

Physical Development

*A1 Physical Development
across life stages*

Name; _____

A1 Physical development across the life stages

Growth and development are different concepts:

- principles of growth – growth is variable across different parts of the body and is measured using height, weight and dimensions
- principles of development – development follows an orderly sequence and is the acquisition of skills and abilities.

In infancy (0–2 years), the individual develops gross and fine motor skills:

- the development of gross motor skills
- the development of fine motor skills
- milestones set for the development of the infant – sitting up, standing, cruising, walking.

In early childhood (3–8 years), the individual further develops gross and fine motor skills:

- riding a tricycle, running forwards and backwards, walking on a line, hopping on one foot, hops, skips and jumps confidently
- turns pages of a book, buttons and unbuttons clothing, writes own name, joins up writing.

In adolescence (9–18 years), the changes surrounding puberty:

- development of primary and secondary sexual characteristics
- the role of hormones in sexual maturity.

In early adulthood (19–45 years), the individual reaches physical maturity:

- physical strength peaks, pregnancy and lactation occur
- perimenopause – oestrogen levels decrease, causing the ovaries to stop producing an egg each month. The reduction in oestrogen causes physical and emotional symptoms, to include hot flushes, night sweats, mood swings, loss of libido and vaginal dryness.

In middle adulthood (46–65 years), the female enters menopause:

- causes and effects of female menopause and the role of hormones in this o effects of the ageing process in middle adulthood.

In later adulthood (65+ years), there are many effects of ageing:

- health and intellectual abilities can deteriorate

You can be tested and asked questions about any of the above, in your exam!

Good Advice; Get in the habit of working from a planned revision weekly timetable....

The exam board design questions of varying difficulties and then allocate marks depending on the degree of difficulty. Each time you learn about a topic area, you need to come up with questions you anticipate, may be asked, using the guidance below and on the next page. This will be your homework task after each lesson and something you can do, working in pairs in your study periods.

Assessment Outcomes

Assessment outcomes	Definition	Command words	Marks
AO1	Demonstrate knowledge of: <ul style="list-style-type: none"> physical, intellectual, emotional and social development across the human lifespan factors affecting human growth and development the effects of ageing 	Describe Discuss Evaluate Identify Justify To what extent	Ranges from 3 to 6 marks
AO2	Demonstrate understanding of: <ul style="list-style-type: none"> physical, intellectual, emotional and social development across the human lifespan factors affecting human growth and development the effects of ageing 	Describe Discuss Evaluate Explain Justify Outline To what extent Which	Ranges from 1 to 6 marks
AO3	Analyse and evaluate information related to: <ul style="list-style-type: none"> human development theories/models factors affecting human growth and development 	Evaluate	10 marks
AO4	Make connections between theories/models in relation to: <ul style="list-style-type: none"> human development factors affecting human growth and development effects of ageing 	Discuss Evaluate Justify To what extent	Ranges from 10 to 12 marks

Command Words in Exam Questions

Describe	<p>Give a clear, objective account in your own words showing recall, and in some cases application, of the relevant features and information about a subject.</p> <p>Example: 'Describe gross and fine motor skills in relation to...'. Top tip; imagine sitting with your grandma and describing something to her, if at the end of the conversation, she doesn't fully understand, you haven't described it well enough</p>
Discuss	<p>Consider different aspects of a topic, how they interrelate and the extent to which they are important.</p> <p>Example: 'Discuss how both the environment and genetic factors may account for...'. </p>
Evaluate	<p>Draw on varied information, themes or concepts to consider aspects such as strengths or weaknesses, advantages or disadvantages, alternative actions, and relevance or significance.</p> <p>Example: 'Evaluate possible explanations for the development of...'. Associate the word evaluate with POSTIVE< NEGATIVE< CONCLUSION</p>
Explain	<p>Show you understand the origins, functions and objectives of a subject and its suitability for purpose. Give reasons to support an opinion, view or argument, with clear details.</p> <p>Example, 'Explain two possible features of the development of...'. Top tip; Associate the word explain, with the word BECAUSE...</p>
Identify	<p>Indicate the main features or purpose of something, and/or are able to discern and understand facts or qualities.</p> <p>Example, 'Identify the services that might be available to...'. </p>
Justify	<p>Give reasons or evidence to support an opinion or prove something right or reasonable.</p> <p>Example: 'Justify how overcoming...'. </p>
Outline	<p>Provide a summary or overview or a brief description of something.</p> <p>Example, 'Outline ways in which X might affect their physical health.'</p>
To what extent	<p>Show clear details and give reasons and/or evidence to support an opinion, view or argument. It could show how conclusions are drawn (arrived at).</p> <p>Example: 'To what extent might recent...'. </p>
Which	<p>Specify one or more items from a definite set.</p> <p>Example: 'Which body part...'. </p>

Make a note of words we use that you didn't know the meaning of...

Key Term	Definition

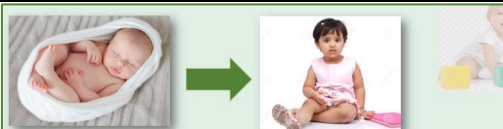
Outline the principles of growth....

Outline the principle of development....

Explain the differences and how growth and development interrelate.....

Describe what the centile lines and chart is and what it's purpose is.....

Describe what is meant by a milestone and give two examples



Human Life Span

A1. Physical development
Birth to infancy 0-2 years-old

Unit 1 Spec A1 -> take notes

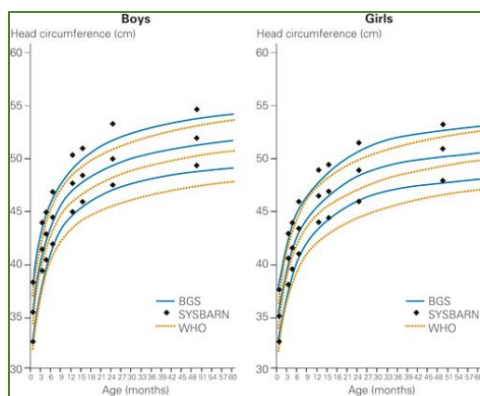
Life stages	Age Group
Birth to infancy	0-2 years
Early Childhood	3-8 years
Adolescence	9-18 years
Early Adulthood	19-45 years
Middle Adulthood	46-65 years
Later Adulthood	65 years onwards

Consider creating cue cards in your study period, to help aid memory recall

Centile line explained.....

If a child's weight is at the 50th percentile **line**, that **means** that out of 100 normal children her age, 50 will be bigger than she is and 50 smaller. Similarly, if she is in the 75th percentile, that **means** that she is bigger than 75 children and smaller than only 25, compared with 100 children her age.

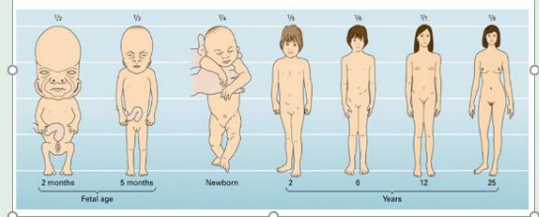
What is a centile? What does the higher the number mean?



Compare and contrast; boy and girl centile growth expectation, differences.....

Head proportion in growth

Changes in Proportions of the Human Body During Growth



Is a baby girl on the 54th Centile for weight, above or below the average in the UK?

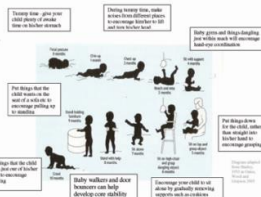
Complete this table with the guidance in the PowerPoint presentation and card match...

Primitive reflex	Description of reflex action
<i>Glabellar reflex</i>	
<i>Snout reflex</i>	
<i>Rooting reflex</i>	
<i>Sucking reflex</i>	
<i>Palmomental reflex</i>	
<i>Grasp reflex</i>	
<i>Moro reflex</i>	
<i>Galant reflex</i>	
<i>Asymmetric Tonic neck reflex</i>	
<i>Babkin reflex</i>	
<i>Placing reflex</i>	
<i>Walking reflex</i>	

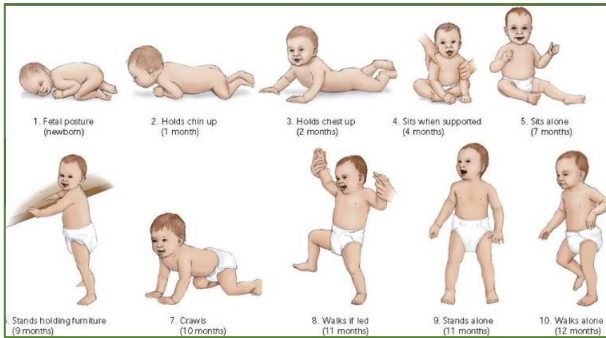
Gross motor skills

Physical Development

This is a widely recognised sequence of development, although the age at which each child grows through each stage varies. Each stage facilitates the next and there are activities that you can do with your child to help him/her progress through the stages.



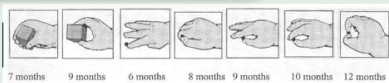
Gross motor skills are large movements, involving the bigger muscles, which require **mobility** and the **coordination** these require eg. Rolling over or reaching out.



Fine motor skills; 0-2 years



Fine motor skills involve smaller precision movement, which requires dexterity and coordination. For example, picking up and holding a pencil, pincer movement.



Age

Gross Motor Skills

Fine Motor Skills

New born

1 month

3 months

6 months

9-10 mths

12-13 mnths		
18 mnths		
2 years		
2 ½ years		

Exam practice question;

Xavier is one-week old, outline the gross and finer motor skill changes, he will experience over the next two years.



Human Life Span

A1. Physical development
Early Childhood 3-8 years-old

Gross motor skill changes 3-8 years



During the preschool years (ages 3/4) and primary school key stage 1 & 2 (aged 5-8) a child learns various new gross motor skills. These new skills are vital for playing with their peers. Each child learns these at a different rate, however the following is an general outline of the development of gross motor skills during the preschool years.



Have a look at this poster

...and carry out your own research task, using the NHS birth to five developmental timeline as well as further research...

Complete the gross and fine motor skills table as you did for 0-2 years, in your booklet.

When can children...

- * run forwards and backwards
- * button and unbutton clothes
- * write their own name
- * use joined up writing
- * walk in a straight line
- * turn pages in a book
- * ride a bike on their own
- * use a skipping rope well

Home work Task – Complete the table below

Age	Gross Motor Skills	Fine Motor Skills
2-3 years-old		
3-4 years-old		
4-5 years-old		
5-6 years-old		
6-7 years-old		
7-8 years-old		

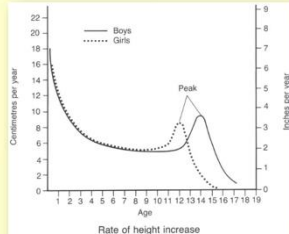


Human Life Span

A1. Physical development
Adolescence (9-18 years)

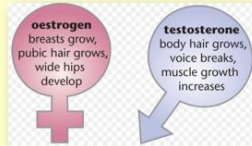
Growth Spurts

In adolescence both girls and boys experience growth spurts and will have lost all baby teeth. Sometimes adult teeth cause issues that are addressed by orthodontic work.

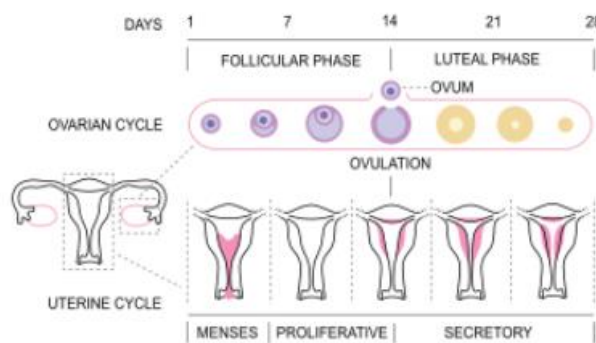


Puberty

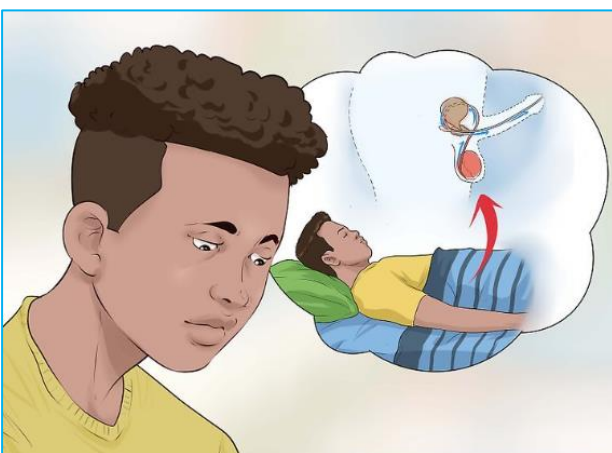
Primary sexual characteristics are organs and cells that are present at birth but don't develop until puberty. There are changes in reproductive organs and the pituitary gland induced changes.



Secondary sexual characteristics, develop during puberty, outward signs of growing from child to adulthood.



Uterus enlarges and vagina lengthens;
ovaries release eggs and menstruation starts



Penis and testes enlarge, sperm is produced
and spontaneous blood flow in chambers

Erection – is it muscular or vascular?

Homework > complete this table – page 7 BTEC text book

Primary Sexual Characteristics – changes in puberty

Female	Male

Secondary Sexual Characteristics – changes in puberty

Female	Male

Exam question; describe the primary sexual characteristic changes that happens to a female



Human Life Span

A1. Physical development
Early Adulthood (19-45 years-old)

Physical Strength Peaks

19-28 years-old is the age group in which we peak physically. Adults reach their full height and strength, and reaction time, coordination and manual dexterity are also at their peak. However, poor life style choices impact on this greatly; obesity, drinking and smoking can create health issues.



Relationships; pregnancy & lactation



Key phases in a females life, in this age group is pregnancy and lactation. Pregnancy causes hormonal changes during and afterwards which in turn, can cause mood changes and raising children can be (almost certainly) very stressful!

Perimenopause – PRE-menopause

Common Perimenopause Symptoms

<p>Physiological</p> <ul style="list-style-type: none"> • Anger • Depression • Irritability • Dizziness • Difficulty concentrating • Fatigue • Mood swings 	<p>Physical</p> <ul style="list-style-type: none"> • Hot flashes • Night sweats • Reduced libido • Weight gain • Urinary incontinence • Vaginal dryness • Bloating
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

From 40 onwards women may experience physical changes in the reproductive system as oestrogen hormone levels drop on the run up to the menopause. This may cause mood issues, hot sweats and a the metabolism slows down so they're more inclined to put on weight.

Watch the singing uterus (and backing singer ovaries) and note down the physical changes that occur in the perimenopause stage, of life.

Julia has just started to experience symptoms of perimenopause.

4 Describe **three** physical symptoms of the perimenopause.

1

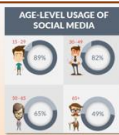
2

3

28

Total for Question 4 = 6 marks

Research task – what are the physical changes that take place in a woman who is lactating – name the hormone and receptors that cause these changes.



Human Life Span

A1. Physical development
Middle Adulthood (46-65 years-old)

Middle aged 'spread'



middle-aged spread
noun
the fat that may accumulate around the abdomen in middle age.
"at 40, you developed something unavoidable called middle-aged spread"



Changing hormones from around 45 years-old for both men and women, leads to the slowing down of the metabolism and weight increase. This excess weight tends to accumulate around the tummy area and is referred to as, the **middle-aged spread**.

Muscle decline



Changing hormones also decrease muscle tone and strength, the older we get so we start to look different than our younger selves which some people find upsetting.



Hair colour



As **we get** older, the pigment cells in our **hair** follicles gradually die. When there are fewer pigment cells in a **hair** follicle, that strand of **hair** will no longer contain as much melanin and will become a more transparent colour — like grey, silver, or white — as it grows

Skin elasticity reduction

Wrinkles are a natural part of the **aging** process. As people **get** older, their skin **gets** thinner, drier, and less elastic, and less able to protect itself from damage. This leads to **wrinkles**, **creases**, and lines on the skin. Environmental factors such as smoking and direct sunlight can accelerate the development of **wrinkles**



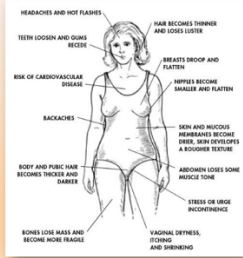
Research task – explain the biology, the science behind aging skin deterioration.

Receding gum line



Almost 10,000 people found that 38% of people aged 30-39 had some degree of the receding gums, compared with 71% in the 50-59 age group, and 90% for those aged between 80-90. This causes sensitivity, infections and tooth loss as they become loose.

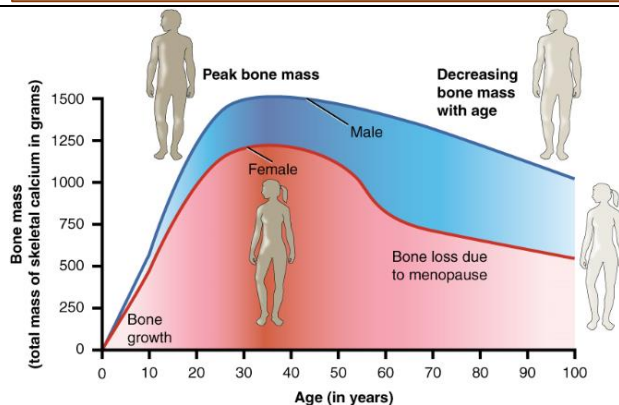
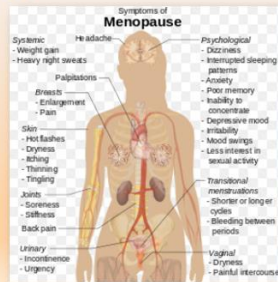
The menopause



The **menopause** is when a woman stops having periods and is no longer able to get pregnant naturally. ... The **menopause** is a natural part of ageing that usually occurs between 45 and 55 years of age, as a woman's oestrogen levels decline. In the UK, the average age for a woman to reach the **menopause** is 51.

Gonadotropins

An increase in gonadotropins that try to stimulate failing egg production causes a female to experience hot flushes and night sweats, which can leave them feeling tired and dizzy.



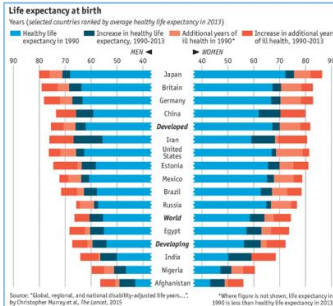
Bone density means the composition of the bone which impacts on how hard it is.

Homework exam question; Why does aging hair go grey/white, explain the biology.



Human Life Span

A1. Physical development
Later Adulthood (65-plus years)



Life expectancy in the UK

2017 Average life expectancy of **woman is 82.9 years** and of **men is 79.2 years**

<http://oldestinbritain.nfshost.com/living.php>



Why do women live longer than men?

Deterioration of senses; hearing

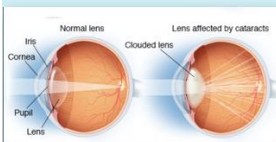
Hearing loss is the result of sound signals not reaching the brain. There are two main types of hearing loss, depending on where the problem lies.

Sensorineural hearing loss is caused by deterioration to the sensitive hair cells inside the inner ear or damage to the auditory nerve.

Conductive hearing loss happens when sounds are unable to pass from your outer ear to your inner ear, often because of a blockage such as earwax which occurs in older age.



Deterioration of senses; sight



Visual impairment is caused by a number of problems but in old age it tends to be the weakening of muscles that help us to see close to or distance. Peripheral vision isn't as good as it used to be and the optical nerve ages.

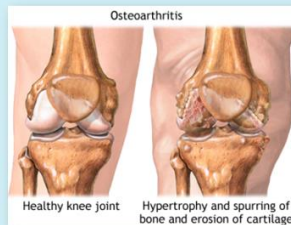
Health issues regarding eyes increase such as cataracts.



What are visual aids?

Mobility Issues

Flexibility in joints, cartilage wastage and injuries can limit movement in older people and make it painful. Further loss of stamina and strength in muscles slow down and restrict movement and injuries take a long time to heal. Balance and coordination become more challenging which all impacts on an older person's independence and mobility.



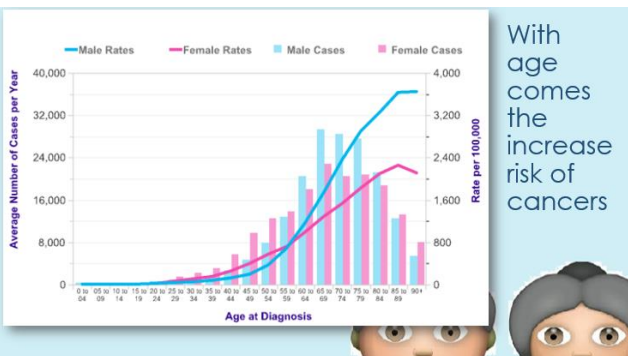
What are mobility aids?

How would becoming incontinent and needing help to wash and brush your hair, make you feel?

Incontinence problems

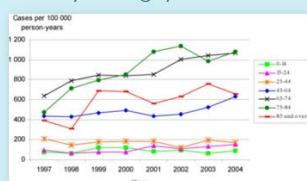
Weakened muscles at the bladder entrance and the anus causes leakages and the inability to hold on to urine or faeces for long periods.

Males experience enlarged prostates with age so bladder size shrinks and urination is frequent. Older people often worry how close they are to a toilet or require pads or a catheter.



Old age and ill health

- Immune systems gets weaker, flu jabs are offered
- Injuries take longer to heal and so are open to infection longer
- Poor life style choices; obesity, smoking, drinking lead to greater chances of heart disease and diabetes
- Kidney filtering systems deteriorate and don't renew



Use pages 11 & 12 in text book and the youtube videos to make notes – Deterioration of intellectual abilities

Exam Question; Outline three physical effects possible person of 85 may experience

Blank page.

Exam Question; Discuss the impact on self-concept these may have on an individual