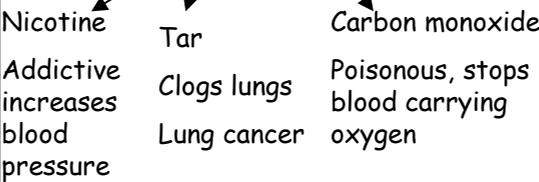


Keywords: Pathogen, Bacteria, Virus, Antibody, Antitoxin, Antigen, LDL, HDL, Fats, Fibre

Group	Needed for	Found in
Minerals	Healthy blood & bones	Milk, salt
Fibre	Not digested, moves food through body	Veg
Carbohydrates	Energy	Bread pasta
Protein	Growth, cell replacement	Fish, meat
Fats	Energy store	Cheese, crisps
Vitamins	Keep us healthy	Fruit & veg
Water	Keep hydrated	Drinks

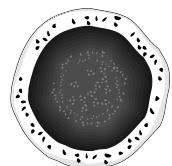


Bacteria
 Damage cells
 Produce toxins



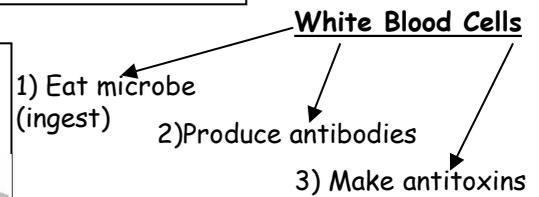
Viruses
 Much smaller
 Damage cells by replicating using the cells own DNA. The cell bursts releasing lots of viruses.

Defence Mechanisms
Eyes-tears with antiseptic
Skin-barrier
Blood-white blood cells and s
Mucus-trap bacteria
Stomach-acid kills bacteria



B1a) Human Biology

Needed for nervous system but too much gives high blood pressure



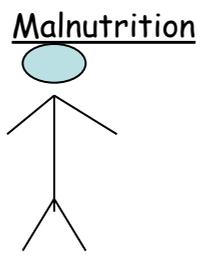
Antibiotics-only fight bacteria not viruses so won't work against colds/flu

Energy Intake

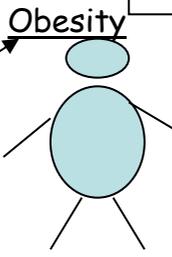
Depends on
 -Activity rate & Metabolic rate



If unbalanced may lead to...



or



- Fatigue
- More prone to disease
- Irregular periods

- Arthritis
- Diabetes
- High blood pressure
- Heart Disease



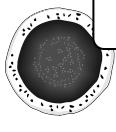
Metabolic Rate-(How much energy your body burns during chemical reactions) is higher in...

- muscle needs more energy
- overweight people more energy needed to move
- men (more muscle)
- regular exercise can boost it

Cholesterol-makes cell membranes and hormones
LDL's-bad, too much=heart problems.
HDL's-good, reduce risk of heart disease
 A balance is important for a healthy heart

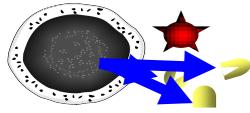
Fats
 Monounsaturated-reduce cholesterol and improve balance between HDL & LDL's Found in olive oil, peanuts & margarine
 Polyunsaturated-reduce cholesterol and improve balance between HDL & LDL's. Found in oily fish and vegetable oils
 Saturated-raise cholesterol bad!

Keywords: Neuron, Hormone, FSH, LH, oestrogen, glands, vaccine, ovulation, antibiotics, receptor, effector, stimulus, mutation

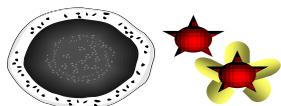


You're going down

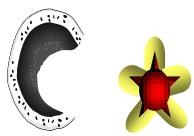
Step 1: The white blood cell "sees" the antigen on the microbe



Step 2: The WBC produces antibodies to fit the antigen



Step 3: The antibodies cause the microbe to clump



Step 4: The WBC's ingest the microbe

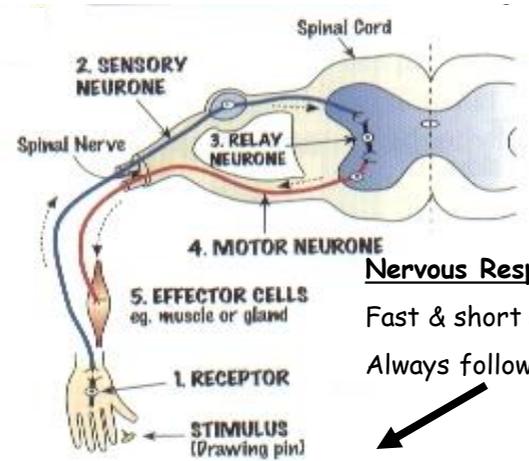
Antibodies & White Blood Cells

The Menstrual Cycle

FSH- made in pituitary gland, causes egg to mature and oestrogen production

Oestrogen-made in ovaries causes womb lining to thicken and LH production and stops FSH production

LH-causes ovulation (egg release) on day 14.

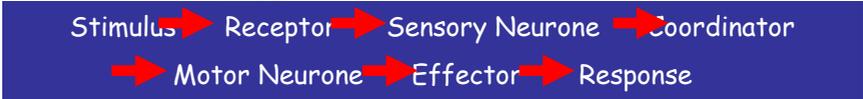


Synapses

Connection between nerves, signal is transferred across gap by chemicals

Nervous Responses

Fast & short acting
Always follow this pattern



Reducing Fertility
Pill-contains oestrogen so no FSH produced and no eggs. Can have side effect not 100% effective and doesn't protect against STI's

Increasing Fertility
FSH taken to stimulate egg production in ovaries

Vaccinations

- 1) Given a weak/dead form of the pathogen
- 2) WBC's produce antibodies
- 3) Pathogen is destroyed.
- 4) If come across real pathogen WBC's can produce antibodies quickly



Body Mass Index (BMI)

BMI = $\frac{\text{mass in kg}}{(\text{height in m})^2}$

- Under 20 - underweight
- 20-25 - Healthy
- 25-30 - Overweight
- 30+ - Obese



Depressant

Affects liver & brain

Antibiotic Resistance

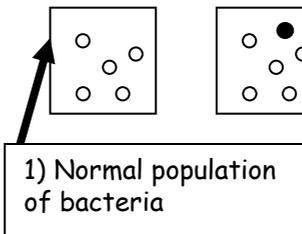
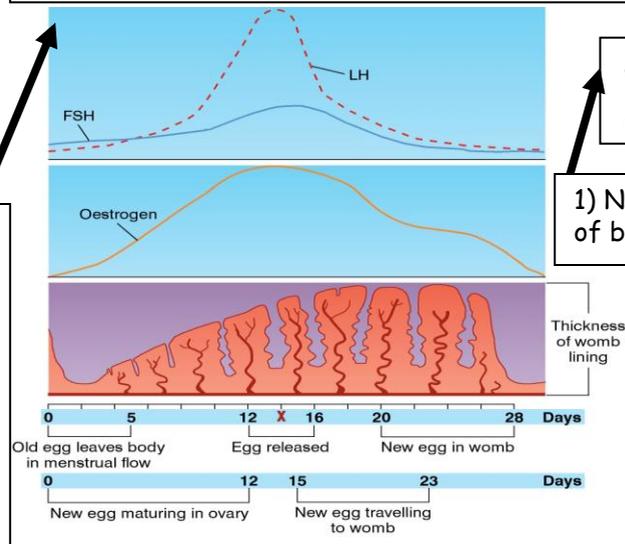
To Prevent resistance!

- 1) Finish antibiotic course
- 2) Only take antibiotics when needed.

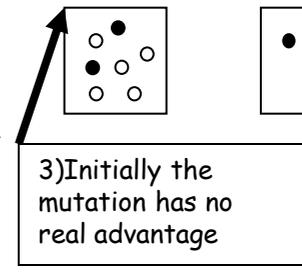
Hormones-chemical messengers produced by glands travel in the blood so are slow and have long lasting effects

● Resistant

○ normal



2) A mutation (change in DNA) occurs that makes the bacterium resistant to antibiotics



5) The antibiotic resistant bacteria reproduce and pass resistance to their offspring

4) If antibiotic is used, the unadapted bacteria die and the resistant bacteria have the advantage and survive