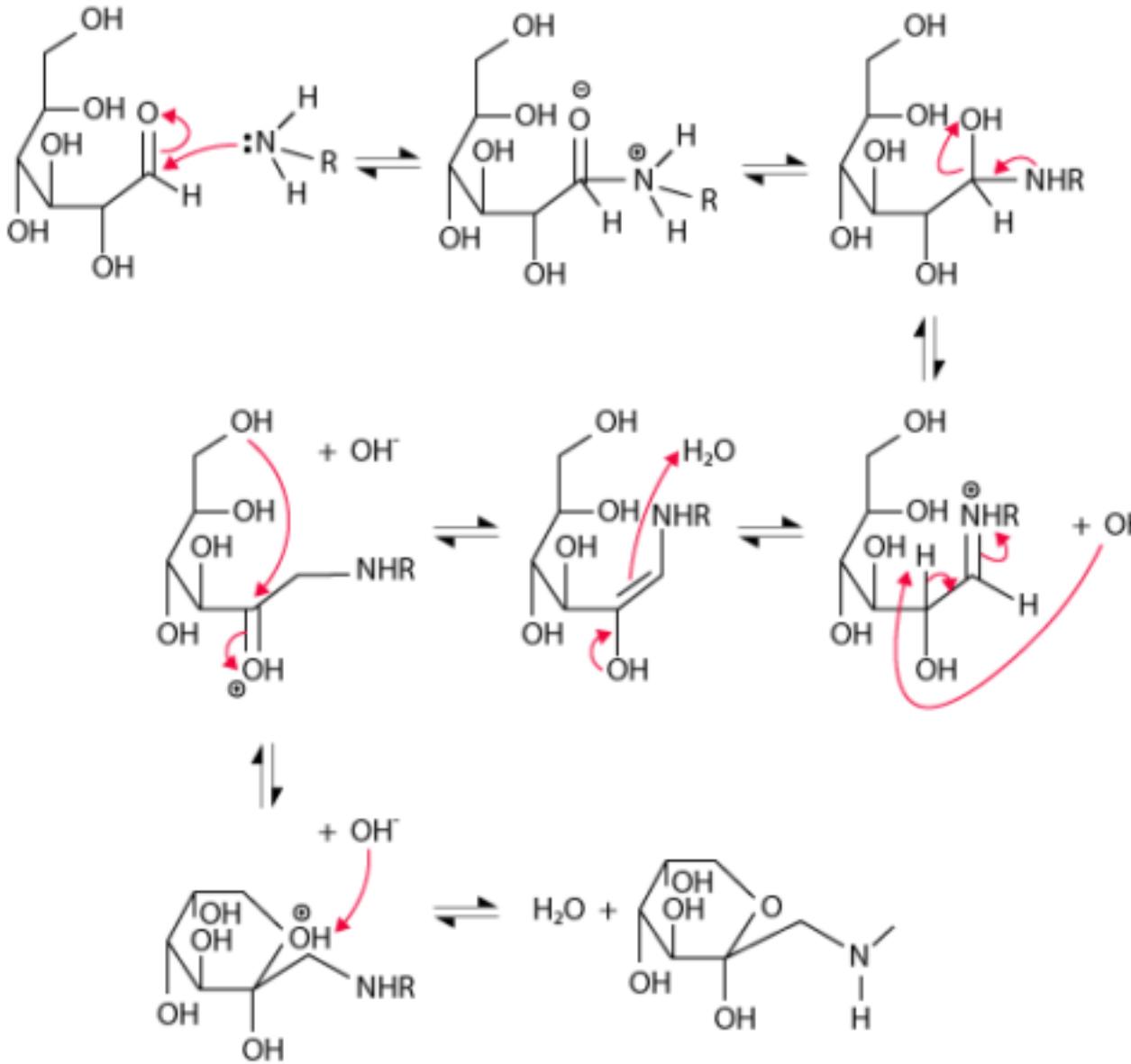
Pyrazine

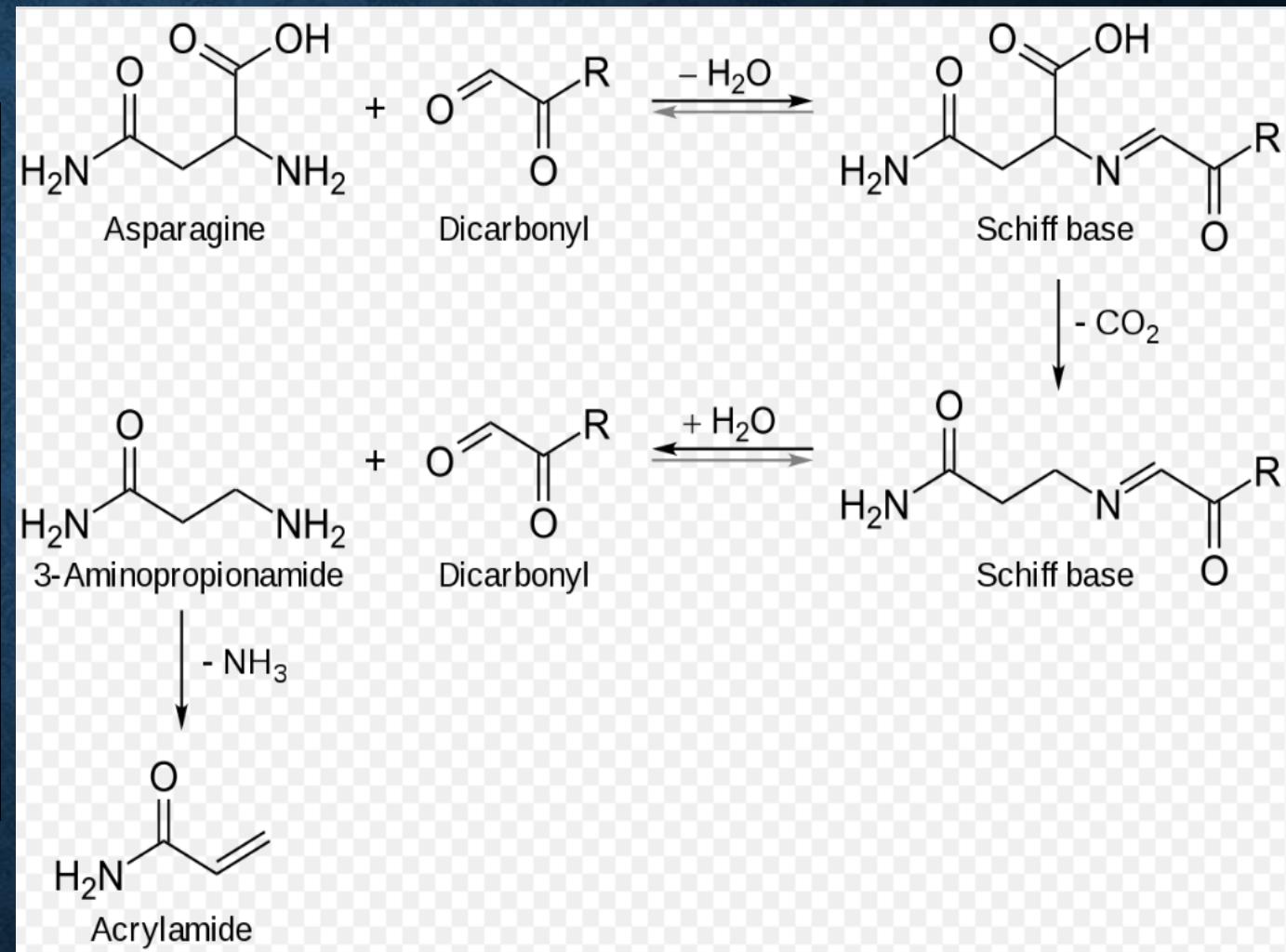
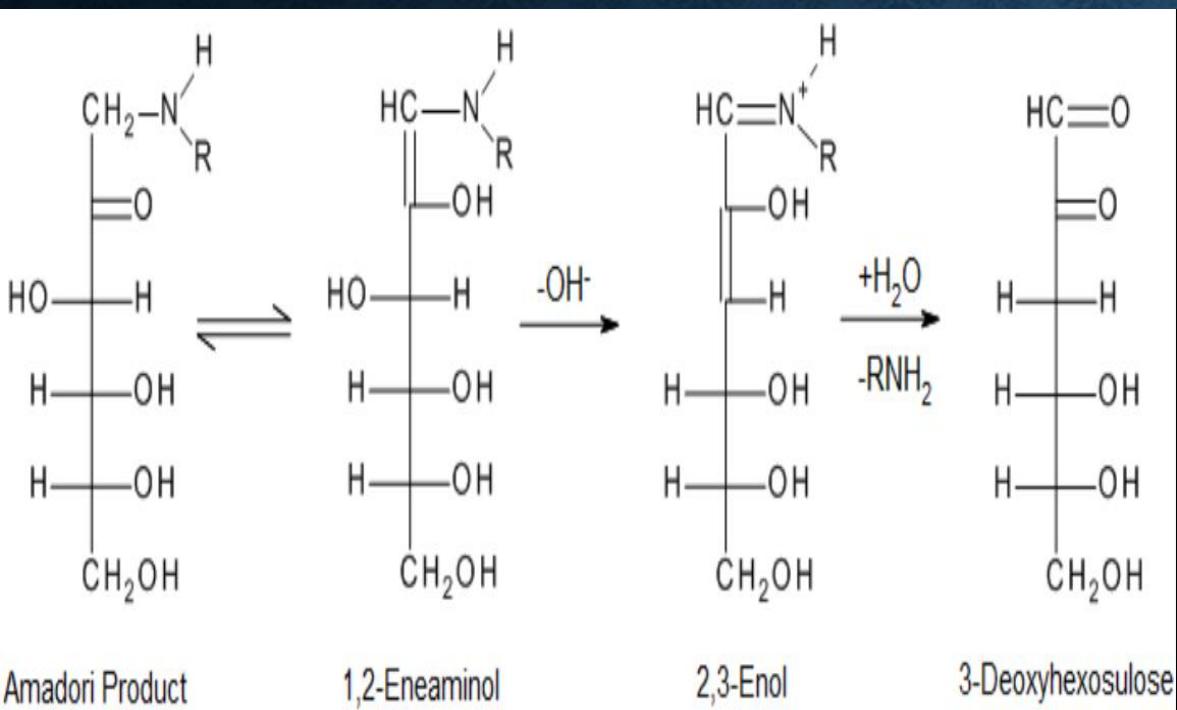
Maillard Reaction

The Maillard reaction is actually a set of chemical reactions between amino acids and sugars that causes food browning and contributes to flavors and aromas.



MAILLARD REACTION MECHANISM





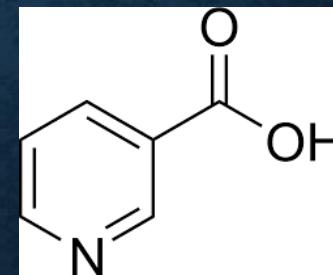
CARCINOGENS

- A **carcinogen** is any substance, radionuclide, or radiation that promotes carcinogenesis, the formation of cancer.
- This may be due to the ability to damage the genome or to the disruption of cellular metabolic processes.
- Chemicals used in processed and cured meat such as some brands of bacon, sausages and ham may produce carcinogens. Cooking food at high temperatures, for example grilling or barbecuing meats, may also lead to the formation of minute quantities of many potent carcinogens that are comparable to those found in cigarette smoke.

- When meat cooks on a barbecue, fat drips onto the hot coals and forms poly-aromatic hydrocarbons (PAH). There are a number of different PAH that can develop(including carcinogens) such as *Benzo(a)pyrene*.
- **Heterocyclic amines** (HCA) are another class of carcinogenic compounds that form as meat cooks. **These molecules concentrate especially in charred areas of the meat.**
- Research has shown that marinating meat in beer can dramatically reduce the concentration of HCAs.

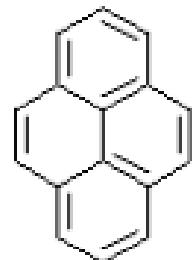


PAH

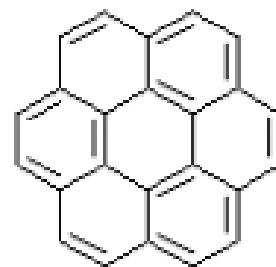


HCA

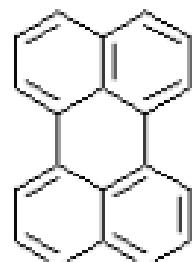
PERICONDENSED



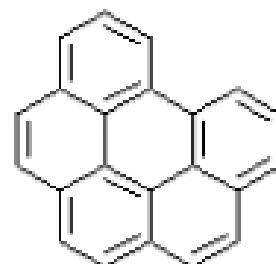
Pyrene
 $C_{16}H_{10}$



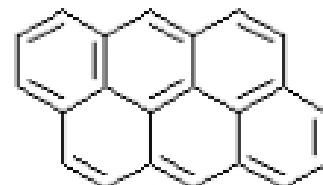
Coronene
 $C_{24}H_{12}$



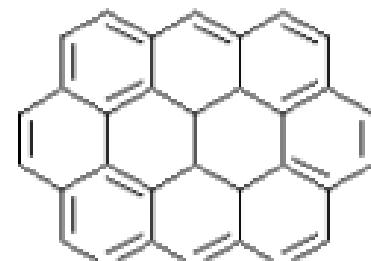
Perylene
 $C_{20}H_{12}$



Benzo[ghi]perlylene
 $C_{22}H_{12}$



Antanthrene
 $C_{22}H_{12}$

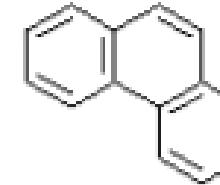


Ovalene
 $C_{22}H_{14}$

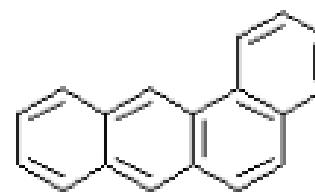
CATACONDENSED



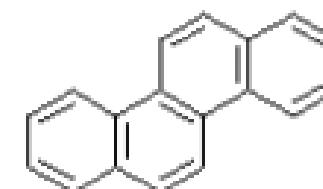
Naphthalene
 $C_{10}H_8$



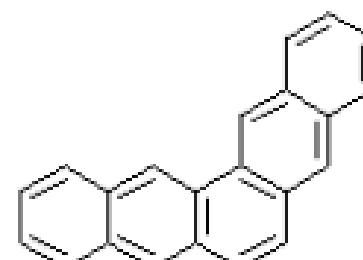
Phenanthrene
 $C_{14}H_{10}$



Tetraphene
 $C_{18}H_{12}$



Chrysene
 $C_{18}H_{12}$

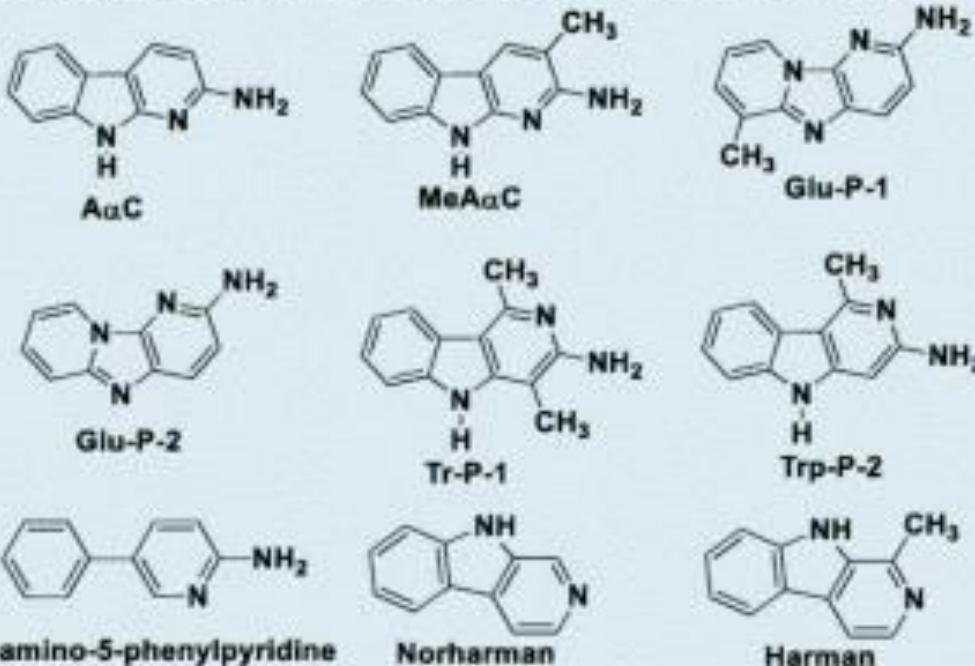


Pentaphene
 $C_{22}H_{14}$

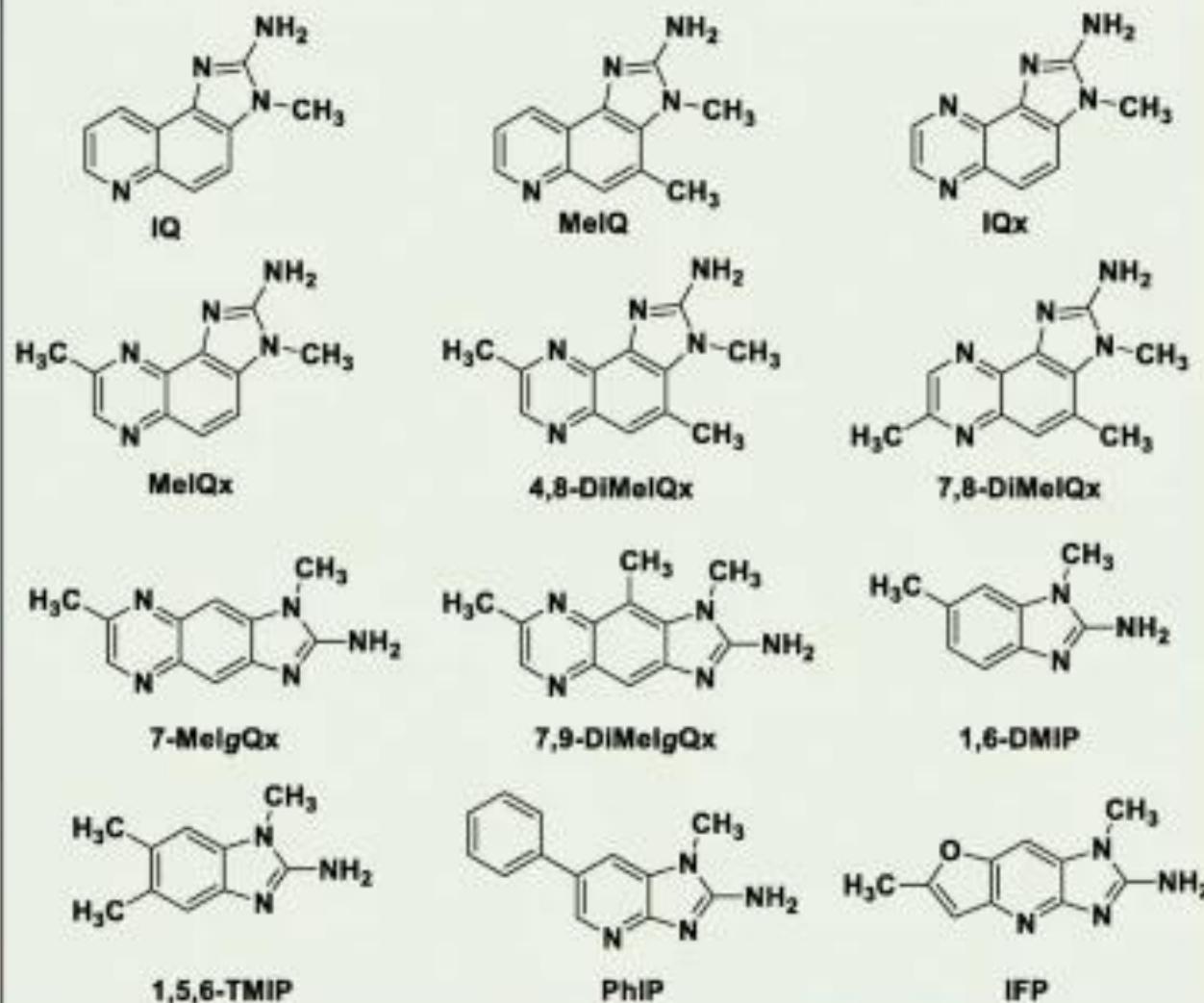


Pentacene
 $C_{22}H_{14}$

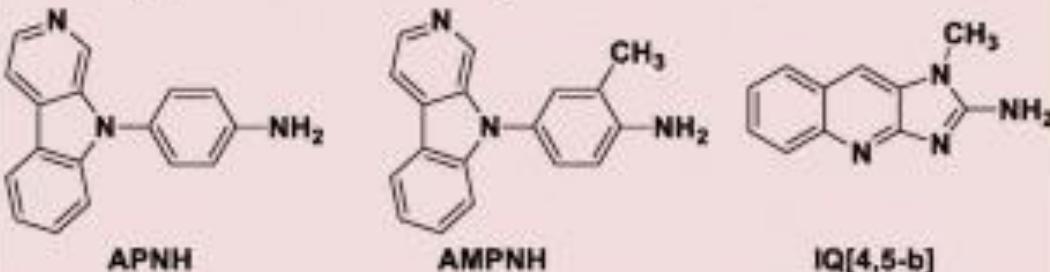
Pyrolysis Heterocyclic Aromatic Amines



Aminoimidazoarene Heterocyclic Aromatic Amines



Endogenous Heterocyclic Aromatic Amines



REMEDY TO THE PROBLEM

- Given are a few ways by which you can reduce the risk of taking in carcinogens from the barbecues meat:
 - Go Lean:** When fat hits an open flame, it produces PAHs. So, instead of grilling fatty burgers or brats, opt for grass-fed steak, chicken, or fish. "But steer clear of tilapia," advises Dr. Freedland. "It has almost no heart-healthy oils." The leanest foods to grill are fruits and vegetables.
 - Choose Veggies:** When you cook muscle at high temperatures—whether beef, pork, fish, or poultry—it mutates and creates HCAs. But fruits and vegetables don't have protein (muscle) or fat, both of which become problematic when exposed to high temps. So, in terms of potential health risks, grilling produce is a safer way to enjoy your barbecue.

3. Wrap it up: If you're cooking meat and veggies together, fat dripping from the meat can fall into the flames and coat your produce with cancer-causing chemicals. Foil-wrapping fruits and veggies can protect them from high heat and the harmful effects of grilled meats. You can also wrap meat in foil to prevent fat from dripping into the hot coals.



4. Watch the marinades: Sauces and marinades are often loaded with sugar. Acidic rubs and marinades, on the other hand, may help break down some of the muscle in the meat and reduce the number of **HCA**s on your plate. If you're looking for an alternative to marinades, rub heart-healthy olive oil over the food and season it with pepper, spices, and herbs.

CONCLUSION

- We discussed initially what is a barbecue and what are the compounds that cause the taste and smell of the smoky meat.
- Then we discussed about the **Maillard Reaction** and also talked briefly about its reaction mechanism.
- After that, our topic of conversation shifted towards **carcinogens**. We first explained what a carcinogen is and where they are found in our daily lives.
- We found out how barbecued meat can result in us taking in carcinogens and hence risking our health.
- Finally we talked about some remedies to avoid ingesting these carcinogens and enjoy the taste of the barbecue.

5. *Flip frequently*: It's not uncommon for folks to put meat on the grill and let it sit for **10 minutes** before flipping and repeating the process. Unfortunately, that method produces detrimental char marks. If you flip the meat more often, you can still achieve the desired temperature and avoid the black char lines. Do it that way and your grilled meal will be as healthy as the food itself, no matter which cooking method you choose.

6. *Try Gas*: You can control the temperature better with gas grills. For best results, light the outside burners, not the center one. Then cook food in the center of the grill with the lid closed.

CIGARETTE



CONTENTS

- INTRODUCTION
- COMPOSITION
- DIFFERENT TYPES OF CIGARETTE
- DIFFERENT BRANDS OF CIGARETTE
- DAILY SMOKING PREVALENCE
- HEALTH EFFECTS
- ENVIRONMENTAL EFFECTS
- DEATH RATE FROM SMOKING





INTRODUCTION TO CIGARETTES

- Invented by James A Bonsack
- Cancer sticks
- Addictive in nature
- Leading preventable death cause



INTRODUCTION

- Cigarette is a paper wrapped cylindrical roll of finely cut tobacco for smoking. It is ignited at one end causing it to smoulder, its smoke is inhaled from the other end. Cigarette smoking is the most common method of tobacco consumption.
- It is distinguished from cigar by its smaller size, usage of processed leaf and white paper wrapping.
- Terms used for cigarette are fag, cigs, ciggies, smokes, darts, stogs.
- When burnt cigarettes create more than **7000 chemicals**. At least 69 of these chemicals cause cancer and many are toxic.



COMPOSITION

- It has three constituents – Tobacco, Paper, and cigarette butt.
- Tobacco is a plant grown for its leaves that contains **nicotine**.
- The tobacco is carefully blended to produce a well-balanced tobacco blend, which can be filled into cigarette wrappers. It is mainly made from the leaves of flue- cured bright leaf, burley tobacco, and oriental tobacco. Leaves are selected, processed, and aged before blending and filling.
- Various additives are combined into the shredded tobacco product mixtures, with **humectants** such as **glycerol**.



COMPOSITION CONTD.

- Most commercially available cigarettes today contain tobacco that is treated with **butterfat and sugar** to mask the bitter taste of nicotine.
- Cigarette paper is made from thin and lightweight rag fibres(non wood plant fibres).

To control the smoking properties, this paper has a porosity that permits the smoke to pass through it.

- The remains of a cigarette after smoking is called **cigarette butt**. It consists of a tissue tube which holds a filter. Filters are made from cellulose acetate fibre. Filters reduce some substances from smoke.



DIFFERENT TYPES OF CIGARETTE



REGULAR CIGARETTE



green tea cigarettes
no tobacco • no nicotine



GREEN TEA
smoke cleaner and greener

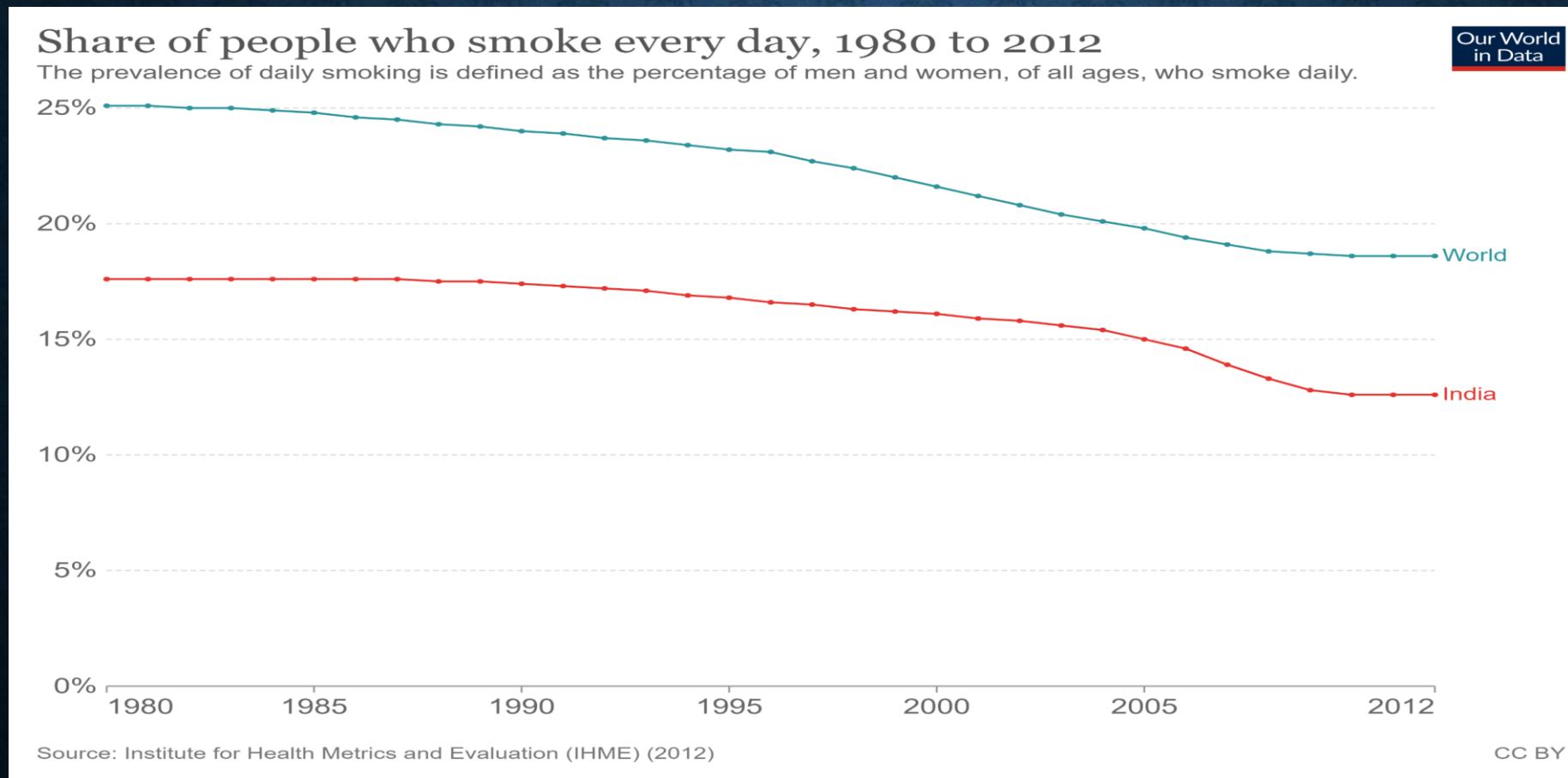


ELECTRONIC CIGARETTES

DIFFERENT BRANDS OF CIGARETTE



DAILY SMOKING PREVALENCE



HEALTH EFFECTS

- Cigarette is highly addictive due to nicotine present in tobacco.
- It harms nearly every organ of the body.
- Smoking can cause heart attacks, strokes, fertility issues, and cancer almost anywhere in the body(particularly lungs).
- As tobacco damages the lungs and immune system, coronavirus is worse for people who smoke.
- On average each cigarette smoked is estimated to shorten life by 11 minutes.



ENVIRONMENTAL EFFECTS

THE ENVIRONMENTAL IMPACT OF CIGARETTES

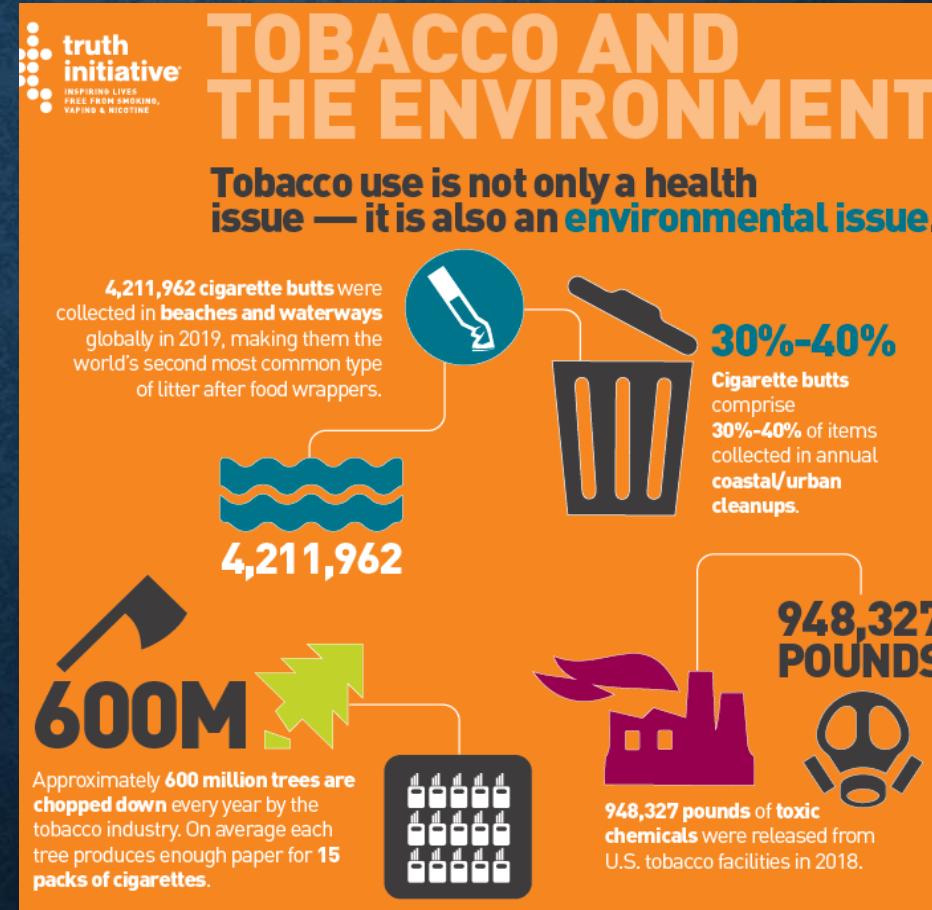
Every year, 2.5 million tons of carbon dioxide are emitted from tobacco smoking.



Over 5 million tons of methane are emitted from tobacco smoke.

Cigarette filters account for over 176,000 tons of waste each year.

1.75 million tons of tobacco packaging waste (paper, glue, ink, foil, cellophane) is produced each year.

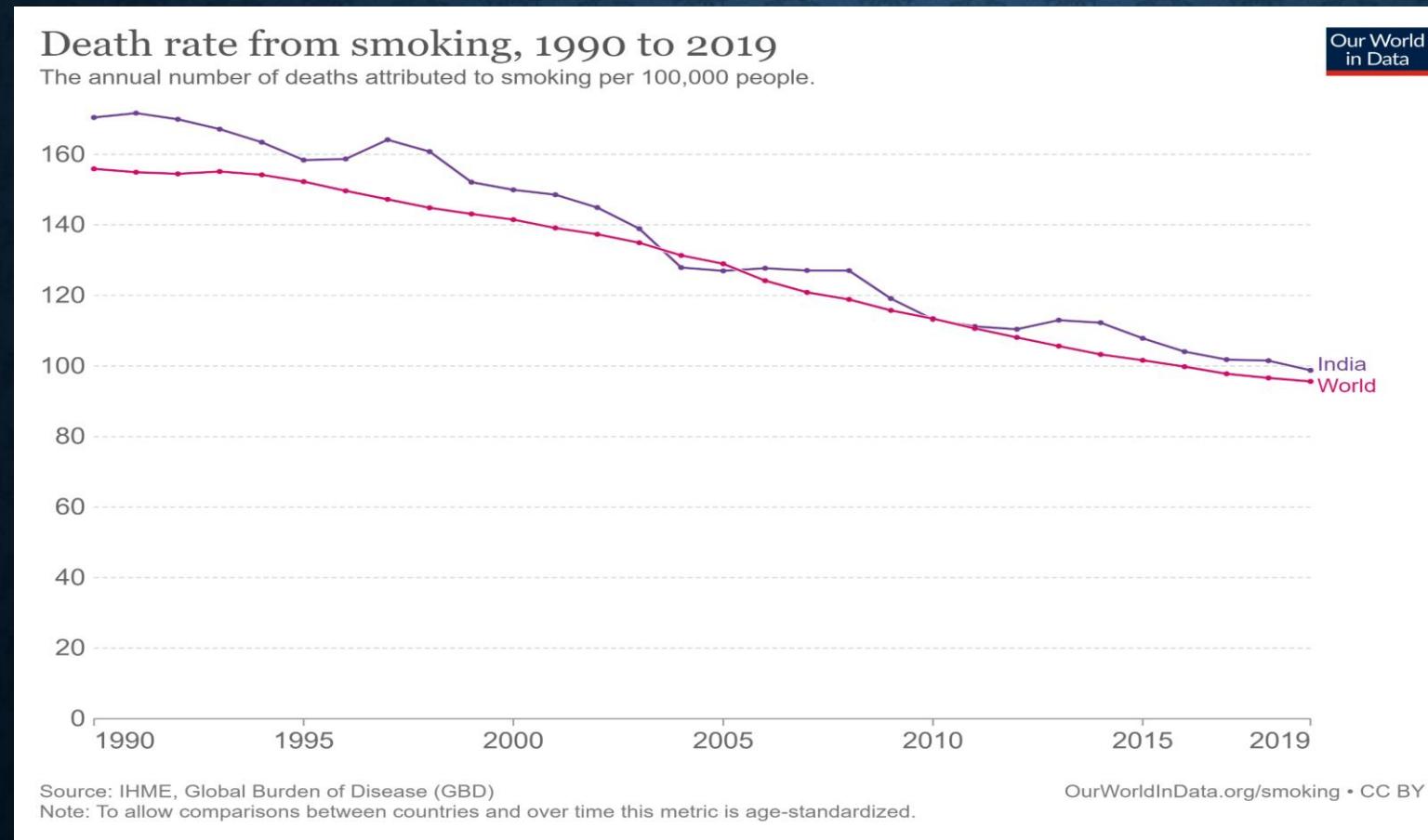


Smoking is good for the environment



Because it kills humans

DEATH RATE FROM SMOKING



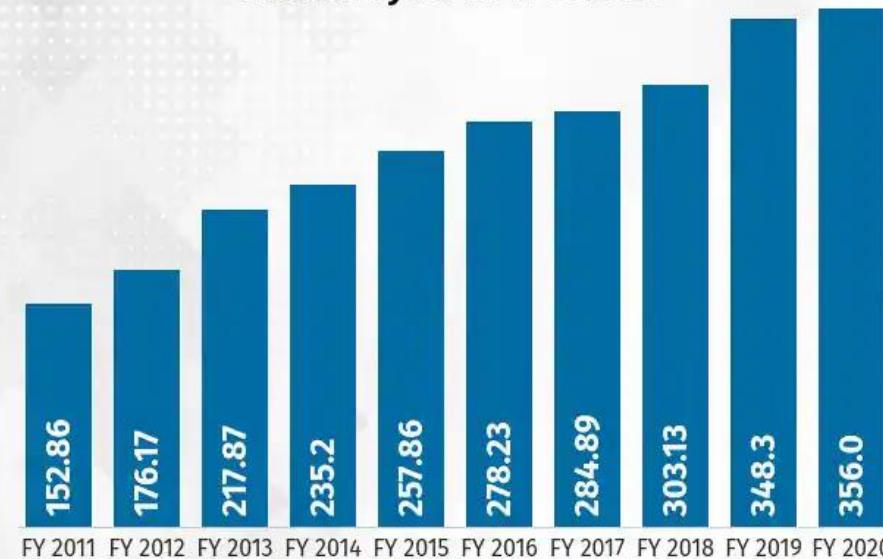
LEGISLATION

- Smoking restrictions
- |
- Smoking age
- |
- Taxation



TAX REVENUE FROM CIGARETTES IN INDIA FY 2011-2020

Tax revenue from cigarettes* across India from financial year 2011 to 2020



*According to the source, data includes excise and state taxes. Figures are cigarette taxes paid by member companies of the source and estimates for others.

(in billion Rs), Source : TII (India)

