

Lecture 1

feed and fuel consumption have led to an increase in agriculture

Haber and Bosch (important invention)

- Under high temp and pressure, hydrogen and nitrogen are combined to form ammonia (effective fertiliser)
 - helped convert into fertiliser
 - > increased food but also increased water/air pollution
 - > population grew dramatically
- Now society depends on this process

Paul Ehrlich: believed everyone will starve if population increased (over consumption)

- Population bomb (BUT DIDN'T happen because of the green revolution)

Green Revolution (Norman Borlaug) 1960s

- Address global food security
- International aid program to assist developing countries to improve food production by using
- Developed drought and disease resistant wheat (super crops)
 - increased crops
- saved people from starvation but used lots of resources (water, fossil fuels, machinery, pesticides, fertilisers)
-

Food production is the main cause of env. Change and degradation

Increased climate = harder to grow crops

- Crops developed in stable conditions will not be able to grow (reduce crop yield)
- Increase co₂, methane, sea levels,
- Warmest years have all occurred since 1994
- Temp is at the highest level in the last 11,000 years
- As co₂ increases so does temp
- Temp will increase 2-3C by 2100

Global warming = ice melts from glaciers (this is where most of our fresh water is)

- Water shortage (losing reservoirs in the sky)
- Won't have enough water to sustain rivers in dry season (loss of downstream summer river flow)
 - water is used for the irrigation (crop harvests will decrease if rivers become seasonal)

Little water is available to us = conflict

Fresh water is <3% of global water

LECTURE 3

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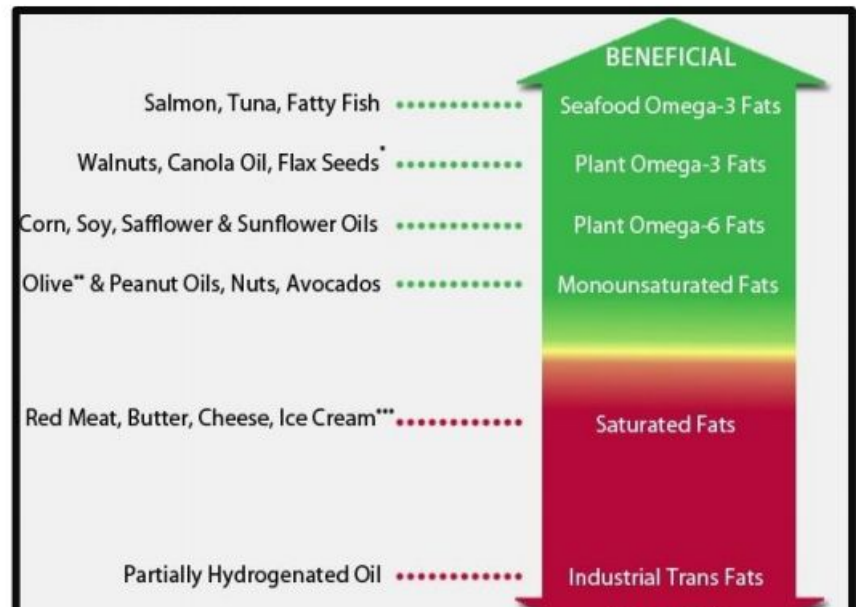
Long ago: diet heavily based on starch, not much fat or sugar
now we eat way more fat/sugar
BUT less starch

FAD 1: REDUCING BAD FOOD

Milk has less fat content than butter

Importance of fat

- Insulation
- Vitamins
- warmth
- padding



TOO MUCH FAT	ENOUGH FAT
<ul style="list-style-type: none"> ● Too much water in system (dilution effect) ● Gain weight 	<ul style="list-style-type: none"> ● Absorb Nutrients = functionality

Fad 2: High protein diets

- improved weight balance/maintenance
- High in amino acids
- High protein foods are often high fat foods (red meat, dairy)
- Just need right amounts!

TOO MUCH PROTEIN	ENOUGH PROTEIN
<ul style="list-style-type: none"> ● Decrease food variety ● Increase heart disease + cancers ● More likely to consume foods high in fat 	<ul style="list-style-type: none"> ● Weight loss ● Muscle gain ● Decrease in body fat

CONCEPTS

Sufficiency & Availability

- Scale of analysis
- Unit of measurement
- Deviations from standards (help us to see that people are not getting enough calories)

FORUM 3: Policy for healthy and sustainable food systems

Dietary risk factors are the leading contributors to the global and national burden of disease
- adults/children overweight and obese

- 2016 predicted to be hottest year on record

Climate change = health concern

What is a healthy and sustainable diet?

low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations.

protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources.

Healthy diet = sustainable diet

Increased consumption of discretionary food

New guidelines change

- wanted sustainable messages but wasn't accepted

5 food groups = nutritious