



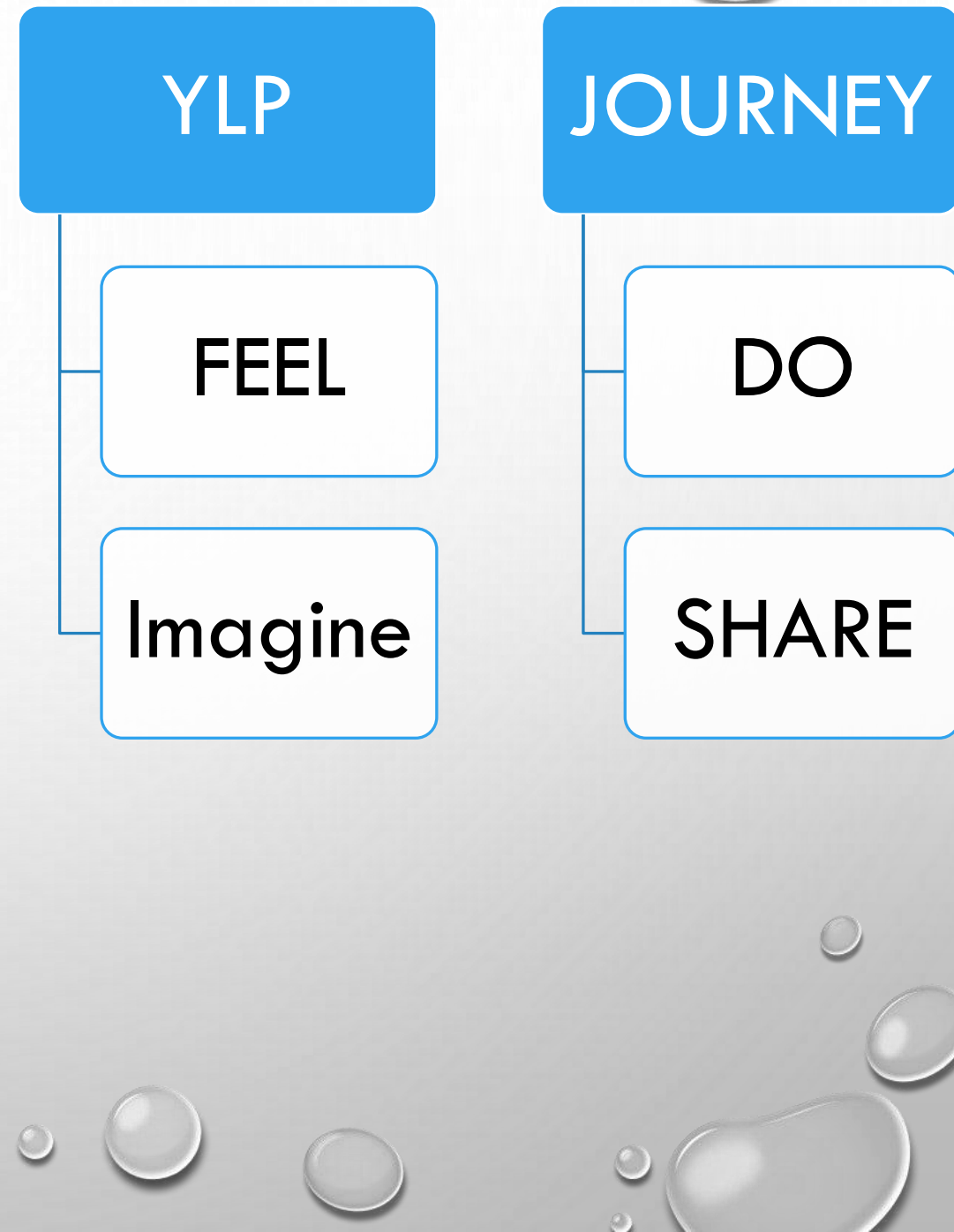
# **YOUTH LEADERSHIP PROGRAM 2022-2023**

BY 5C STUDENTS

# PROCESSED FOOD

**-FORGET THE JUNK HYPE ONLY EAT FOOD THAT IS FRESH AND RIPE**

- **DIVIDED INTO FOUR SUB ZONES**
- FEEL-LETS TALK ABOUT WHAT THEY ARE!
- IMAGINE: THE KIND OF HEALTH EFFECTS WE HAVE!  
HOW ARE THEY DIGESTED? OR ABOUT PRESERVATIVES
- DO: TALKING ABOUT THE DIGESTION OCCURRING IN  
OUR BODY AND HOW FAT IS BEING  
ACCUMULATED/CREATING POSTERS/MODELS.
- SHARE SURVEY / HOW CAN WE STOP /SHARING OUR  
IDEAS IN DISCUSSION/STARTED WITH CLASS .



**FEEL**



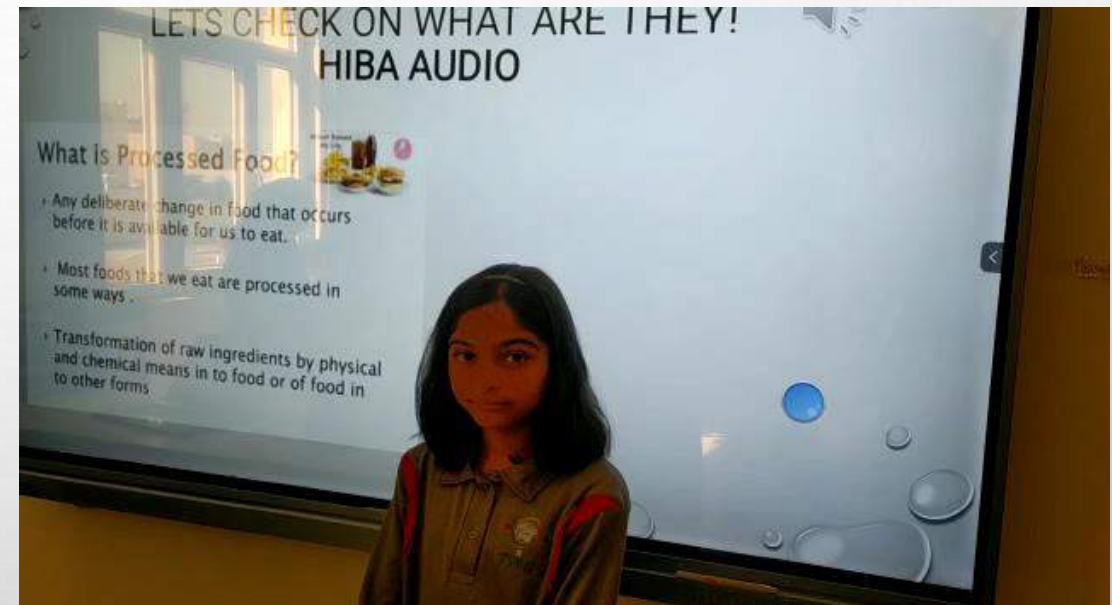
# LETS CHECK ON WHAT ARE THEY! HIBA AUDIO



## What is Processed Food?



- ▶ Any deliberate change in food that occurs before it is available for us to eat.
- ▶ Most foods that we eat are processed in some ways .
- ▶ Transformation of raw ingredients by physical and chemical means in to food or of food in to other forms



# WHAT ARE ULTRA PROCESSED FOOD HOW IT IS DIFFERENT FROM PROCESSED FOOD?

ZAISHA FATIMA

## Don't Get Hooked!



Hello everyone! My name is Zaisha. I am from class 5C.

Today I am here to tell you about What is ultra-processed food. These foods go through multiple processes (extrusion, moulding, milling, etc.), contain many added ingredients and are highly manipulated. Examples are soft drinks, chips, chocolate, candy, ice-cream, sweetened breakfast cereals, packaged soups, chicken nuggets, hotdogs, fries and more.

So, ask yourself a question What is the shelf life of homemade cookies? 2-3 weeks max kept out side the fridge then how it is that packaged cookies stays for several month and even years. Since it has chemicals extend their shelf life but reduce yours.

You might be wondering what is the difference between processed food and ultra-processed food? Processed food covers a wide gamut and includes cheeses, canned vegetables with added salt, canned fruit with added sugar and meat preserved with salt. And ultra-processed foods can have added colours, sugars, salts, and preservatives that add no nutritional value.



# WHY PEOPLE LOVE EATING PROCESSED FOOD?



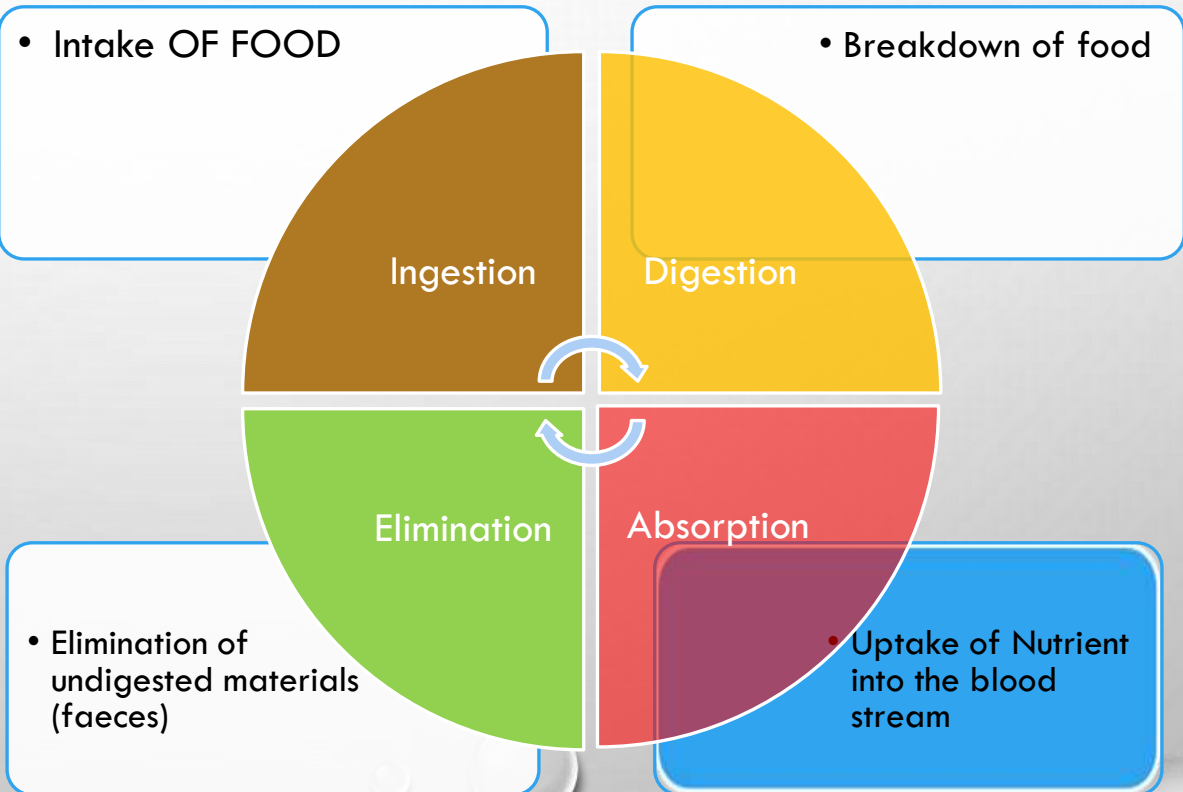
Unfortunately, PFs tend to be cheaper than fresh food, last longer, and some can be more appealing due to their high sugar content. UPF's make up nearly 90% of the energy we get from added sugars.

The image features a light gray background with a subtle gradient. In the top-left and bottom-right corners, there are several realistic water droplets of varying sizes, rendered with soft shadows and highlights to give them a three-dimensional appearance. The word "IMAGINE" is centered horizontally in the middle of the frame.

**IMAGINE**



Have you ever Imagine How  
does Digestion in our Body occurs  
? Where does the food go?



# DIGESTION PROCESS!

## HOW DOES IT OCCURS IN OUR BODY?

### AUDIO TAHANI

Lets talk  
about 4  
Stages  
here

**The Digestive System**

**What is the Digestive System?**

- Responsible for intake, breakdown, use and removal of food and drink
- Tells us we're hungry, full & thirsty
- Sends messages to brain via the Autonomic Nervous System (ANS)

**Journey through Alimentary Canal**

- Point food enters body
- Teeth rip and grind it into smaller pieces
- Saliva moistens food/saturates with enzymes
- Tongue pushes food throat to swallow

**Four stages of Digestion**

1. Ingestion
2. Digestion
3. Absorption
4. Elimination

**Mouth**

- Thick walled muscular tube
- Saliva moisten food in mouth, transports
- Gravity does most of the work
- Peristalsis does the rest

**Esophagus**

- Absorb some nutrients

**Stomach**

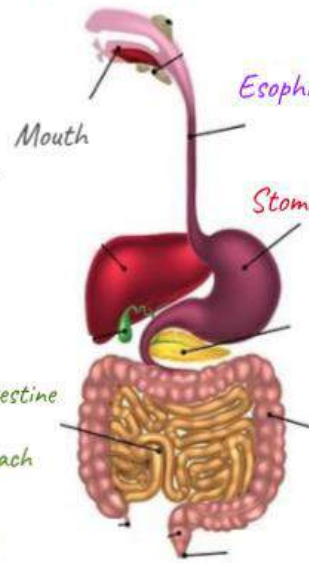
- Food churned & mixed with Chyme
- Enters the small intestine (pyloric sphincter)
- 1-4 hours for stomach to empty
- Carbs empty first, then protein
- Fats and fibre move slowest

**Small intestine**

- Receives chyme from stomach
- Major site of digestion
- Role to absorb nutrients
- 4-8hrs to travel through

**Large intestine**

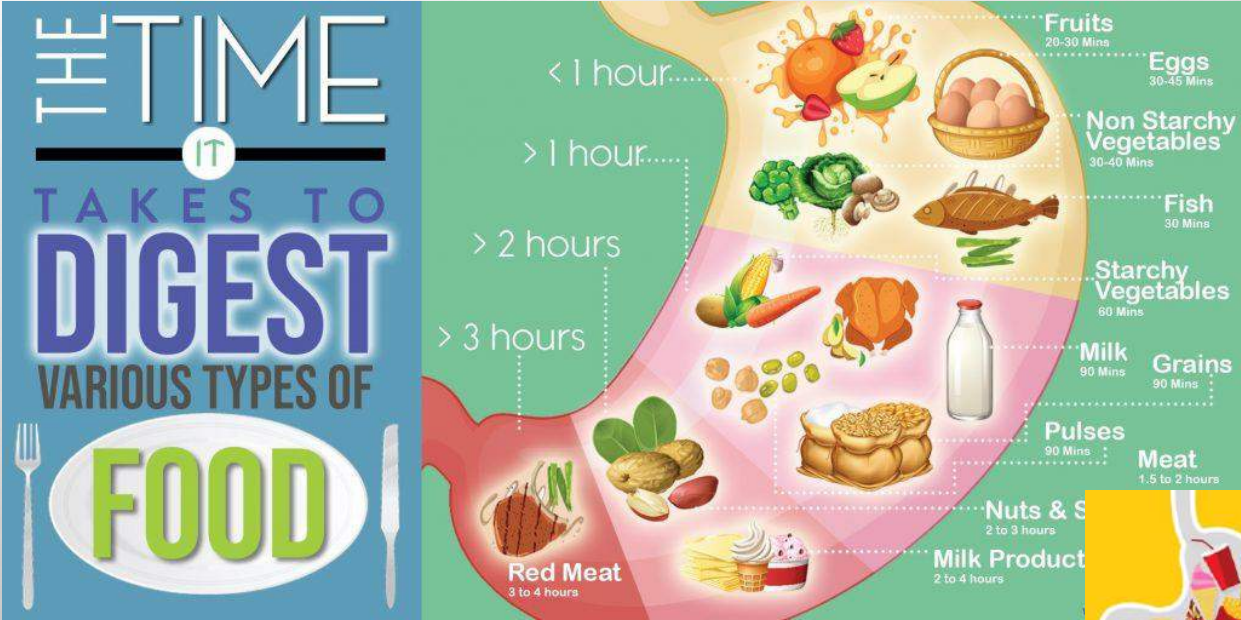
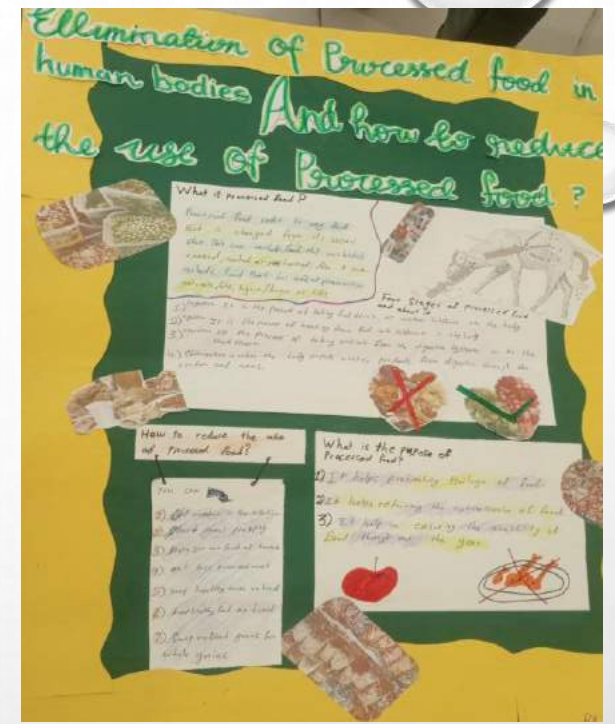
- Absorbs water and vitamins from food resid
- Forms and stores faeces
- Made up of colon and rectum
- Leads to the anus
- Food can stay in LI for 12-25 more hours



**EDUCATE FITNESS.**

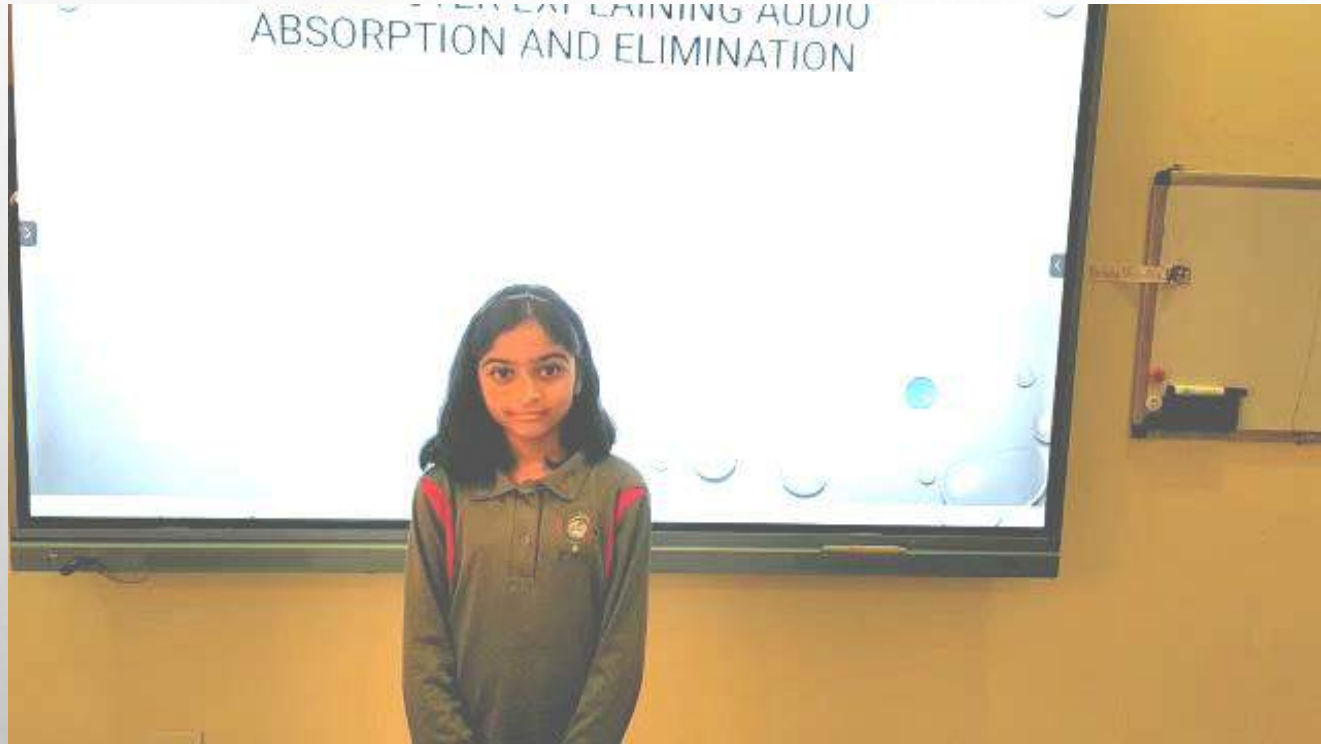


# DIGESTION AND INGESTION



BY HAFSAH FATIMA

# ABSORPTION AND ELIMINATION



Hiba Explaining

**Eat good food! stay safe!**

## Processed Food!

### Absorption!

**Be Aware!**

**Health First!**

**Nutrient Absorption**

Most absorption happens in the small intestine

The process by which digested food molecules are absorbed into the bloodstream and transported to different parts of the body is known as absorption.

During the absorption process in digestion, a network of mucous membranes help carry the digested, soluble food molecules into the bloodstream.

- Diffusion
- Active Transport
- Passive Transport

Absorption is the process by which end products of digestion pass through the mucosa cells into blood or lymph to be transported to various body cells. Substance absorbed are monosaccharides, amino acids, glycerol, fatty acids, vitamins,

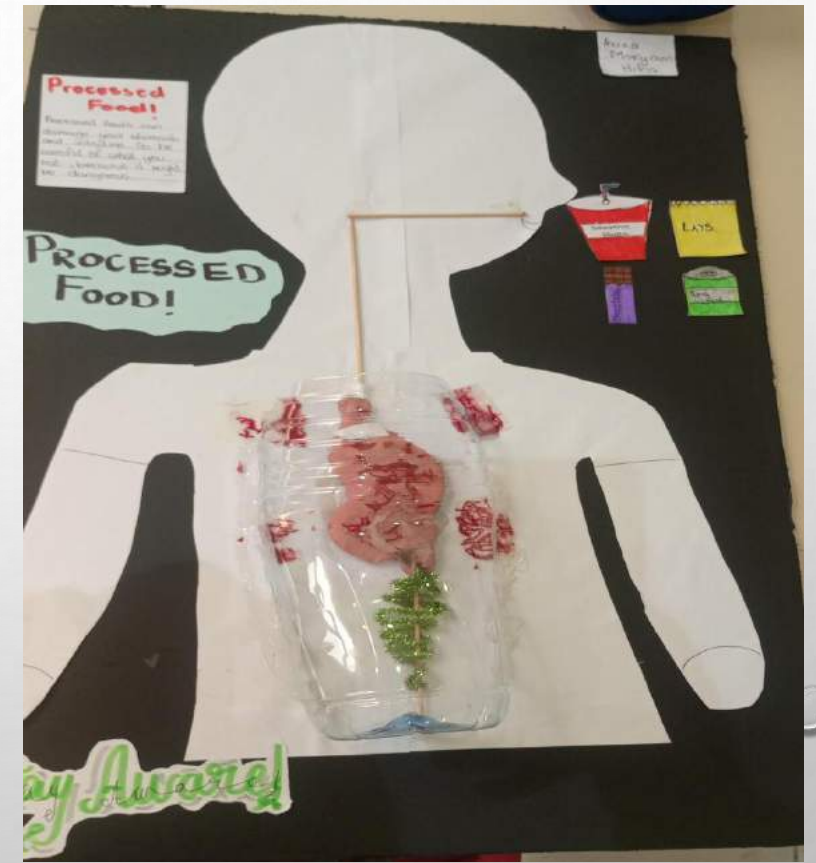
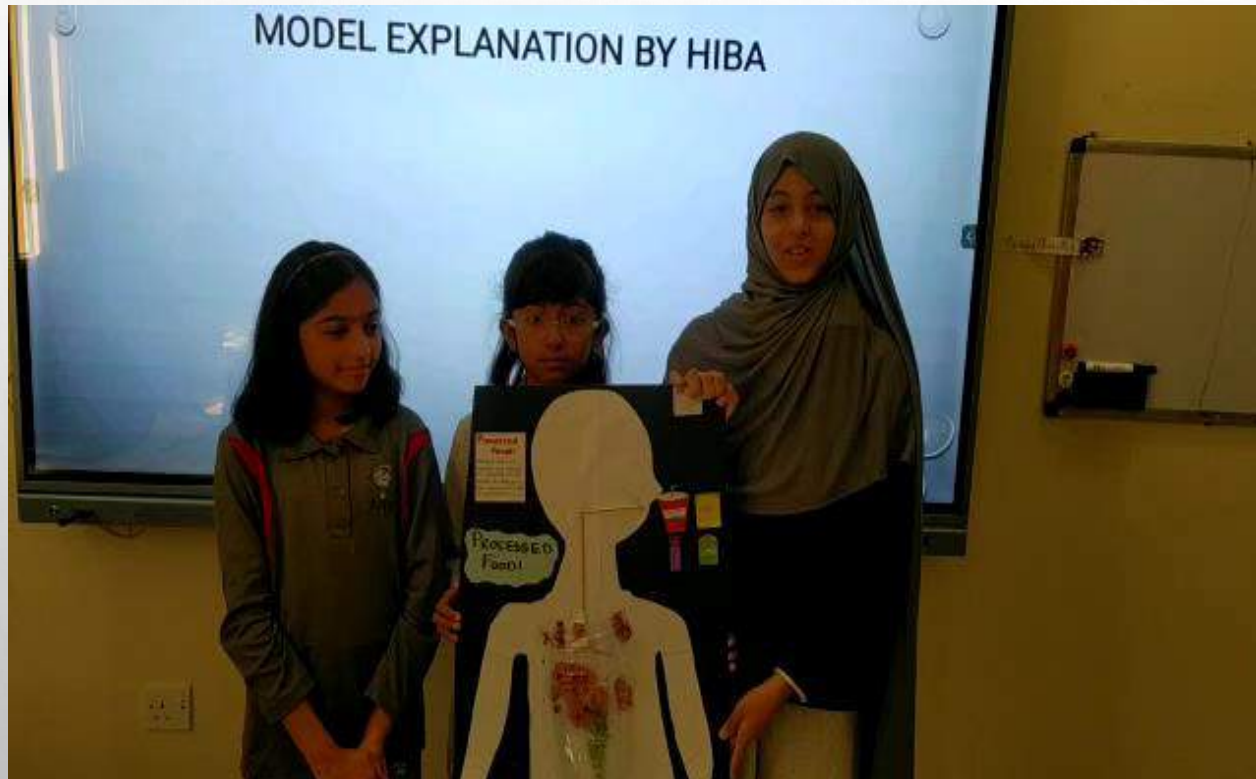
Absorption. There are **four** main stages of food processing. These include ingestion and propulsion, digestion, absorption of nutrients, as well as egestion. The four main stages of food processing are ingestion, digestion, absorption, and elimination. Ingestion, the act of eating, is the first stage.

```
graph TD; Food[Food] --> Ingestion[Ingestion]; Ingestion --> Digestion[Physical and chemical digestion]; Digestion --> Absorption[Absorption]; Absorption --> Assimilation[Assimilation]
```

Hiba

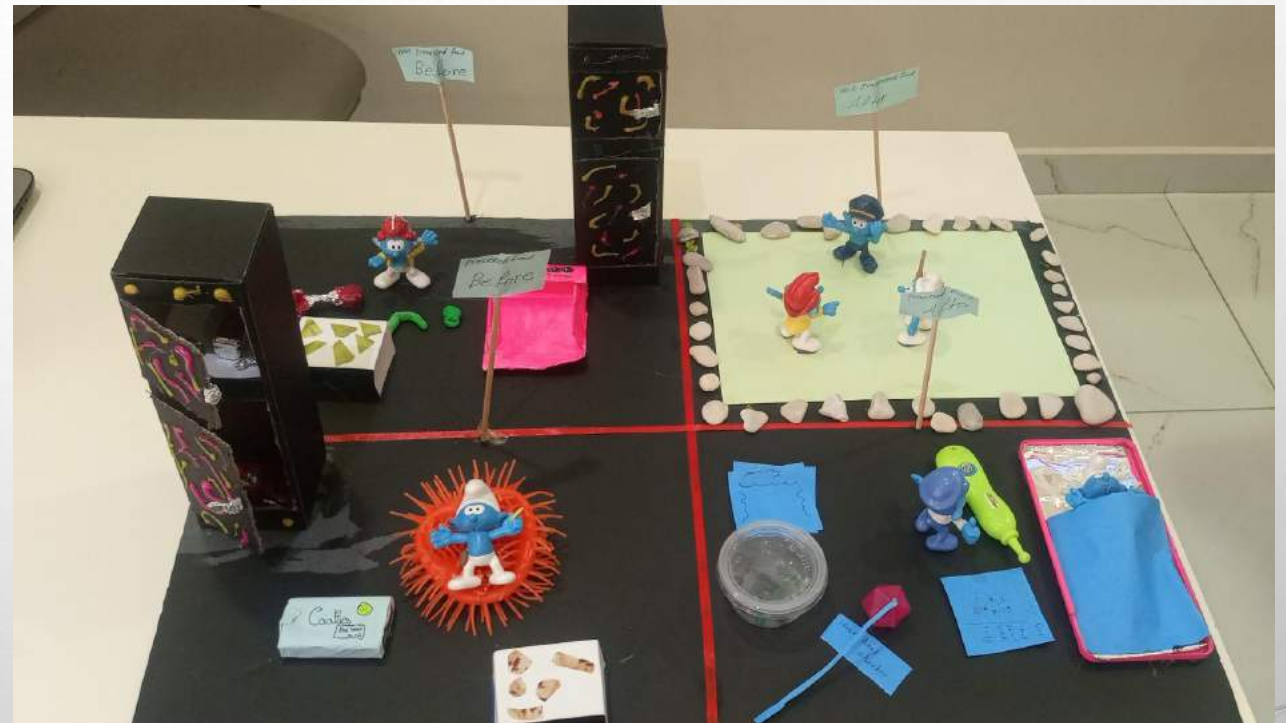


# MODEL 1 WITH PROCESS EXPLANATION



Hiba, Aaiza, Maryam

# MODEL 2- BEFORE & AFTER EXPLANATION



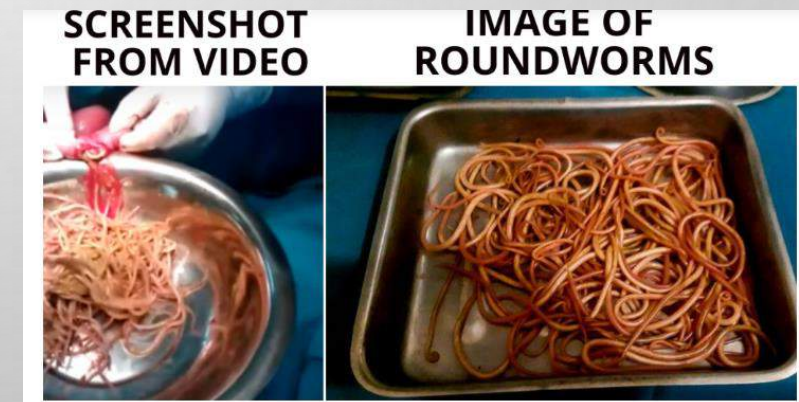


# RESEARCH-ON COOKED FOOD /INSTANT NOODLES

- WE ALSO CONTACTED DR YOGESH HARWANI, A GASTROENTEROLOGIST AT NOBLE GASTRO HOSPITAL, AHMEDABAD. *"THIS VIDEO SHOWS SMALL INTESTINE OBSTRUCTION DUE TO WORMS. THIS INFECTION OCCURS MAXIMUM IN DEVELOPING NATIONS. USUALLY, HUMANS GET INFECTED BY EATING UNCOOKED FOOD OR CHILDREN GET INFECTED AFTER PLAYING IN CONTAMINATED SOIL. WORMS CAN LEAD TO INTESTINAL OBSTRUCTION, BLOOD LOSS AND SEVERE ABDOMINAL PAIN,"* HE SAID.

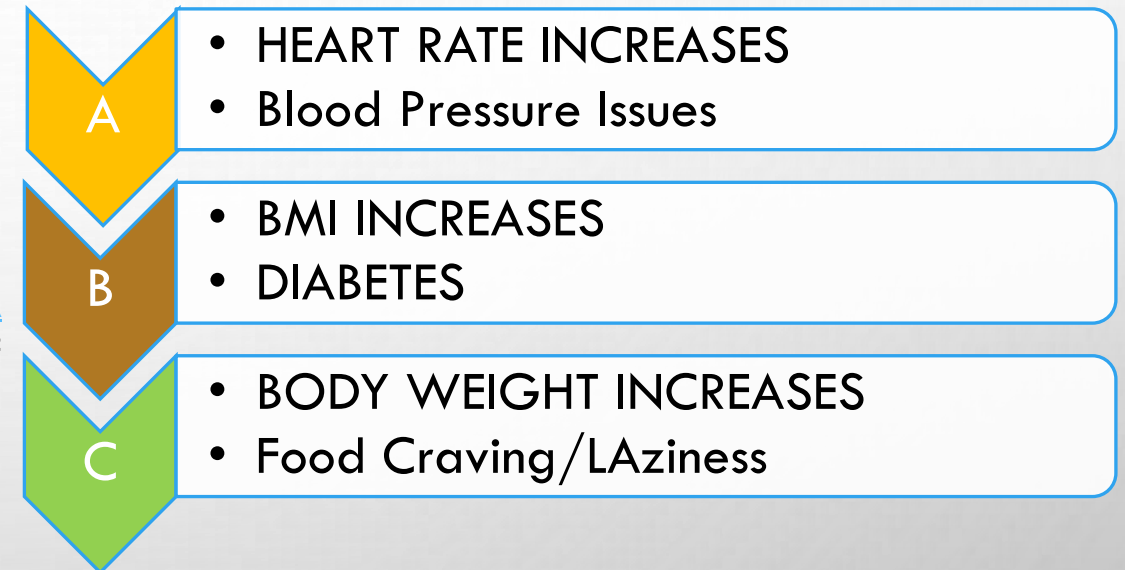


[news.in/video-of-surgically-extracted-intestinal-worms-falsely-claimed-as-undigested-noodles/](https://www.news.in/video-of-surgically-extracted-intestinal-worms-falsely-claimed-as-undigested-noodles/)



# A CASE STUDY ON PROCESSED FOOD AT NIDDK -RESEARCH

- PEOPLE EATING ULTRA-PROCESSED FOODS ATE MORE CALORIES AND GAINED MORE WEIGHT THAN WHEN THEY ATE A MINIMALLY PROCESSED DIET, ACCORDING TO RESULTS FROM A NATIONAL INSTITUTES OF HEALTH STUDY. THE DIFFERENCE OCCURRED EVEN THOUGH MEALS PROVIDED TO THE VOLUNTEERS IN BOTH THE ULTRA-PROCESSED AND MINIMALLY PROCESSED DIETS HAD THE SAME NUMBER OF CALORIES AND MACRONUTRIENTS. THE RESULTS WERE PUBLISHED IN [CELL METABOLISM\(LINK IS EXTERNAL\)](#).
- THIS SMALL-SCALE STUDY OF 20 ADULT VOLUNTEERS, CONDUCTED BY RESEARCHERS AT THE **NIH'S NATIONAL INSTITUTE OF DIABETES AND DIGESTIVE AND KIDNEY DISEASES (NIDDK)**, IS THE FIRST RANDOMIZED CONTROLLED TRIAL EXAMINING THE EFFECTS OF ULTRA-PROCESSED FOODS AS DEFINED BY THE [NOVA CLASSIFICATION SYSTEM](#). THIS SYSTEM CONSIDERS FOODS "ULTRA-PROCESSED" IF THEY HAVE INGREDIENTS PREDOMINANTLY FOUND IN INDUSTRIAL FOOD MANUFACTURING, SUCH AS **HYDROGENATED OILS, HIGH-FRUCTOSE CORN SYRUP, FLAVORING AGENTS, AND EMULSIFIERS**.
- RESULT OF RESEARCH
- **OVER TIME, EXTRA CALORIES ADD UP, AND THAT EXTRA WEIGHT CAN LEAD TO SERIOUS HEALTH CONDITIONS," SAID NIDDK DIRECTOR GRIFFIN P. RODGERS, M.D. "RESEARCH LIKE THIS IS AN IMPORTANT PART OF UNDERSTANDING THE ROLE OF NUTRITION IN HEALTH AND MAY ALSO HELP PEOPLE IDENTIFY FOODS THAT ARE BOTH NUTRITIOUS AND ACCESSIBLE — HELPING PEOPLE STAY HEALTHY FOR THE LONG TERM."**





# NO PROCESSED FOOD TRIAL WAS CONDUCTED ON COLLIN AND MICHAEL FOR 7 DAYS. **RESULTS ARE MENTIONED BELOW.**

Collin			Michael	
Before	After		Before	After
<b>20.7</b>	<b>20.4</b>	<b>BMI</b>	<b>23.3</b>	<b>22.7</b>
<b>140</b>	<b>138</b>	<b>Weight (lbs)</b>	<b>174</b>	<b>170</b>
<b>11</b>	<b>9</b>	<b>Body Fat %</b>	<b>14</b>	<b>14</b>
<b>30</b>	<b>30</b>	<b>Waist Size (in)</b>	<b>34</b>	<b>34</b>
<b>30</b>	<b>29</b>	<b>Belly Size (in)</b>	<b>34</b>	<b>34</b>
<b>88</b>	<b>80</b>	<b>Heart Rate</b>	<b>64</b>	<b>52</b>

## TRIAL DESCRIPTION WITH RESULTS

Changing your diet this drastically is NO joke! During this 30 day challenge to become perfectly healthy, we ate no processed foods for 7 days and we're going to tell you about it. This includes no sugar, which is probably the most difficult part of this diet; see how we did it!

### SOLUTIONS or RECOMMENDATIONS

- Eating processed foods on occasion is fine.
- However, look for hidden sugar, fat and salt, especially those added during processing.
- Most Nutrition Facts labels now include added sugars.
- Dietary Guidelines for Americans recommends getting less than 10% of total calories from added sugars.

# WHAT DO YOU THINK ! PRESERVATIVES ARE GOOD ?



## Processing involves:

- ▶ Cleaning, peeling, heating
- ▶ Cooling, freezing
- ▶ Canning
- ▶ Fermenting
- ▶ Mincing
- ▶ Emulsification
- ▶ Drying
- ▶ Packaging



**Aaiza Shah**



## CADBURY DAIRY MILK



### TYPICAL VALUES

PER 100G

Energy (KJ).....	2205kJ
Energy (Kcal).....	530kcal
Protein (MICRO).....	7.5g
Carbohydrate (MACRO).....	57.0g
(of which sugar).....	56.7g
Total Fat (MACRO).....	29.8g
(of which saturated fat (MACRO).....	18.4g
Fibre (MICRO).....	0.7g
Sodium* (MICRO).....	0.09g
*Equivalent as salt.....	0.23g

## PRESERVATIVES USED

### PROPANOIC ACID:

Propanoic acid is a naturally occurring carboxylic acid with chemical formula  $\text{CH}_3\text{CH}_2\text{COOH}$ . It is a clear liquid with a pungent odor. The anion  $\text{CH}_3\text{CH}_2\text{COO}^-$  as well as the salts and esters of propanoic acid are known as propanoates.

Formula:  $\text{C}_3\text{H}_6\text{O}_2$

Density: 990.00 kg /m<sup>3</sup>

Boiling point: 141 °C

Molar mass: 74.07854 g/mol

IUPAC ID: propanoic acid

Melting point: -21 °C



## TOPS MANGO PICKLES

Calorific Value 149.0 Kcal  
Calories From Fat (UNIT OF ENERGY) 63 Kcal  
Per 100g (approx.)

Total Fat (MACRO)	7.0 g
Saturated Fat (INCREASE HEART DISEASE)	0.74 g
Cholesterol (LIPID FAT)	Nil
Polyunsaturated Fatty Acid	2.27 g
Monounsaturated Fatty Acid	3.92 g
Trans Fatty Acid	Nil
Protein (NX6.25) (MACRO)	1.4 g
Carbohydrates (MACRO)	20.2 g
Sodium (MACRO)	5850 mg
Vitamin A (MICRO)	1726.2 ug
Vitamin C (MICRO)	0.72 mg

## PEPSI : NUTRITION FACTS



Learn about serving sizes.	8 fl oz	%DV *	20 fl oz	%DV *
Calories	100	-	250	-
Total Fat (g)- MICRO	0	0	0	0
Sodium (mg)- MACRO	20	1	55	2
Total Carbs (g)- MACRO	28	9	69	23
Sugars (g)- MACRO	28	-	69	-
Protein (g)- MICRO	0	-	0	-

## PRESERVATIVES USED

### SODIUM BENZOATE:

Sodium benzoate has the chemical formula  $\text{NaC}_7\text{H}_5\text{O}_2$ ; it is a widely used food preservative, with E number E211. It is the sodium salt of benzoic acid and exists in this form when dissolved in water.

- ❖ Melting point: 300 °C
- ❖ Molar mass: 144.11 g/mol
- ❖ Density: 1.50 g/cm<sup>3</sup>

## PRESERVATIVES USED

The preservative added to the pickle are **SALT, VINEGAR, OIL & SUGAR** if you want to keep it for long time as they disconnect the contact btw air and food product, sugar & salt consume water which a food product contains so it acts as a good preservative but should not be added in extreme which spoils the pickle's taste. **SODIUM BICARBONATE** is also used as a preservative in pickles.



# QATAR IDENTITY – OBESITY

OVERWEIGHT AND OBESITY ARE DEFINED AS ABNORMAL OR EXCESSIVE FAT ACCUMULATION THAT PRESENTS A RISK TO HEALTH

- RESULTS: OVERWEIGHT AND OBESITY PREVALENCE WAS 44.8% AMONG MALES AND FEMALES AND 45.6% AND 40.9% AMONG QATARI AND NON-QATARI STUDENTS, RESPECTIVELY**



Qatar is a peninsula in the Middle East that has a population of approximately 2.6 million people, of whom about 12% are indigenous. The country has progressed from an economy initially based on pearl diving and fishing to become one of the largest liquid natural gas exporters in the world and is among the top ten countries for gross national income per capita. Increasingly, revenues from natural energy resources have been channeled towards extensive modernization and development programs. Rapid modernization, however, as in Qatar's neighboring Arab countries, has been accompanied by an increasing prevalence of obesity and its cardio metabolic complications.



# HEALTH RISK-MARYAM

## Processed Food – Health Risks



Food processing removes some of the nutrients, vitamins and fiber present in the food

Processed foods are **HIGHLY ADDICTIVE** and make you crave them frequently.

Cheap artificial sugars, salt and preservatives in processed foods have less fibre quantity & don't add any nutrition benefits, it slows down digestion

Some processed dairy products, dried fruits etc contains Sulphite which causes a range of health diseases like headache, skin rashes, irritable bowel syndrome etc.

The salts, phosphates and other artificial ingredients in the processed food leads to kidney and other health problems

Processed food kills natural taste and colour of foods. In order to restore the natural flavour, manufactures add cheap artificial sugar, salts, fats, colours and preservatives that create **GASTROINTESTINAL** problems, **HORMONAL** Problems, **NERVOUS SYSTEM** problems etc

Frequent consumption of processed foods can lead to **hormonal problems** like menstrual irregularities, premenstrual syndrome, infertility, thyroid dysfunction etc

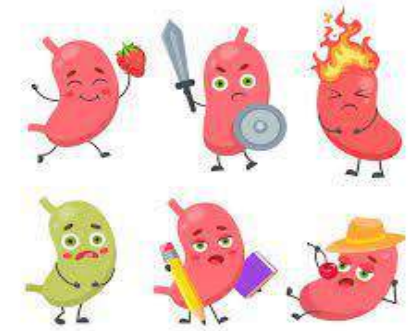
Frequent consumption of processed food can also lead to **nervous system problems** like depression, irritability and inability to concentrate.

## Processed 'Food'

### WHY NOT THESE?

The following are the disadvantages of using processed food items:

1. Processed food-stuffs often lose nutrients.
2. It results in loss of iron and vitamin B.
3. There is loss in weight and nutrients.
4. The original taste changes to some extent.



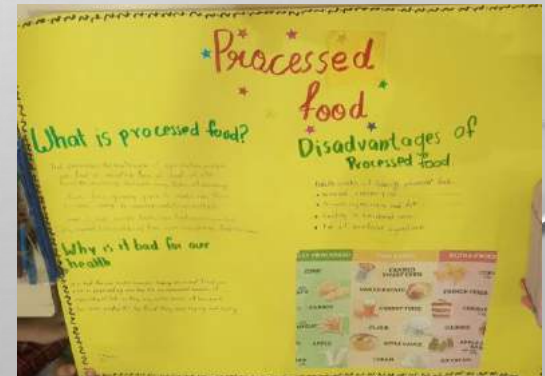
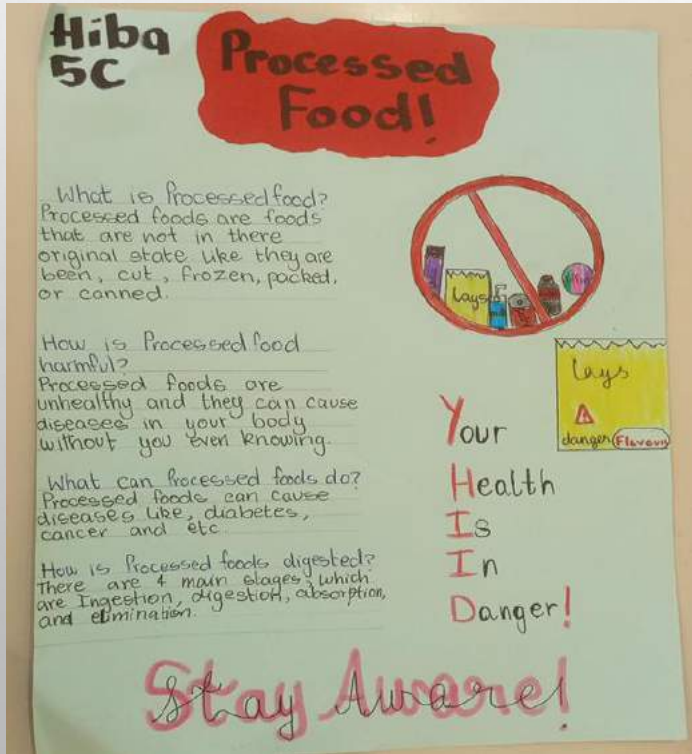
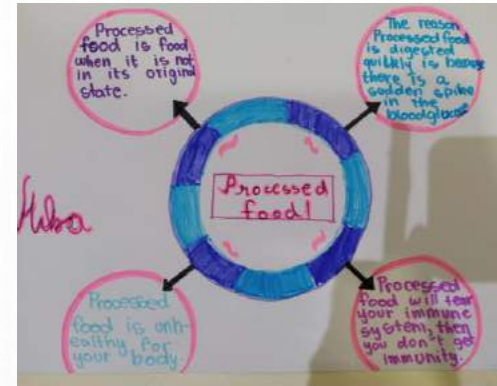
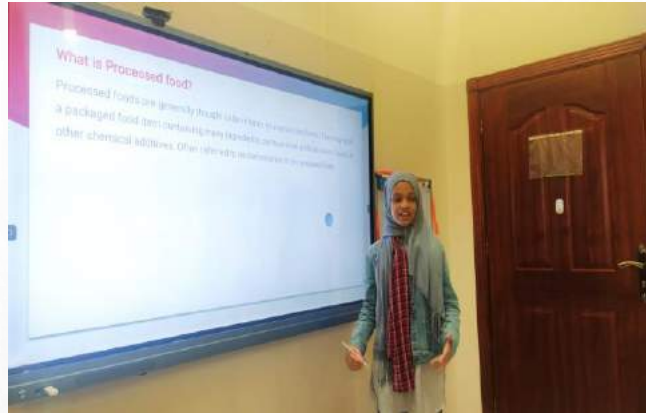
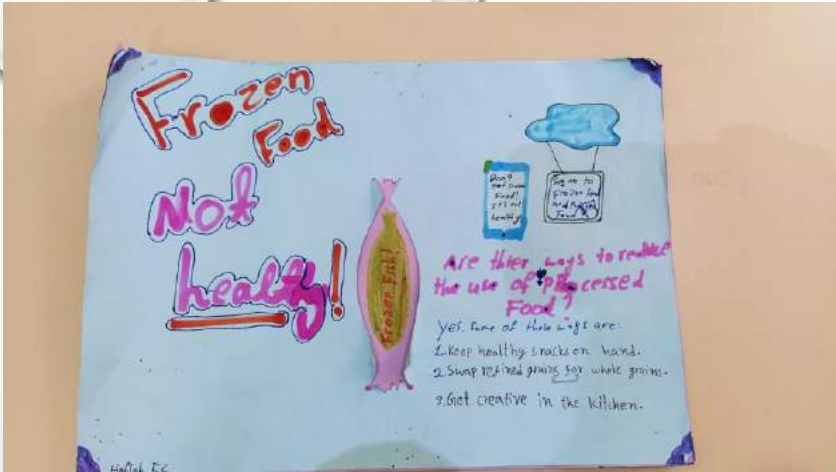
## HARMFUL EFFECT OF EATING PROCESSED FOOD

- **Preservatives in foods** are designed to prevent bacteria growth and spoilage, but sometimes they can also prevent you from enjoying good health. While the effects of food preservatives on the body can vary with age and health status, looking into the potential harmful effects of preservatives in foods may help you reclaim good health and protect your personal well-being against toxic damage.
- **HEART DAMAGE**  
Studies of heart tissue reviewed by InChem have showed that food preservatives can weaken heart tissues. According to laboratory research, rats who consumed the highest levels of food preservatives showed the highest levels of heart damage over time.
- **CANCER**  
One of the most serious harmful effects of preservatives in foods is their ability to transform into carcinogens when digested. According to InChem, nitrosamines, which include nitrites and nitrates, interact with stomach and gastric acids to form cancer-causing agents.

# DOO











## Processed food

**Do You**

- Eat Out Several times a Week?
- Buy food that is jammed, boxed, bagged, bottled or canned?
- Eat less fruits and vegetables than you should each day?
- Avoid Cooking Meals Yourself?

Then You are just taking the risk of Cancer, Obesity, Diabetes and more Diseases.

The percentage of All foods we eat.

**Q: I**

The Ministry of Public Health (MOPH) in the State of Qatar has issued food safety Action Guide for food services/retail to the International food practices in the field of food Safety and in line with the requirements with the relevant Gulf Standards.

**What to do:**

- Shop Smart, Read, Nibble, Taste and Talk
- Keep a food diary for every processed food.
- Avoid eating too many processed foods.
- Drink more water.
- Food safety and hygiene.
- Try to make processed meals but with healthy ingredients.

**Can You take the control of processed food we eat? It may not immediately take if you can't know of them, you eat processed food you must find a way!**

**I AM SUGAR FREE!**

# 4 Main Stages of Processed food!

**Ingestion:**

Ingestion takes place when you eat food, Ingestion takes your food down the throat.

**Digestion:**

Digestion takes place after you have ingested food into your body. It takes 45 minutes to digest food.

**Absorption:**

Absorption is the process by which end products of digestion pass through mucosa cells to be transported to various parts of the body.

**Elimination:**

Elimination takes place when all the good and bad things have been separated and absorbed. Then all the bad stuff excretes your body.

**Processed**

All these 4 stages are of processed food, and they tell us how processed foods are digested into our body food!

## Elimination of Processed food in human bodies And how to reduce the use of Processed food?

**What is processed food?**

Processed food is any food that has been changed from its original state. It is usually packaged and contains preservatives to keep it from spoiling. It is often high in sugar, salt, and fat.

**Four Stages of processed food:**

- 1) Ingestion
- 2) Digestion
- 3) Absorption
- 4) Elimination

**How to reduce the use of processed food?**

- 1) Buy fresh produce.
- 2) Cook at home.
- 3) Avoid eating out.
- 4) Read labels.
- 5) Buy in bulk.
- 6) Freeze leftovers.
- 7) Buy in bulk.
- 8) Buy in bulk.

**What is the effect of processed food?**

- 1) It is high in calories.
- 2) It is high in sugar.
- 3) It is high in fat.
- 4) It is high in salt.
- 5) It is high in preservatives.

## Processed Food! Absorption!

**Eat good food! stay safe!**

**Nutrient Absorption**

Most absorption happens in the small intestine.

**Be Aware!**

The process by which digested food molecules are absorbed into the bloodstream and transported to different parts of the body is known as absorption.

During the absorption process in digestion, a network of mucous membranes help carry the digested, soluble food molecules into the bloodstream.

- Diffusion
- Active Transport
- Passive Transport

**Health? First!**

Absorption is the process by which end products of digestion pass through the mucosa cells into blood or lymph to be transported to various body cells. Substance absorbed are monosaccharides, amino acids, glycerol, fatty acids, vitamins.

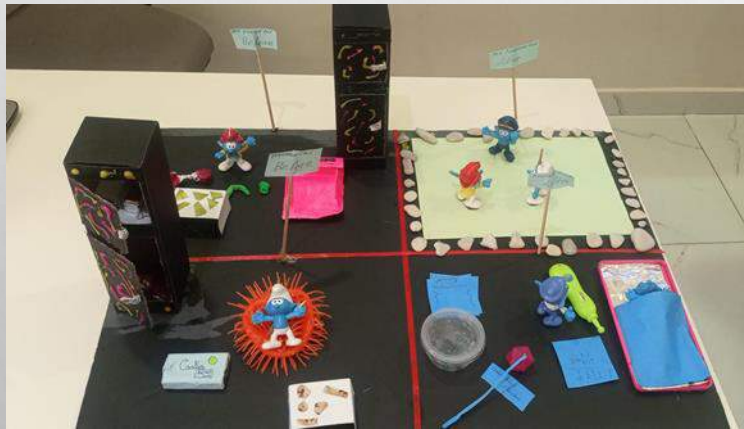
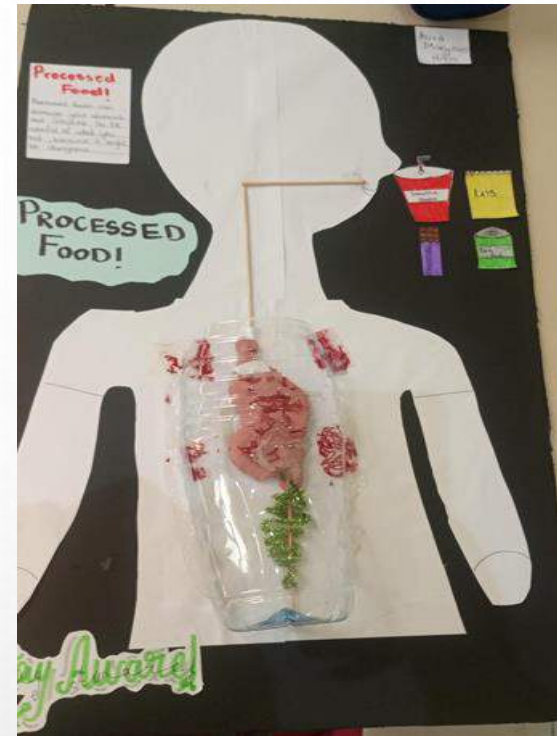
**Absorption.** There are four main stages of food processing. These include ingestion and propulsion, digestion, absorption of nutrients, as well as egestion. The four main stages of food processing are ingestion, digestion, absorption, and elimination. Ingestion, the act of eating, is the first stage.

```

    graph TD
      Food --> Ingestion
      Ingestion --> Digestion[Physical and chemical digestion]
      Digestion --> Absorption
      Absorption --> Assimilation
  
```

**Hiba**






Processed food poem!

~~Processed~~  ~~bread~~       Fresh organic Apples

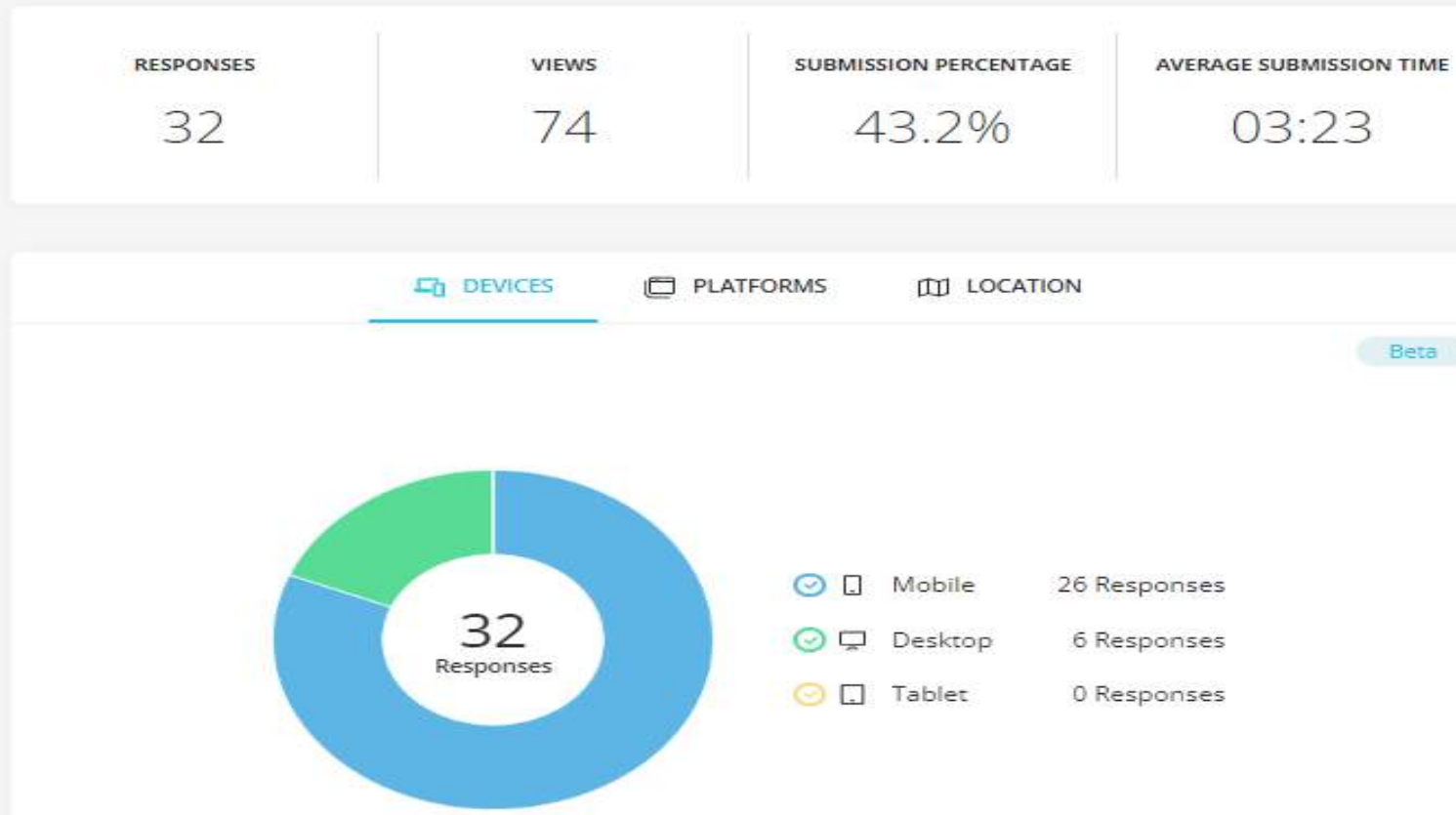
Processed food, Processed food  
 Giving us a big bad shot  
 Everything going in the cart  
 Giving us a disease of heart  
 Lets avoid getting unhealthy from  
 the shop  
 Processed food, Processed food.  
 We must stop.

The image features a light gray background with a subtle radial gradient. In the top-left and bottom-right corners, there are several realistic water droplets of varying sizes, rendered with soft shadows and highlights to give them a three-dimensional appearance. The word "SHARE" is centered in the middle of the frame in a large, bold, black, stylized font with a slightly distressed or hand-drawn quality.

**SHARE**



# SURVEY AMONG STUDENTS & TEACHERS WAS CONDUCTED



# HAFSAH FATIMA



# AFSHEEN ASKING TAHREEM QUESTION REGARDING PROCESSED FOOD.

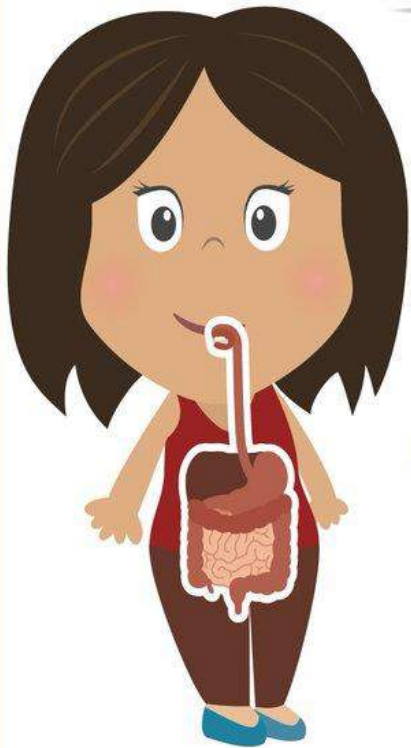




# HIBA MOTHER VIDEO

# FUNNY FACTS TO CHECK ON!

## Did you know??



Food travels about 30 feet through your body

Because food is propelled through your digestive tract by muscles, rather than gravity, you can digest food upside down

The small intestine has the approximate surface area of a tennis court

The average digestive tract contains 2-3 pounds of bacteria (both "good" and "bad")

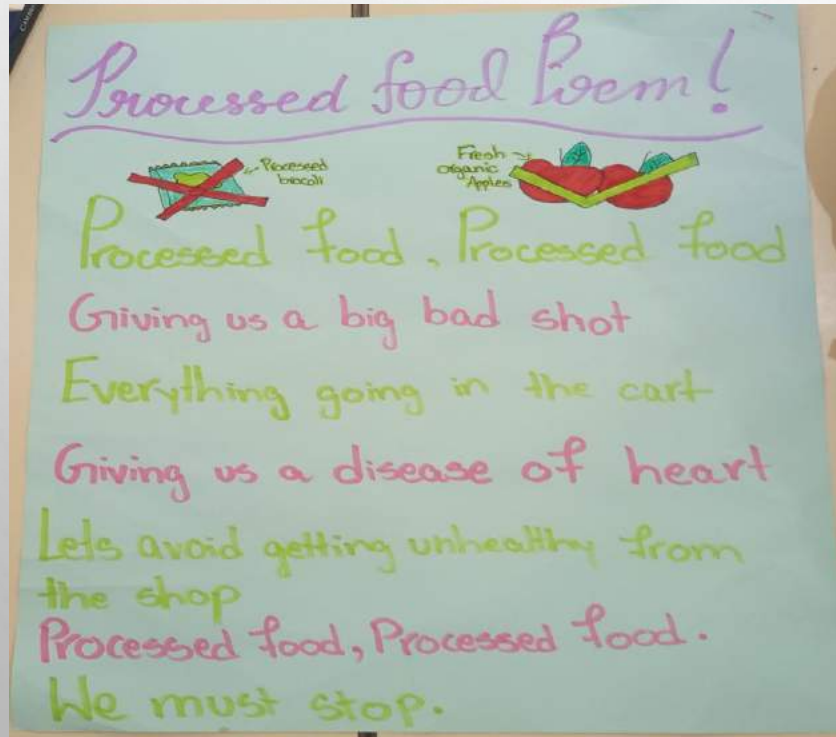
## Fun facts about the digestive system.



- The average person produces 2 pints of saliva every day. That is 32 ounces, or 2 cans of soda.
- The second part of your small intestine is called the jejunum. That's just fun to say!
- Your body can move your food through the digestive system even while you are standing on your head. It is not connected to gravity because it works with muscles.
- Ever wonder why it smells bad when you pass gas? It is because it is produced by fermented bacteria and then mixed with air.
- Aerobic exercise is the best type of exercise to keep your digestive tract in shape.
- The longest attack of constant hiccups lasted 68 years.

# PROCESSED PROCESSED FOOD WE MUST STOP!

- LETS HEAR FROM OUR LEARNERS HOW TO STOP THROUGH A SHORT POEM







**THANK  
YOU  
FOR  
LISTENING  
ANY QUESTIONS?**