

Unit 2 KA1: Structure and Function of Reproductive Organs

Gametes are haploid.
Give a description of
the term **haploid**.

Female Including labels: follicle, immature ova, mature ova, corpus luteum and ovulation

Male: Include labels; sperm, germline cell, interstitial cell and seminiferous tubule

Hormone/fluid	Where is it Produced?	Function
FSH		
ICSH		
	Interstitial cells	
	Prostate gland/seminal vesicles	

Complete the table for the male reproductive system

Name the **site of fertilisation** in humans

Name the **diploid cell**, formed as a **result of fertilisation**.

Unit 2 KA2: *Hormonal Control of Reproduction*

Pituitary Gland releases hormones:



This stimulates interstitial cells to produce the hormone:

Puberty is brought by...

Hormonal Control in Males

Hormonal Control in Females

Pituitary Gland releases hormones:



This causes maturation of the follicle

This causes _____ and development of the corpus luteum

Describe the negative feedback control involving testosterone

The first half of the menstrual cycle is known as:

The second half of the menstrual cycle is known as:

Describe the negative feedback control involving ovarian hormones

Describe the impact of oestrogen on the uterus in this phase

Describe the impact of progesterone on the uterus in this phase

An eventual drop in progesterone leads to shedding of endometrium known as:

Unit 2 KA3: *Biological Control of Fertility*

Give examples of or describe the three **physical methods of contraception** mentioned below

Two reasons (in terms of sperm) for **male infertility**

Artificial Insemination is

Describe the stages of IVF

Explain the Biology basis behind the following **chemical methods of contraception**

Type of fertility in females is known as:

Type of fertility in males is known as:

Intracytoplasmic Sperm Injection (ICSI) is:

Preimplantation Genetic Diagnosis (PGD) is:

Unit 2 KA4: Antenatal and Postnatal Screening

Describe the formation of a **Karyotype** from foetal cells

Describe some **Biochemical Tests** carried out during pregnancy

Describe the patterns of inheritance and give examples of genotypes of sufferers/non sufferers/carriers for each example

Describe the purpose of the two type of **Ultrasound**

Data Scan

Anomaly Scan

Describe the following method of obtaining foetal cells for a **Karyotype**. Give one advantage and one disadvantage of each.

Amniocentesis

Chorionic Villus Sampling

If a baby's **blood** is high in phenylalanine what **condition** would they have and how would the individual be **treated**?

Autosomal Recessive

Autosomal Dominant

Incomplete Dominant

Sex Linked Recessive

Unit 2 KA5: Arteries, Capillaries and Veins

Describe a similarity and difference between blood plasma and tissue fluid

Similarity

Difference

Osmotic Return

Lymphatic System

The function of valves is

Which blood vessel contain valves

The fluid surrounding cells forced out of capillaries by pressure filtration

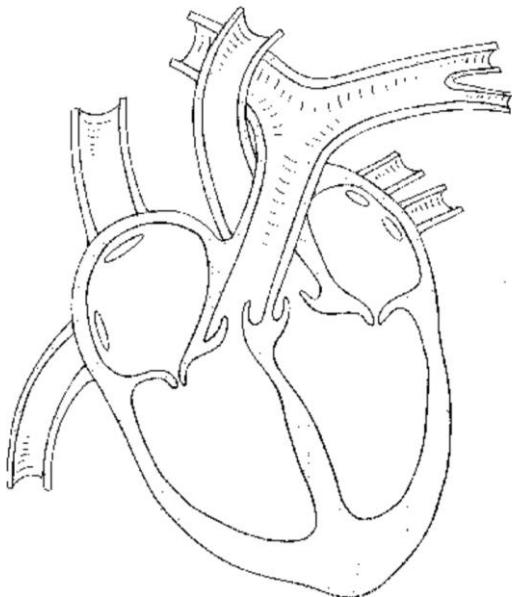
Draw a diagram of to compare an artery and vein showing elastic fibres, smooth muscle, central lumen and endothelium

Describe the structure and function of capillaries

Describe the two methods of tissue fluid returning to the circulatory system

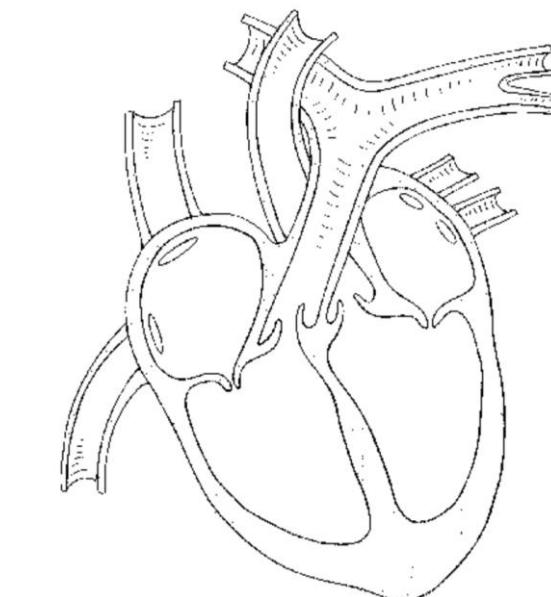
Describe the impact of vasoconstriction on blood flow

Describe the impact of vasodilation on blood flow



Label the heart adding SAN (PACEMAKER) and AVN. Add arrows to show the direction of impulses across the heart.

Label the heart - name each chamber, name the arteries/veins that flow out of/into the heart and heart valves. Use coloured pencils to show the location of deoxygenated (blue) and oxygenated (red) blood.



Unit 2 KA6: Structure and Function of the Heart

1

Name the 2 branches of the autonomic system, their impact on heart rate and the neurotransmitter used.

2

The autonomic system (and so heart rate) is controlled by which part of the brain

The sympathetic nerve stimulates the release of the hormone

Complete the table showing the state of the valves during the cardiac cycle

Stage of Cardiac Cycle	Valves Open	Valves Closed
Atrial systole		
Ventricular systole		
Diastole		

Give the Calculation for Cardiac Output

What is used to measure blood pressure

Hypertension can be a risk factor for the disease

What is the typical blood pressure reading for a young adult?

Unit 2 KA7: Cardiovascular Disease

Where does an atheroma form

An atheroma is composed of

The impact of atheroma on the structure of an artery, blood flow and blood

Describe the formation of a thrombus including endothelium damage, clotting factor, prothrombin, thrombin, fibrinogen and fibrin

Three cardiovascular diseases caused by an atheroma

Define the following:

Two uses of cholesterol in the body

If a thrombus causes a **heart attack** (myocardial infarction) in which **vessel** does the clot occur and which type of tissue dies as cells are starved of oxygen

Peripheral Vascular Disease

Deep Vein Thrombosis

Pulmonary Embolism

LDL transports cholesterol from where to where?

If a thrombus causes a **stroke** in which **vessel** does the clot occur and which type of tissue dies as cells are starved of oxygen

HDL transports cholesterol from where to where?

Ways to reduce blood cholesterol

