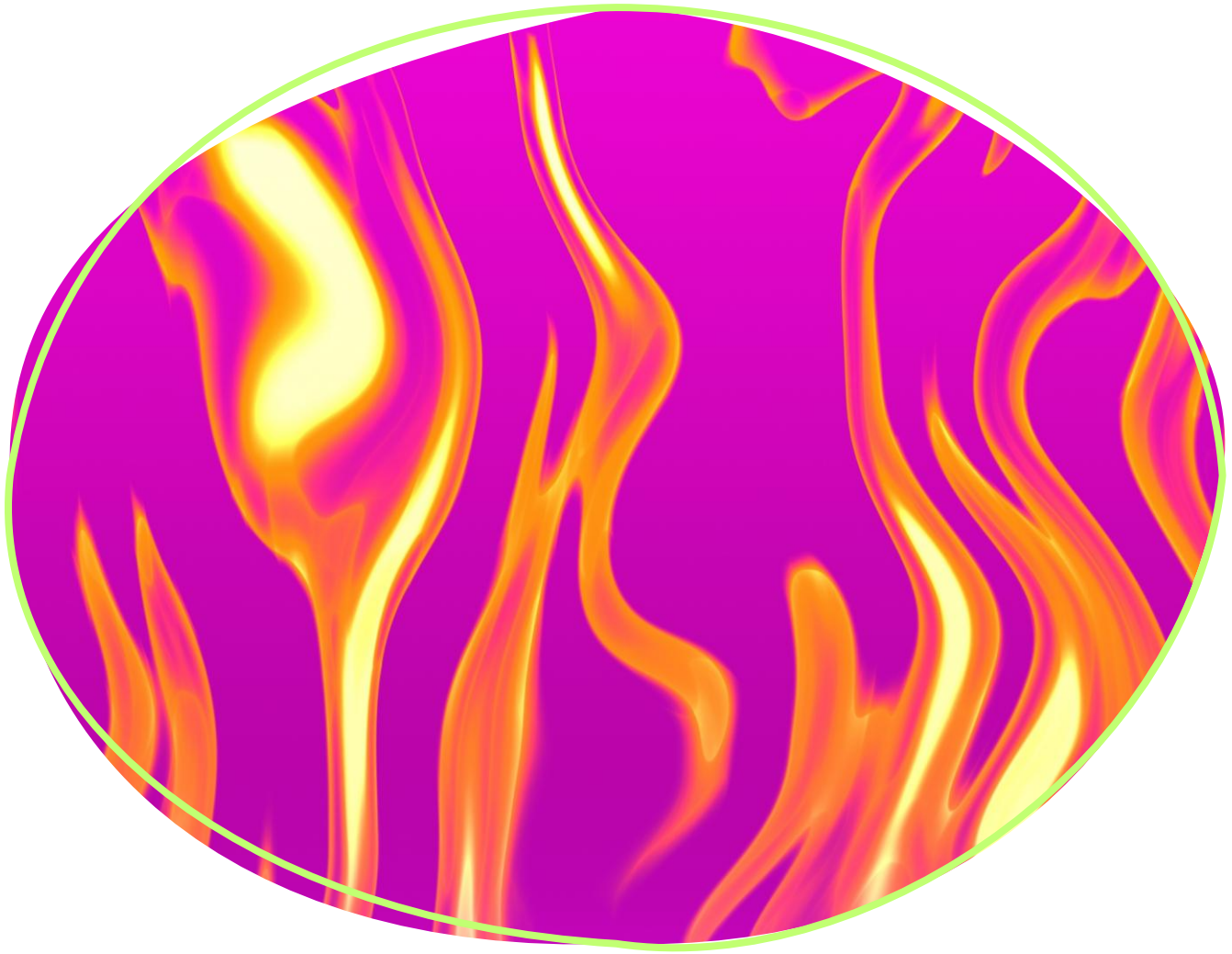

Diet and Inflammation

INFLAMMATION

Natural Mast Cell Stabilisers

Anti-inflammatory foods

Remove pro-inflammatory foods

Disclaimer

The information in this presentation is intended for information and educational purposes only.

It is not medical advice.

You should always consult your doctor about your own particular conditions, and ensure that you do you own research before making any changes to your diet.

I am not medically qualified, and this information is not a substitute for medical advice, or diagnosis.

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Session

1. Inflammation
- What is it, and how does it affect our health?
- What foods provoke inflammation?

2. How to reduce inflammation
- Diet- anti-inflammatory foods

MCAS

This can be difficult for us with MCAS

We can't always choose to eat the 'best' foods – we have to eat what we don't react to!

Sometimes, it's quite common for us to react to the 'healthy' anti-inflammatory foods, but be able to eat 'junk'!

I struggled to incorporate 'anti-inflammatory' foods

'Fed is best' – eat what you can, and don't worry unduly if that's processed foods.

Start small – one blueberry, 1 inch celery. Build up gradually

About making choices – if you can tolerate ginger – drink some ginger tea as often as you can. Don't 'waste' that opportunity.

Understand which foods have the potential to help you, and make good choices between your safe foods. Or both.

What is Inflammation?

The immune system produces inflammation in response to cell damage or infection.
Inflammation creates heat, swelling, redness, and pain.

It is designed to help stimulate tissue repair and to kill infection.

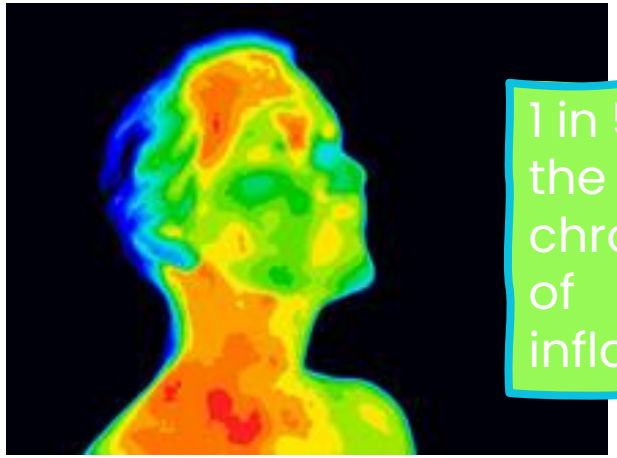
Acute inflammation is good – it helps us heal

Inflammation increases blood flow to the area, bringing immune cells and nutrients to fight infection and begin repair.

When the inflammatory process doesn't switch off and becomes long-term, like a continual fire in the body, this can become very damaging to body tissues.

Chronic Inflammation

According to the National Institute of Environmental Health Sciences, many people experience some level of low-grade, chronic inflammation due to our Western diet and lifestyle.



1 in 5 people in the UK have chronic levels of inflammation.

Why Does It Matter?

Chronic inflammation is linked to almost every long-term condition, and research increasingly shows that long-term, low-level inflammation is one of the leading causes of most illnesses.

https://www.niehs.nih.gov/health/topics/conditions/inflammation

How Chronic Inflammation Affects The Body:

- DNA Damage
- Cancerous Cell proliferation
- Ageing and cell-death
- Atherosclerosis (heart disease)
- Respiratory diseases
- Neurological diseases (Alzheimer's
- Depression
- Obesity
- Fatigue
- Autoimmune Disease
- Dementia

What Causes Chronic Inflammation?

Many factors can contribute to inflammation

1. A Diet High in Pro-Inflammatory Foods
2. Oxidative Stress
3. Allergies and Intolerances
4. Gut Dysbiosis – Bee's Session
5. Environmental Toxin Exposure - Session 3
6. Stress – this afternoon's sessions

Anything that creates constant, low-level provocation of your immune system can cause inflammation.

Pro-Inflammatory Foods

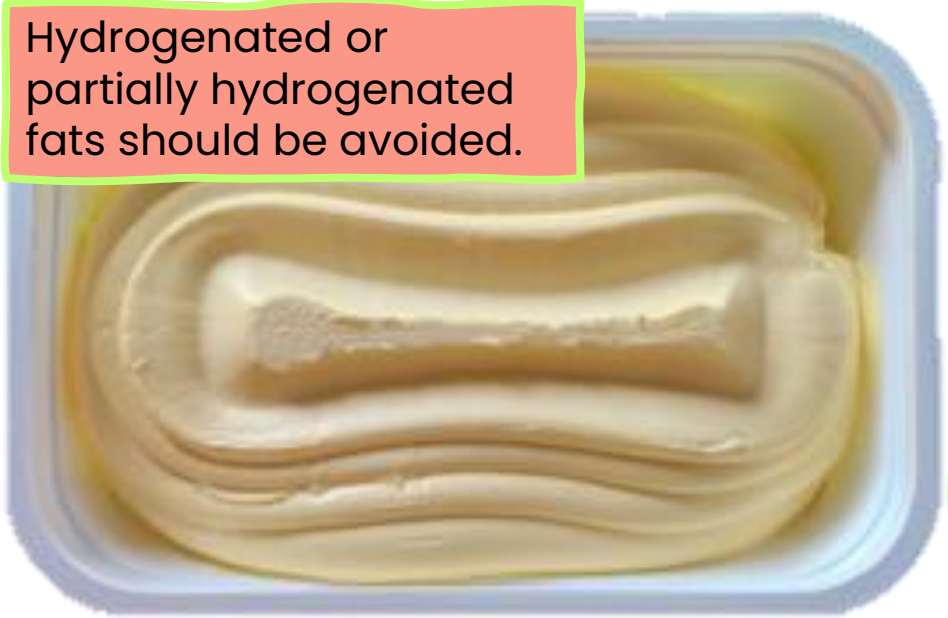
We're all eating them!

- Trans fats, Hydrogenated fats
- Colourings and Preservatives
- Sugar
- Refined carbs – white bread, pasta, rice, cakes etc
- Food Intolerances
- Artificial sweeteners like Aspartame
- Processed foods

Unhealthy Fats

Hydrogenated and Trans fats are damaging to the body.
Hydrogenation is the process of making a liquid oil solid at room temperature e.g. margarine.

Hydrogenated or partially hydrogenated fats should be avoided.

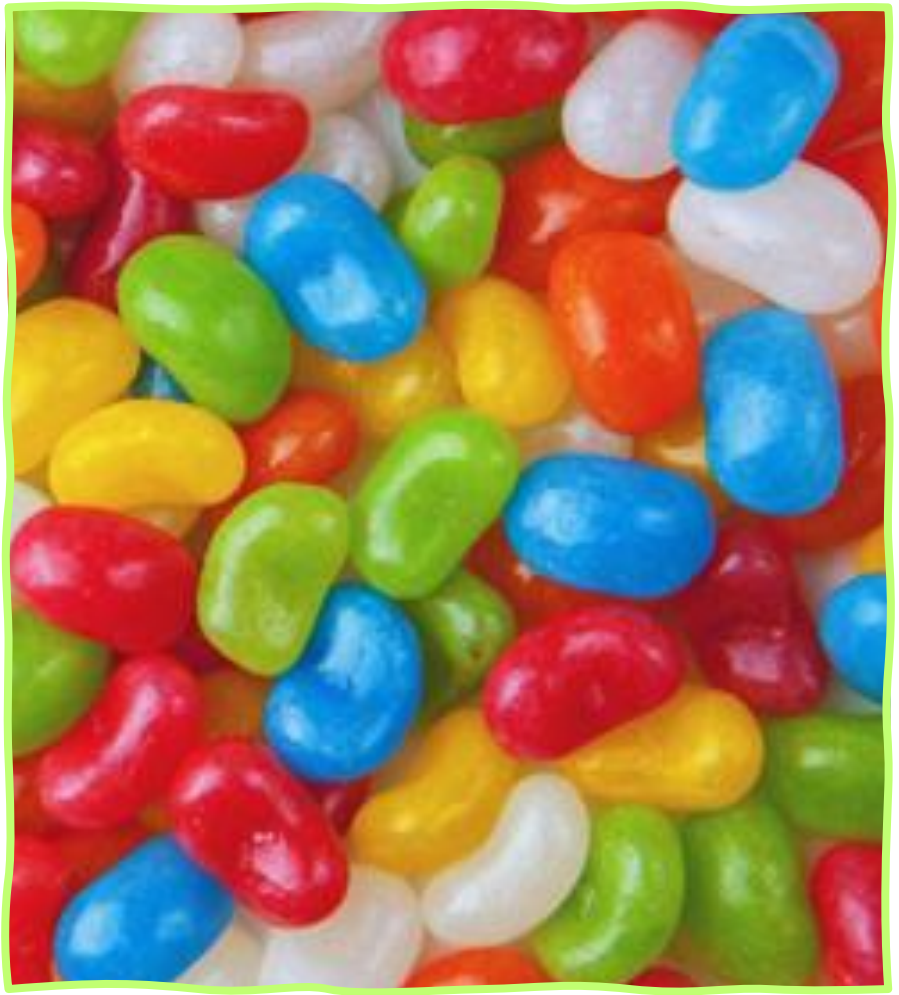


Trans fats have no known health benefits, and there is no safe level of consumption; they are banned in the USA.

Exposing oils to heat, light, and chemicals damages them (oxidisation).

Damaged and processed fats are very dangerous for health.
They are inflammatory and cause disease.

Colourings and Preservatives



E211 Sodium Benzoate:
Carbonated drinks, fruit juices, pickles, salsa, dips.

E220 Sulphur Dioxide:
Dried fruit, fruit juice, pickled veg, sausages, cider, wine.

All are linked to asthma and allergies.

E251 Sodium Nitrite:
Processed meats, bacon, sausages, ham.

E102 Tartrazine:
Yellow colouring:
sweets, etc.
Now banned in UK (2009)

Linked to allergic reactions, skin issues and hyperactivity in children. (1959).

Flavour Enhancers: E621 MSG.

MSG syndrome
headache, skin flushing, sweating, muscle tightness, numbness, burning, dizziness, chest pain, and heart palpitations.

Sugar

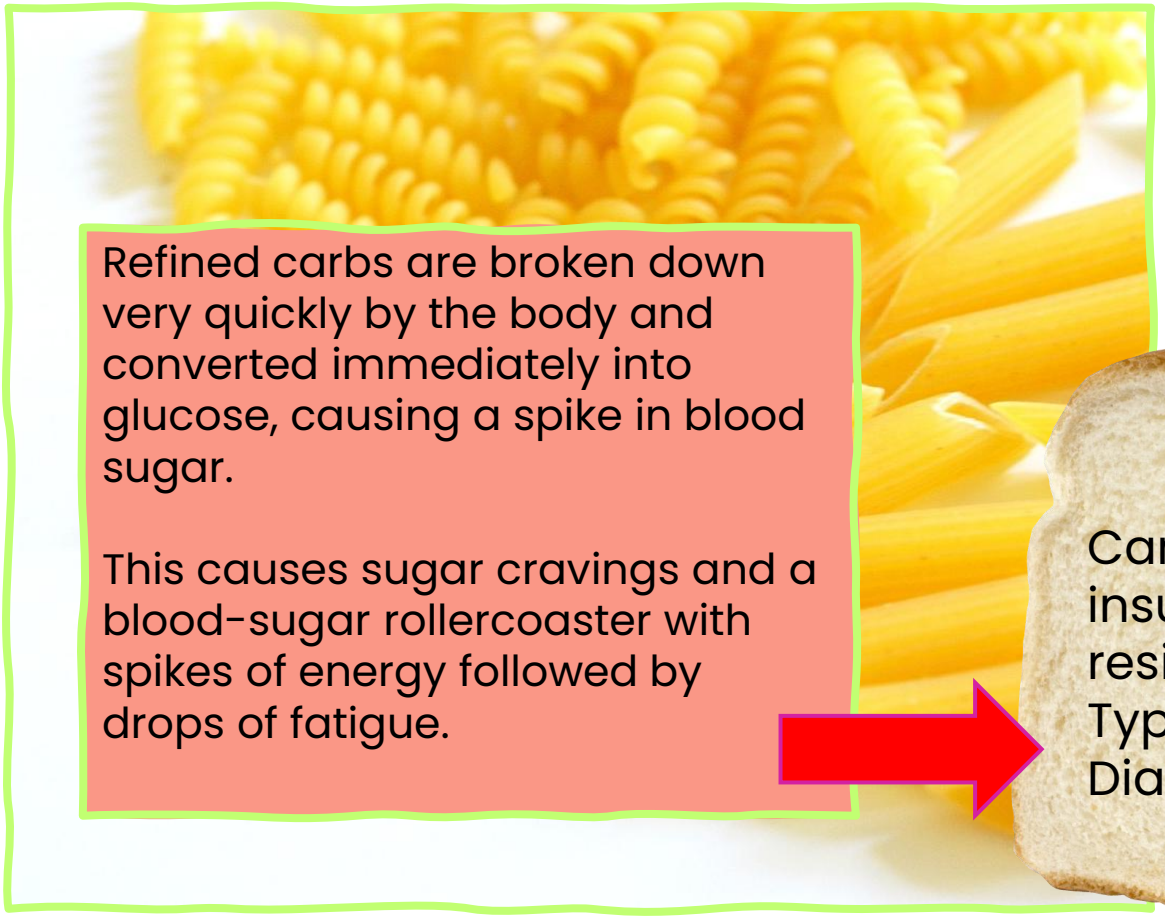
Excess sugar consumption is associated with chronic diseases such as:

- Type 2 Diabetes,
- Obesity,
- Cardiovascular disease,
- Alzheimer's disease.

Sugar prevents vitamin C from getting into the body's cells.

One recent study showed that excessive consumption of sugar can cause mitochondria to become less efficient at producing energy.

Refined Carbohydrates



Refined carbs are broken down very quickly by the body and converted immediately into glucose, causing a spike in blood sugar.

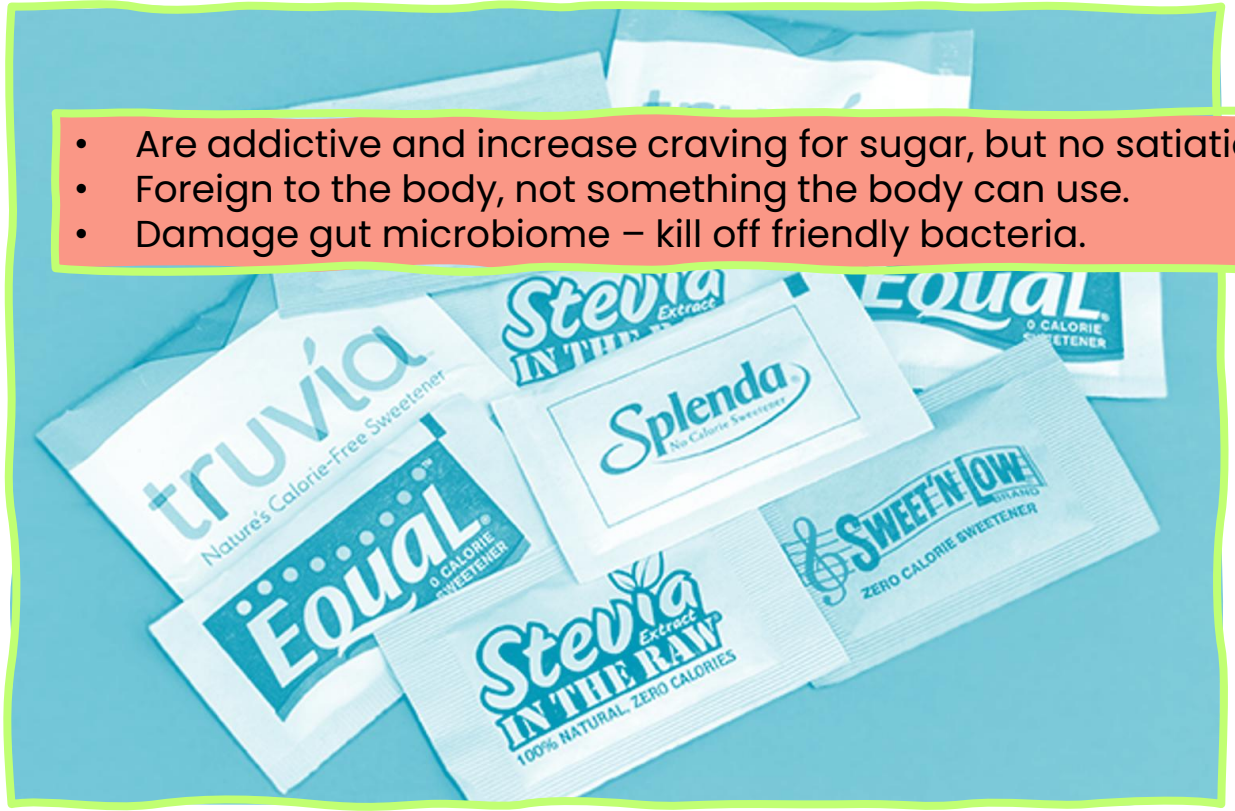
This causes sugar cravings and a blood-sugar rollercoaster with spikes of energy followed by drops of fatigue.

Additionally, they have had all the nutritious parts of the grain removed (germ and bran)and so don't contain any fibre to support good gut health.

Can trigger insulin resistance and Type 2 Diabetes.

Artificial Sweetners

Trigger an insulin response but have no glucose to work on, so insulin in the blood is spiked.



- Are addictive and increase craving for sugar, but no satiation.
- Foreign to the body, not something the body can use.
- Damage gut microbiome – kill off friendly bacteria.

Aspartame: Associated with physical and mental health issues.

- Increase migraine, visual disturbances, sleep issues, gut issues, neurotoxicity, and memory loss.
- Increases oxidative stress in the body, especially in the brain, damages healthy cells.
- Interferes with the production of neurotransmitters (halts the production of serotonin)
- Possibly carcinogenic (WHO)

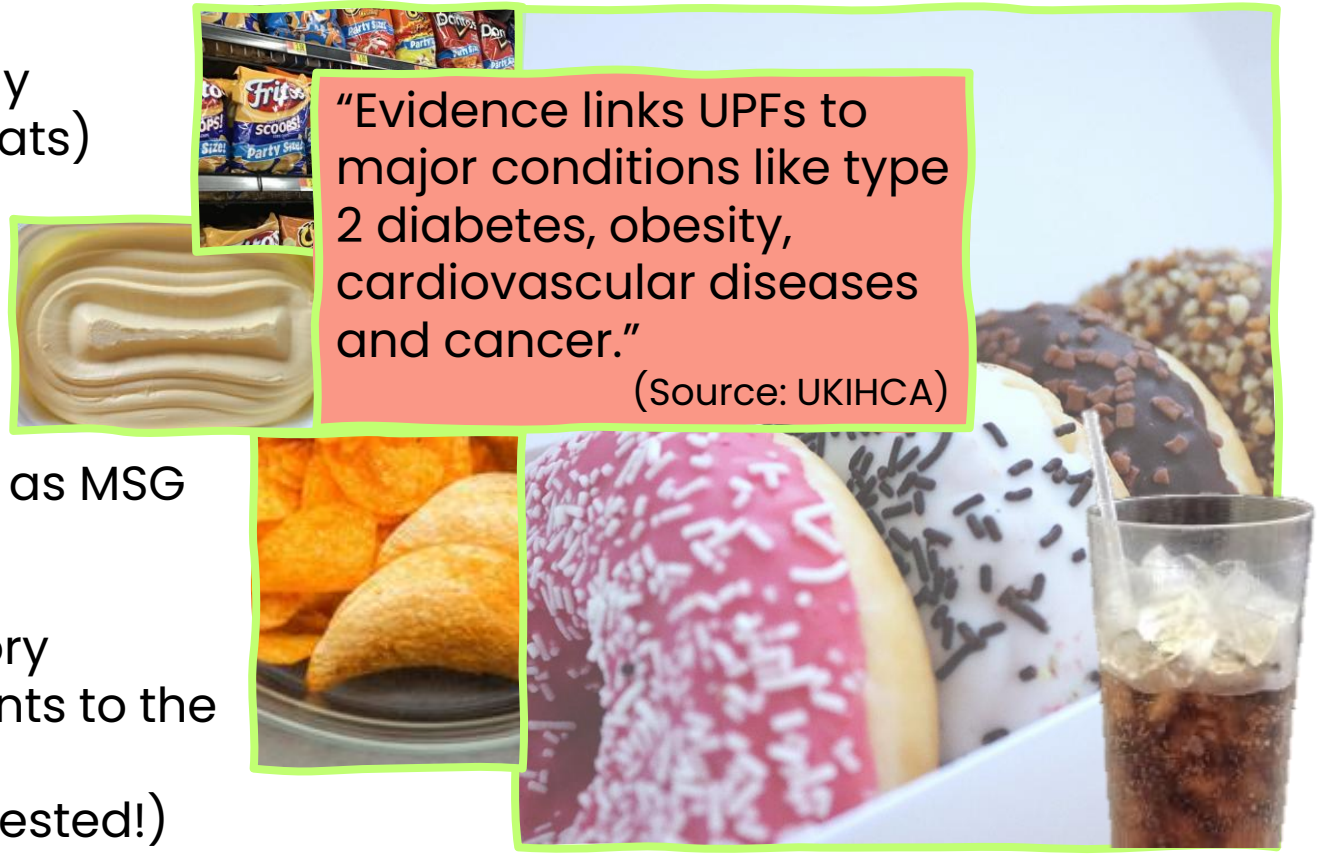
Sucralose: breaks down DNA (is genotoxic).

Ultra-Processed Foods

What do we mean by Ultra-Processed Foods? (UPFs)

These foods often contain:

- Hydrogenated or partially hydrogenated fats (Trans fats)
- Sugar
- Artificial sweeteners
- Artificial colours
- Preservatives
- Nitrates
- Flavour enhancers, such as MSG



"Evidence links UPFs to major conditions like type 2 diabetes, obesity, cardiovascular diseases and cancer."

(Source: UKIHCA)

UPFs and the body

- UPFs are pro-inflammatory
- They don't provide nutrients to the body

(Take up nutrients to be digested!)

Factory-produced, sold in packets.

‘Low Fat’ Foods

They have lots of added artificial flavourings, colourings, sugar, artificial sweeteners etc. to make them appetising.

But these ingredients make them very unhealthy.

These foods are artificial, processed foods.

- They are not recognised as food by the body.
- They contain no beneficial nutrients.

Low-fat foods are artificial and packed with sweeteners and flavourings, which are stressors on the body. They cause cortisol to rise and weight to increase!

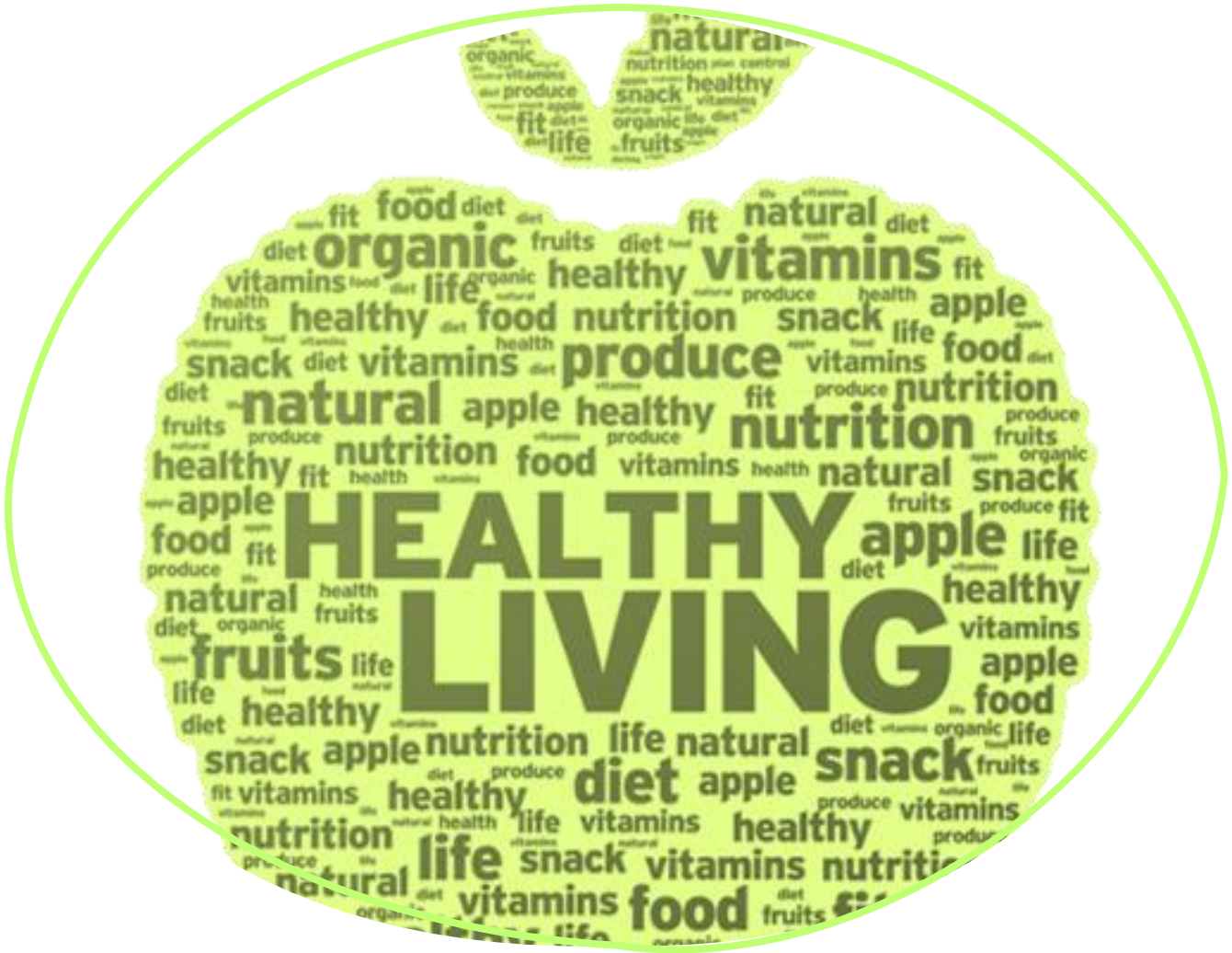
Summary Part 1

Inflammation is a natural immune response and is helpful when it's in response to acute damage.

Chronic inflammation is very harmful to the body and the cause of premature aging and most chronic illness.

Many factors trigger inflammation, including dietary, gut dysbiosis, environmental toxins and oxidative stress.

Dietary factors such as highly processed foods, sugar, additives and trans fats are all very pro-inflammatory.



Part 2 Reducing Inflammation - Diet and Lifestyle

Macro & Micro Nutrients

Our bodies don't make these substances – we get them from food.

Macro Nutrients

- Proteins
- Fats
- Carbohydrates

Micro Nutrients

- Vitamins
- Minerals

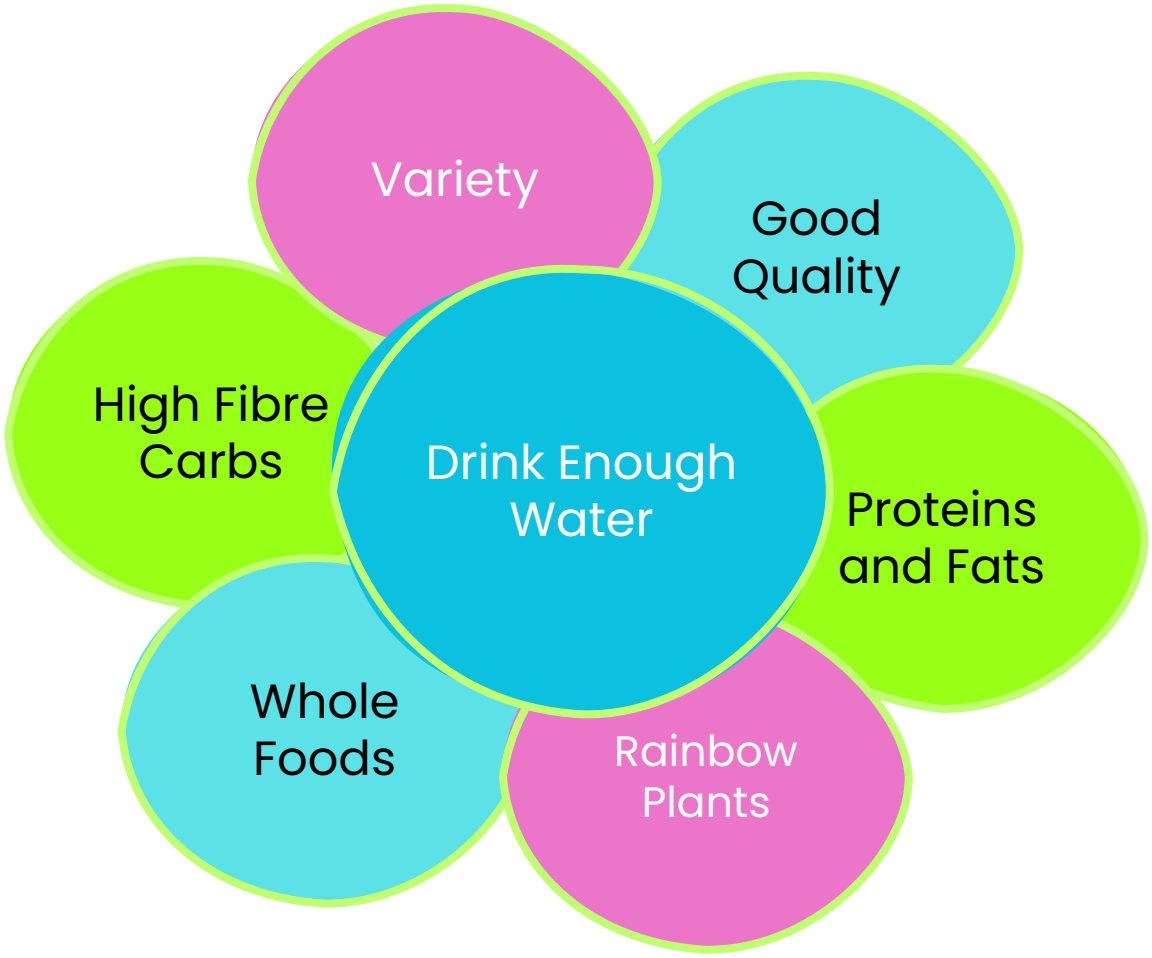
"Your body and brain are entirely made from molecules derived from food, air and water".

Patrick Holford

If we don't eat them, we don't get them! And we become malnourished.

Good Diet Principles

- Eat a whole-food diet (avoid processed foods)
- Have a varied diet – variety means more chance of getting the right balance of nutrients.
- Eat a rainbow of fruits and vegetables containing lots of vitamins and minerals
- Eat good quality protein
- Eat good quality fats
- Choose high fibre, whole grains
- Drink enough water



Whole Foods

Food that has not been processed or refined and is free from additives and artificial substances.

Foods in their natural state. The opposite of Processed foods.

Fruit and Vegetables

Nuts, Grains and Pulses

Dairy

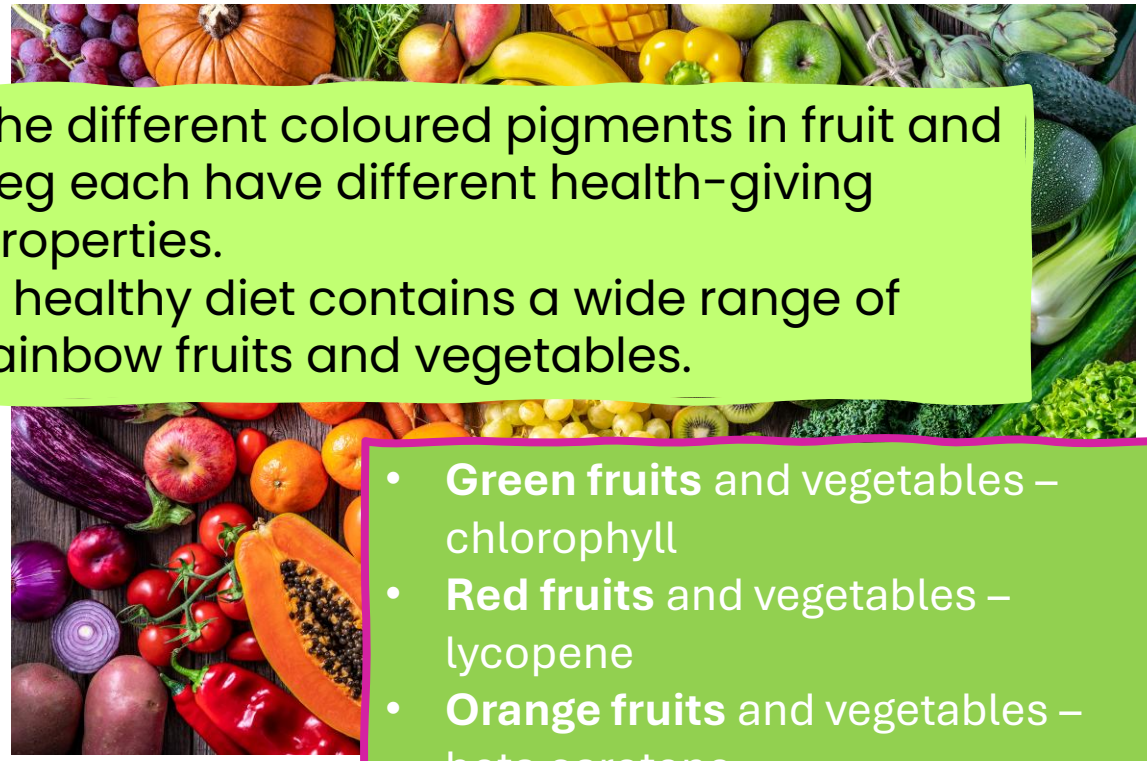
Eggs

Meat & Fish

Foods that your Great-grandmother would recognise.

Healthy Fats

Plants



The different coloured pigments in fruit and veg each have different health-giving properties.
A healthy diet contains a wide range of rainbow fruits and vegetables.

- **Green fruits** and vegetables – chlorophyll
- **Red fruits** and vegetables – lycopene
- **Orange fruits** and vegetables – beta carotene
- **Blue fruits** and vegetables – anthocyanins
- **White fruits** and vegetables – sulphur

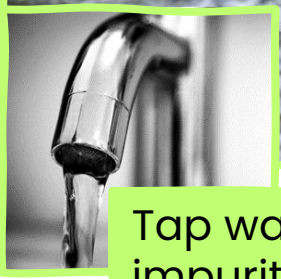
Plants like fruit and vegetables are the most healthy things to eat as they:

- Are anti-inflammatory.
- Contain anti-oxidants.
- Are the source of natural dietary fibre (cellulose, plant walls)
- Contain all the nutrients that are needed by our heart, liver, kidneys, brain and all other internal organs to function properly.
- Contains a multitude of vitamins and minerals in the most bio-available form for our body to digest and use.

Berries, dark leafy greens, nuts, and seeds and orange veg are high in antioxidants like vitamins C and E, polyphenols, and flavonoids, which help reduce inflammation

Water

Drinking plenty of water is essential for good health.



Tap water contains chemicals and impurities, so if you can, try filtering tap water to make clean water a priority.

Some best practices for water consumption:

- Drink 2-3 litres of water a day.
- Avoid caffeinated, carbonated drinks as they deplete the body of nutrients, disrupt blood glucose, affect the gut microbiome and are diuretics stimulating more water loss.

The human brain is around 83% water (total weight) – hydration is key to brain function

Eat A Rainbow Every Day

Aim to eat as many different colours of foods every day to make sure that you are getting as many different nutrients as possible

How Can You Add One More Vegetable?
Can you tolerate a different colour vegetable?

Can you add a small piece of something?

Can you tolerate it raw?

Can I eat more of the veg I tolerate?

By eating more of these health-giving foods, we are improving our health and wellbeing and have a better chance of fighting off disease.

Anti-inflammatory Foods

Pineapple contains **bromelain**

Cinnamon

Quercetin: in apples and red fruits
Berries: red and purple

Omega 3 fatty acids: oily fish, chia seeds, flax seeds, brussels sprouts, eggs, Olive oil, avocado

Nuts and seeds walnuts, chia,

Garlic

Rosemary

Green Tea

Ginger and turmeric,

Broccoli Sprouts

You can grow your own 'super food'

Broccoli sprouts contain sulforaphane
Reduces inflammation – reduce NF-kB
Helps fight cancer
Supports detox
High levels of chlorophyll – antioxidant
Regulate blood pressure, heart health
Regulate blood sugar
Supports brain health

- **Vitamin C**: A 3-ounce serving of broccoli sprouts contains 60% of the daily value (DV) of vitamin C
- **Vitamin A**: A 3-ounce serving of broccoli sprouts contains 10% of the DV of vitamin A
- **Calcium**: A 3-ounce serving of broccoli sprouts contains 6% of the DV of calcium
- **Potassium**:
- **Magnesium**:
- **Selenium**:
- **Iron**:
- **Phosphorus**:
- **Vitamins B1 and B2**:
- **Vitamin E**:
- **Folic acid**:

Broccoli Sprouts

1.Purchase organic broccoli sprouting seeds, such as these. https://amzn.eu/d/bVjtRAn
2. Sprout in a clear glass jar (not plastic) with a mesh lid or cloth that allows airflow (sprouting kits are available). https://amzn.eu/d/9jzJXfX
3. Place 1 or 2 tablespoons of seeds in the sprouting vessel and cover with 2–3 times their volume of filtered water, leaving them to soak overnight (about eight hours).
4. In the morning, drain the seeds well, turn jar upside down, place in their stand and place in sunny area, ensuring good air circulation.
5. Continue to rinse seeds twice a day for 2–5 days. Pour filtered water into the mesh at the top, shake jar gently, rinse thoroughly, drain all water out and return to stand.
6. When the hulls or seed covers float away when rinsing this indicates the sprouts are ready. They can be harvested from 4-7 days, depending how green you like them. Optimal sulforaphane levels are around day 4-7. Air dry on a kitchen towel for 30–60 minutes.
8. Store in the fridge in an airtight jar (generally keep for 2–5 days).

https://www.youtube.com/watch?v=U9iL8Kvugks&t=76s

Summary

Fruit and Vegetables contain anti-inflammatory and anti-oxidant compounds that help support our body to reduce chronic inflammation

Different coloured pigments in fruits and vegetables have specific anti-inflammatory and anti-oxidant properties

Diets made from wholefoods – vegetables, protein, complex carbs, healthy fats are best – avoid processed and packet meals as much as possible

Broccoli sprouts contain high levels of nutrients and anti-inflammatory chemicals

MCAS

Having said all of that……

Remember – fed is best! Eat what is safe for you and don't worry unduly about this

Some people are reactive to salicylates, oxalates and lectins in fruits and vegetables, so eating these can be tricky.

Don't eat foods that you are reacting to just because they are 'healthy'

Start small – one blueberry, 1 inch celery. Build up gradually

Making choices – choose wisely, prioritise eating anti-inflammatory foods that you tolerate

Experiment with adding small amounts of anti-inflammatory foods, one at a time, build up gradually

Avoid eating pro-inflammatory foods if you have the choice

Food for Thought

What pro-inflammatory foods do I eat a lot?

Processed foods?
Sugar?
Additives?

How can I eat more anti-inflammatory and anti-oxidant foods.

What 1 anti-inflammatory or anti-oxidant food can I add into my diet, or aim to eat a bit more of?