

Sports, exercise and health science

Data booklet

SL & HL, first assessment 2026

Anatomical diagrams, unit conversions, equations and statistical formulae you are expected to have to hand rather than memorise.

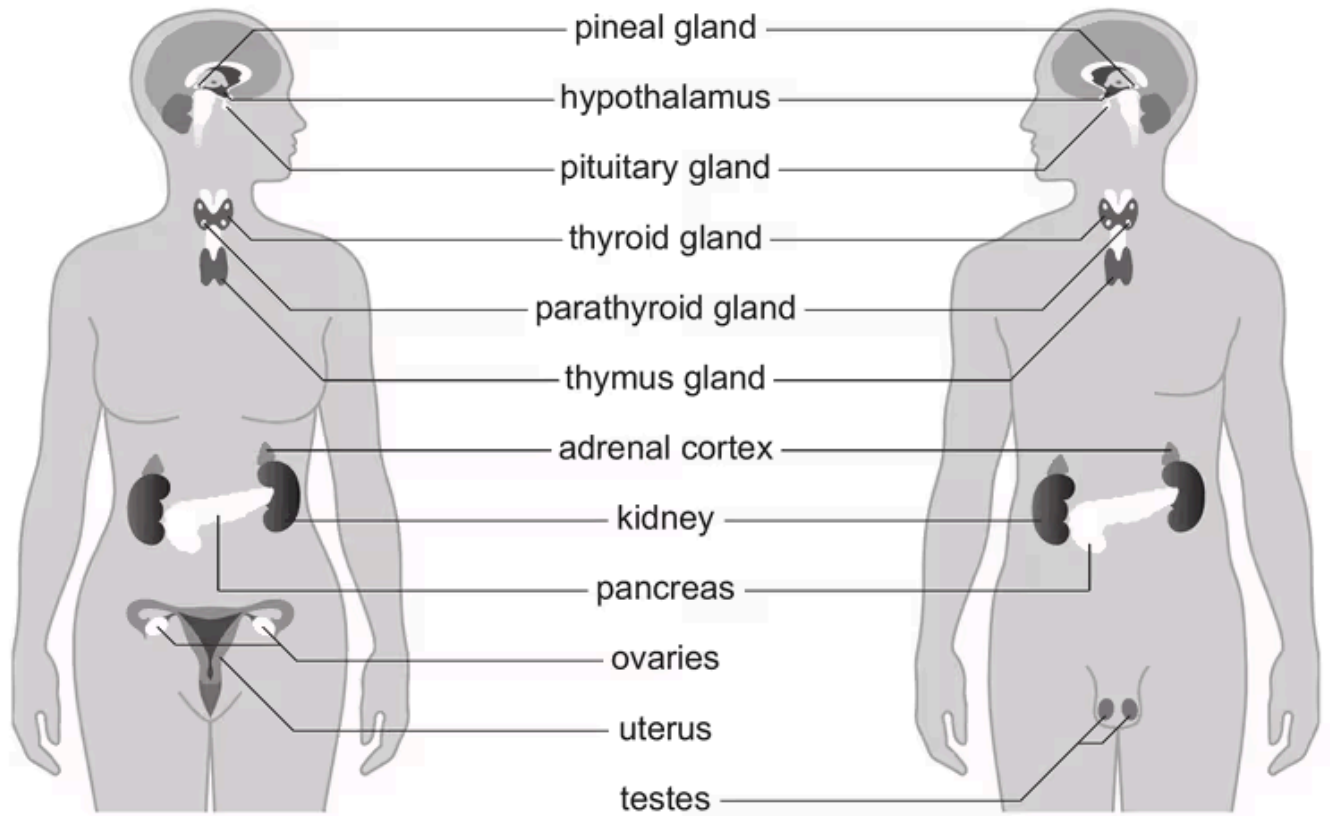
Provided in: Papers 1A, 1B and 2

Calculator: Scientific calculator, permitted in Papers 1A, 1B and 2

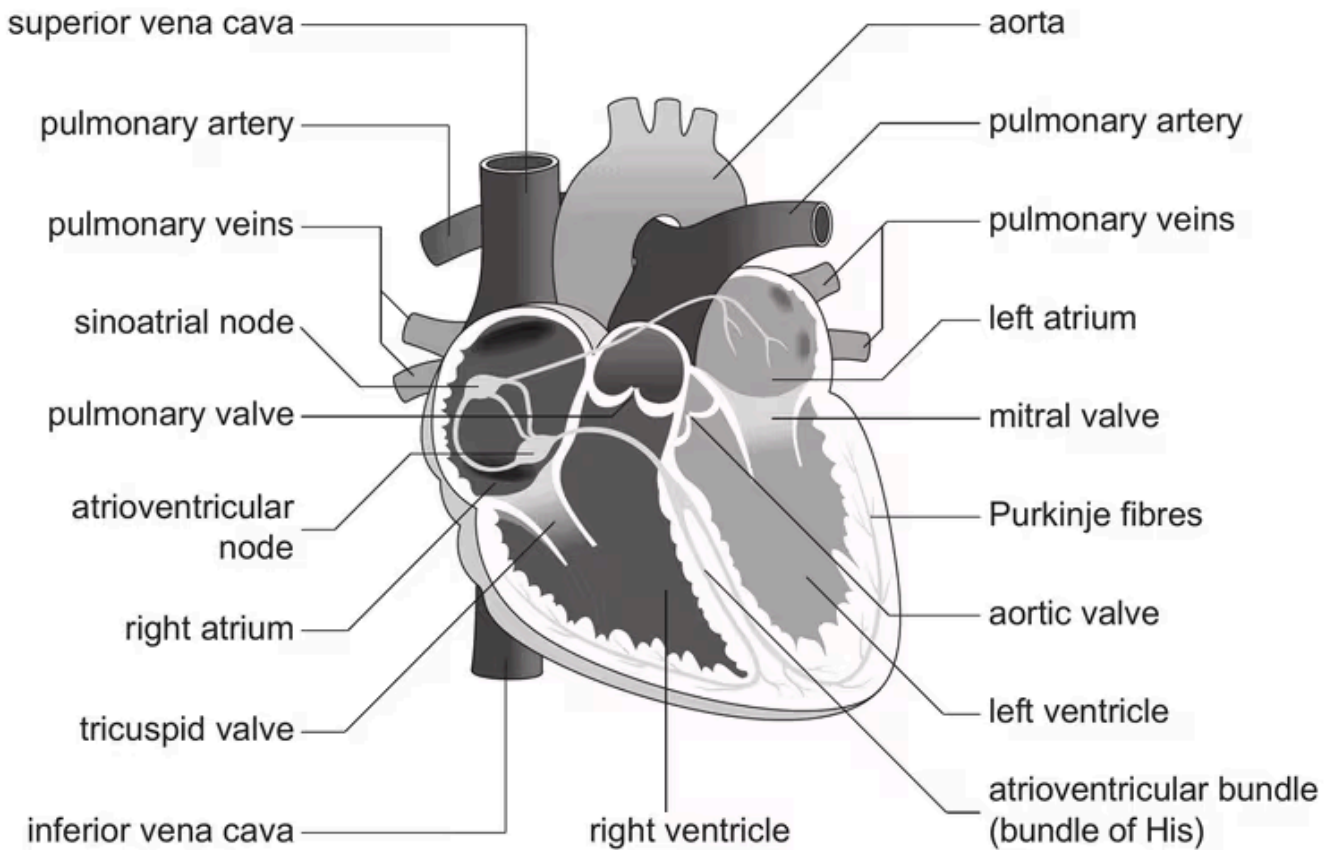
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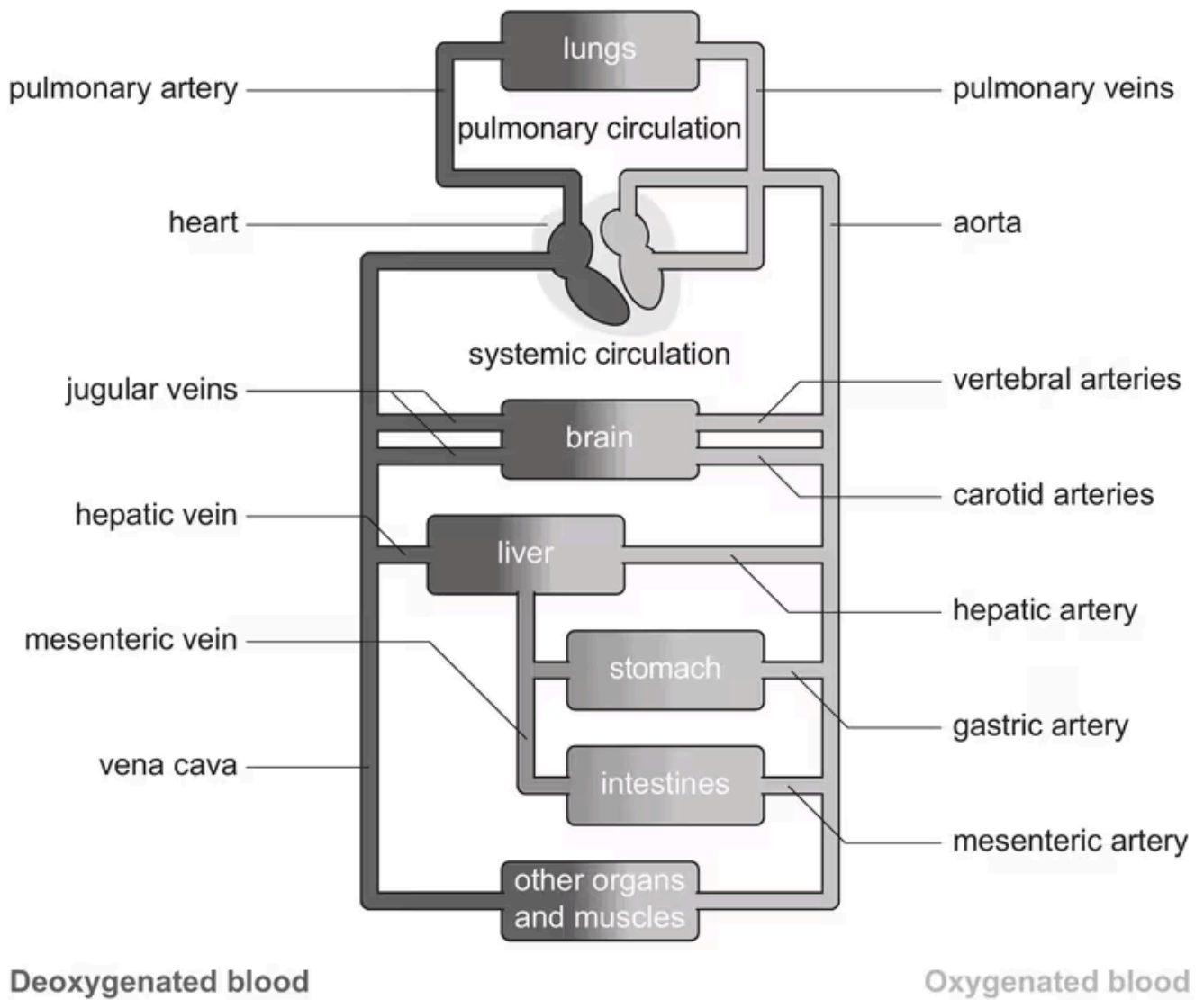
1. Endocrine glands



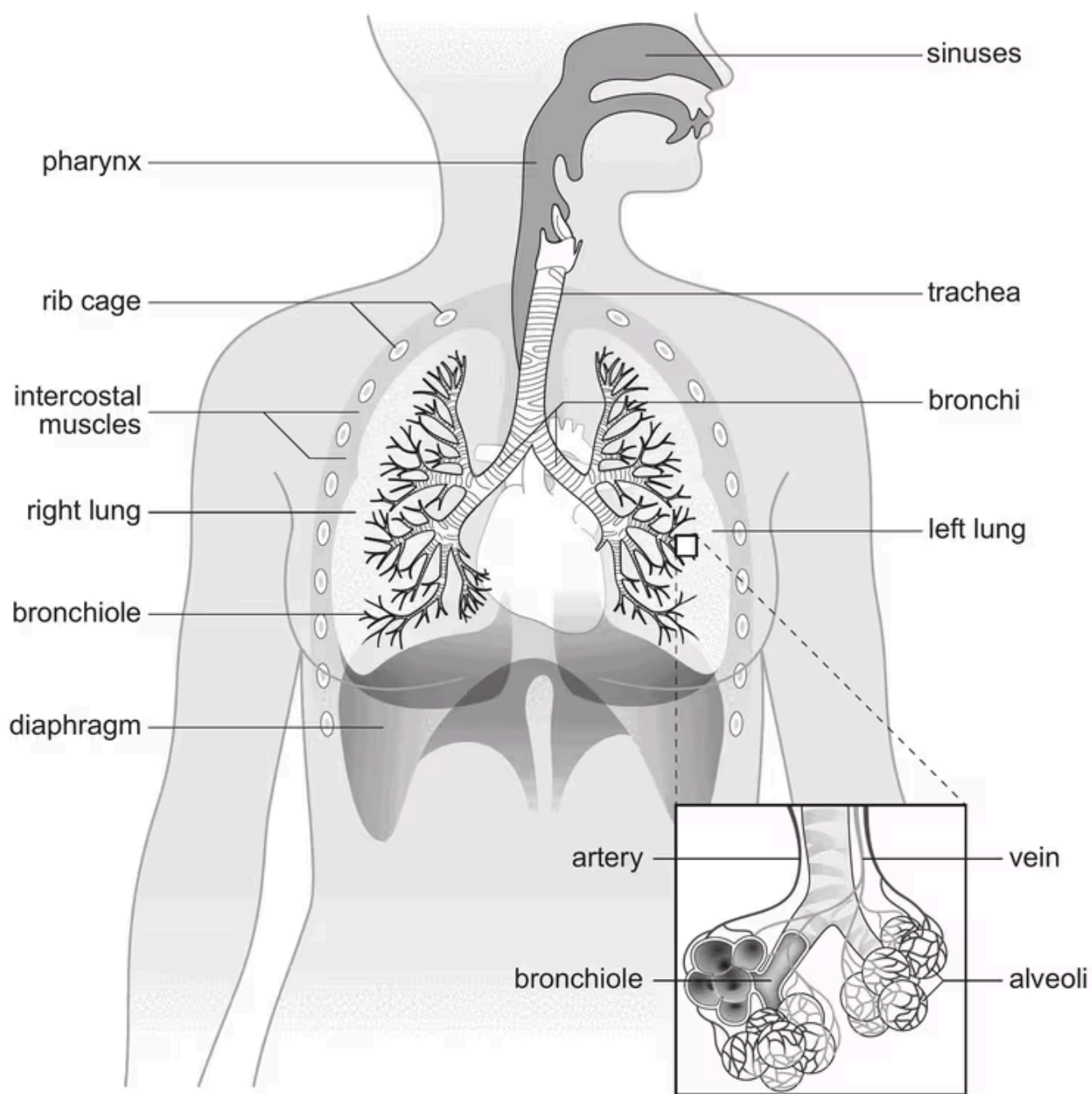
2. Structure of the heart



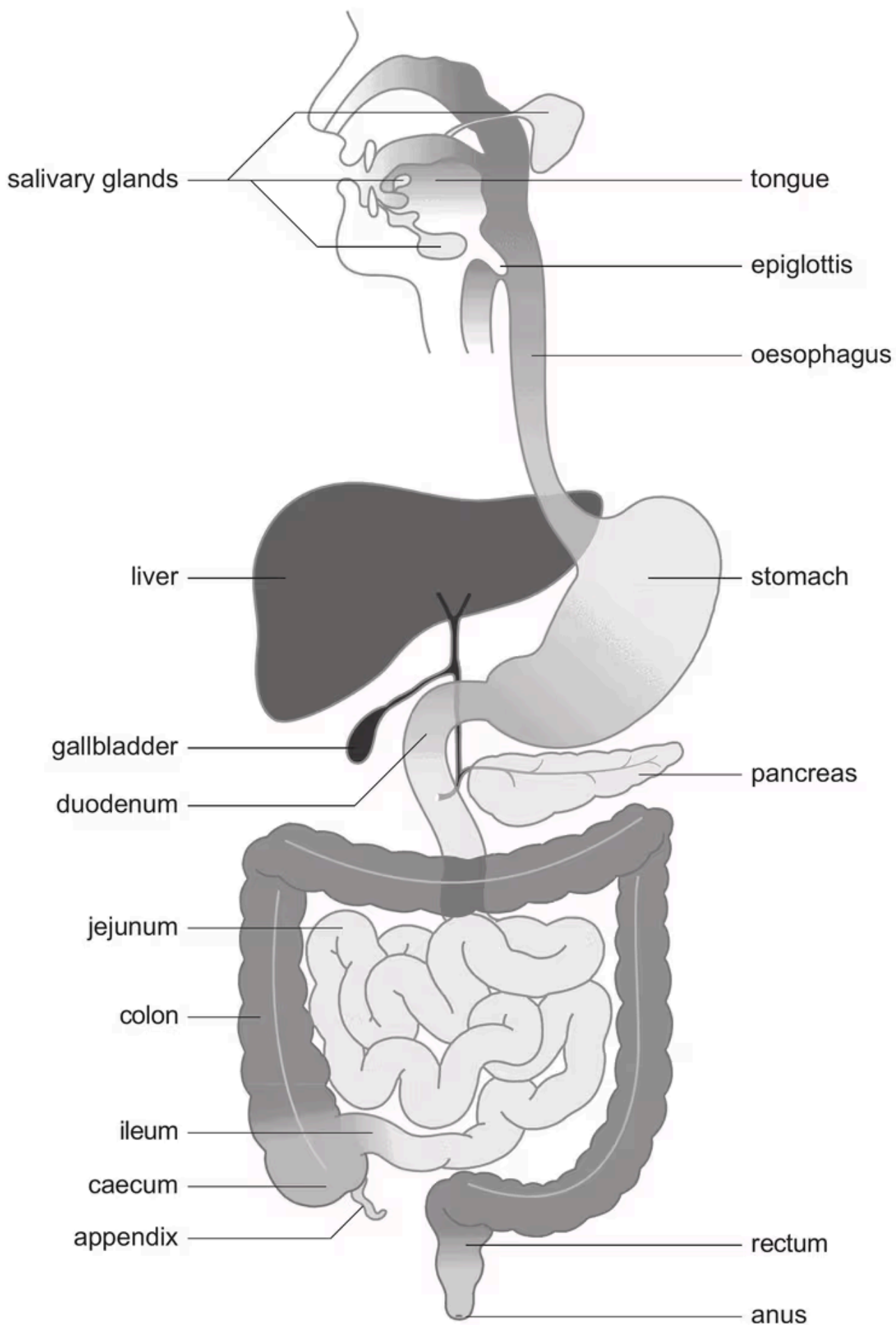
3. Cardiovascular system



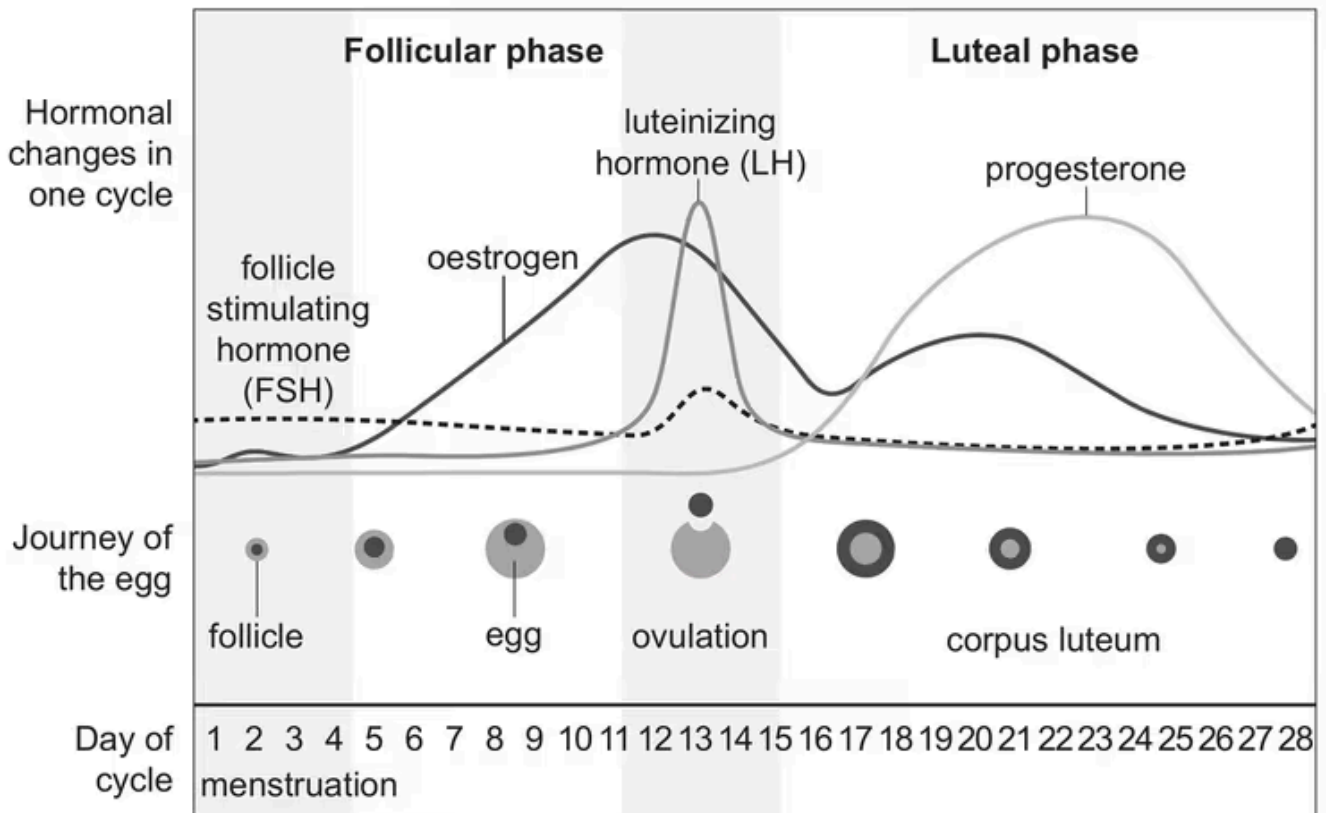
4. Respiratory system



5. Digestive system



6. Menstrual cycle

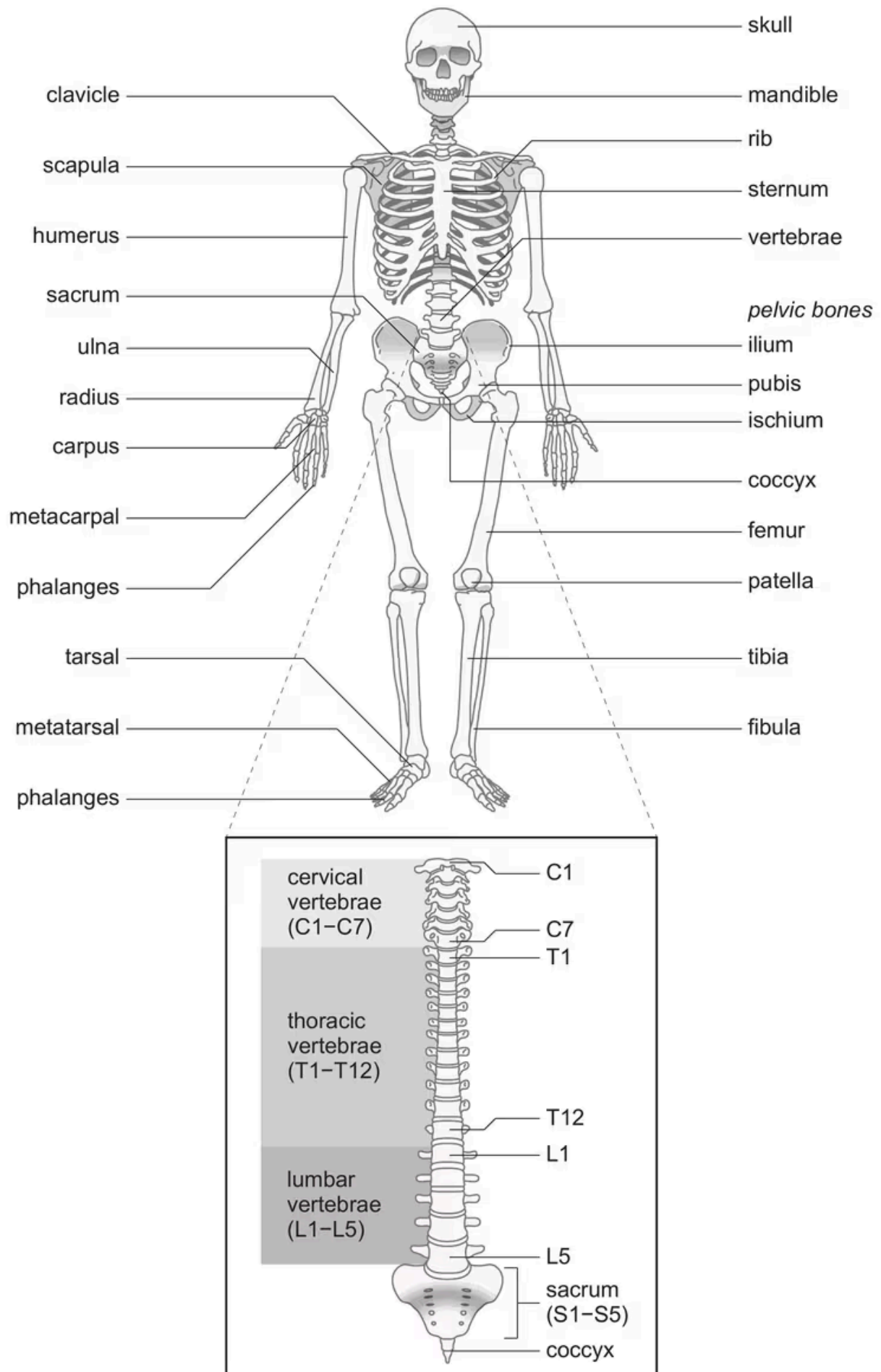


This example illustrates a 28-day cycle.

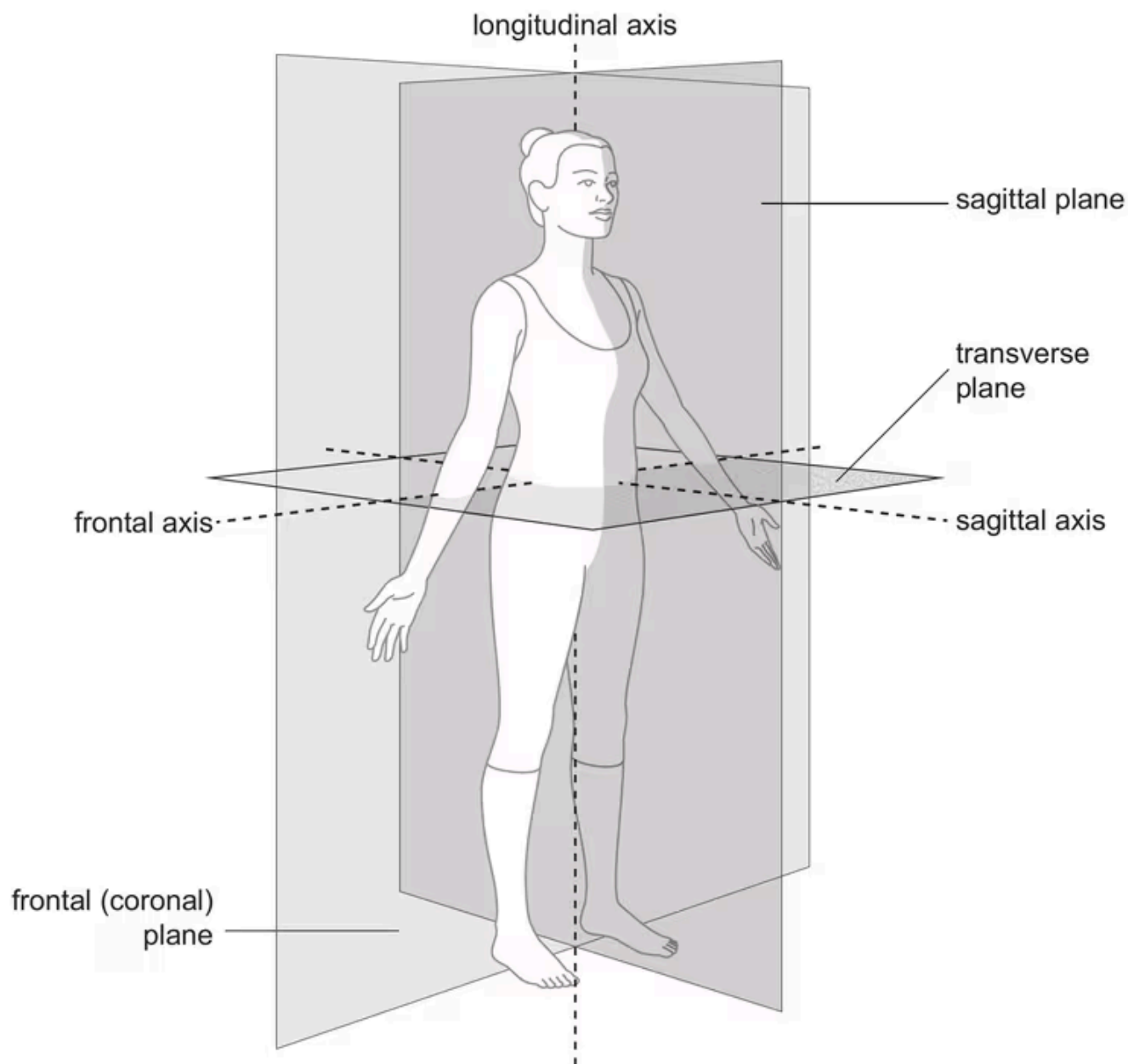
The day of ovulation and hormone levels can vary if the cycle length varies

This example illustrates a 28-day cycle. The day of ovulation and hormone levels can vary if the cycle length varies.

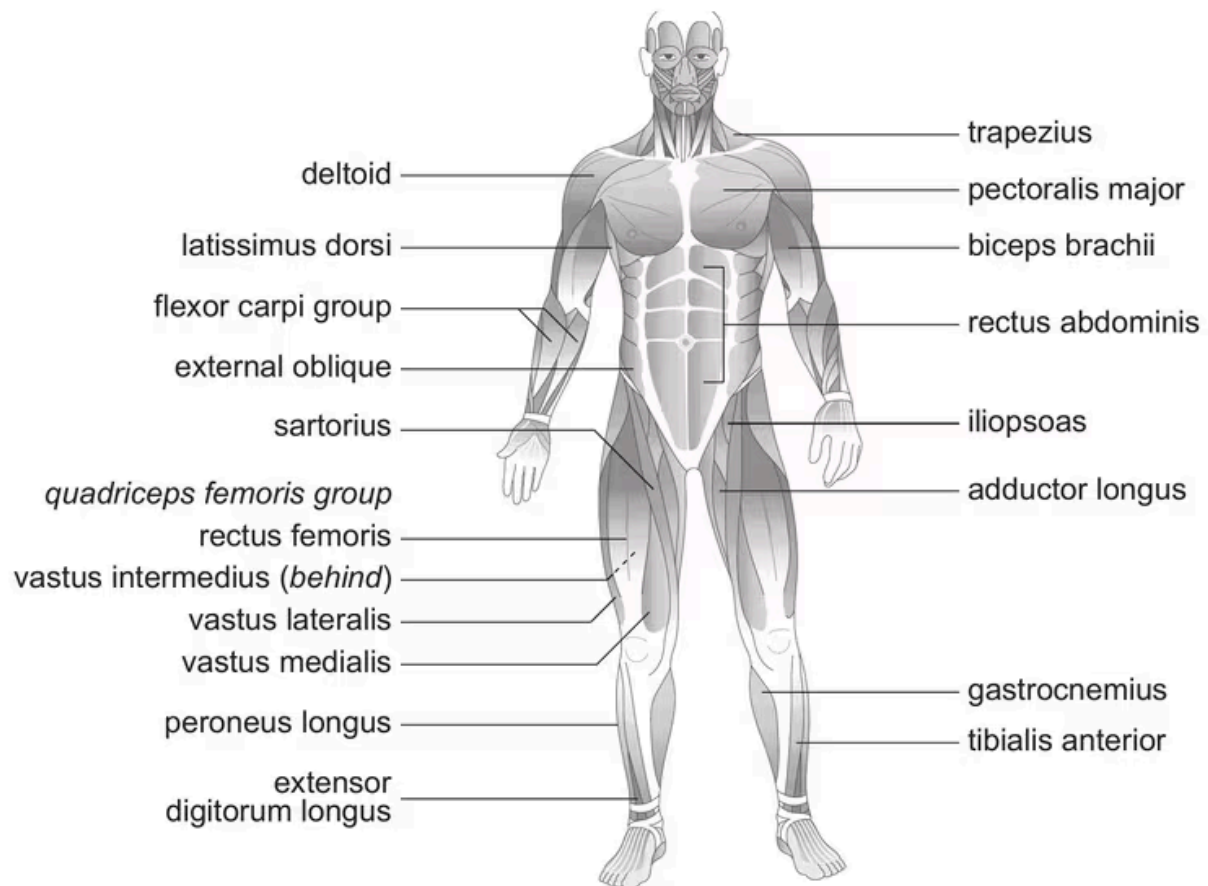
7. Skeletal system



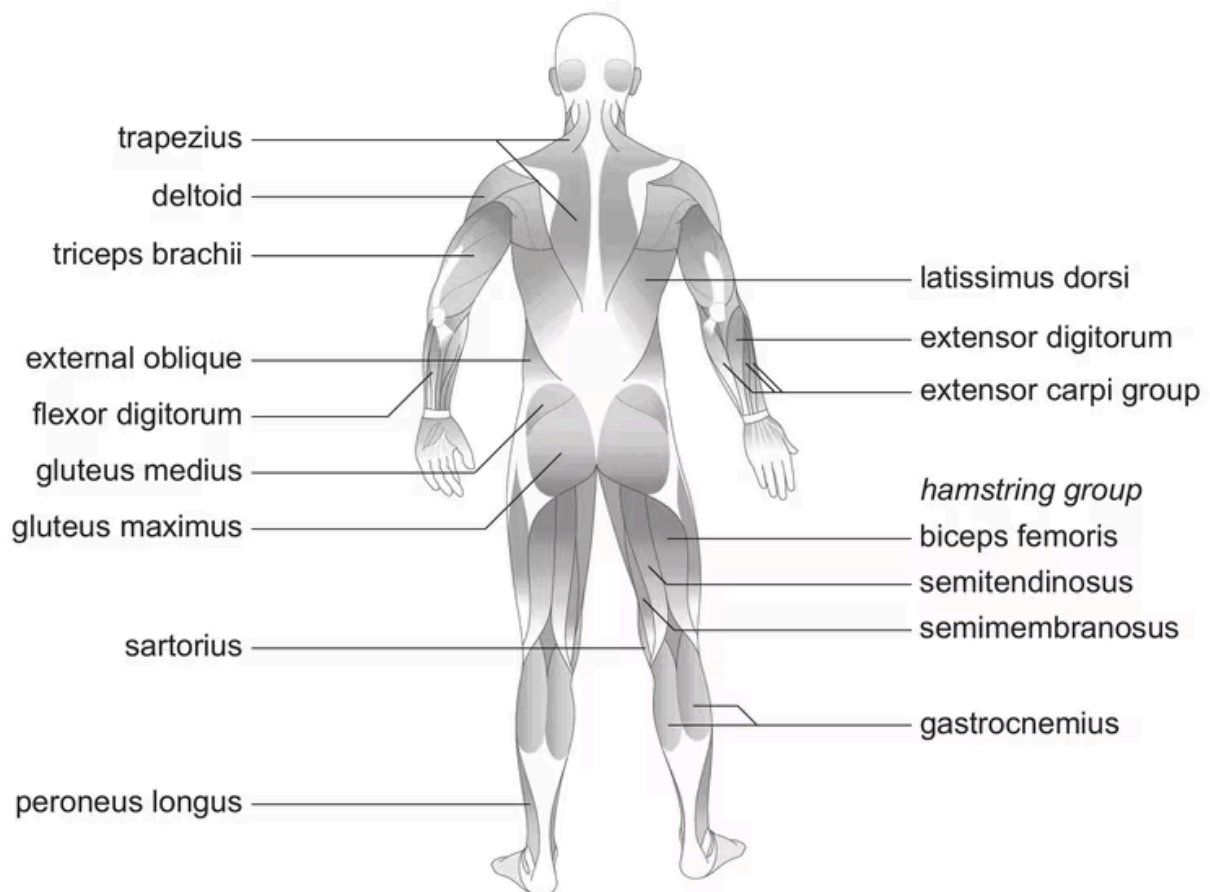
8. Anatomical planes and axes



9. Muscular system

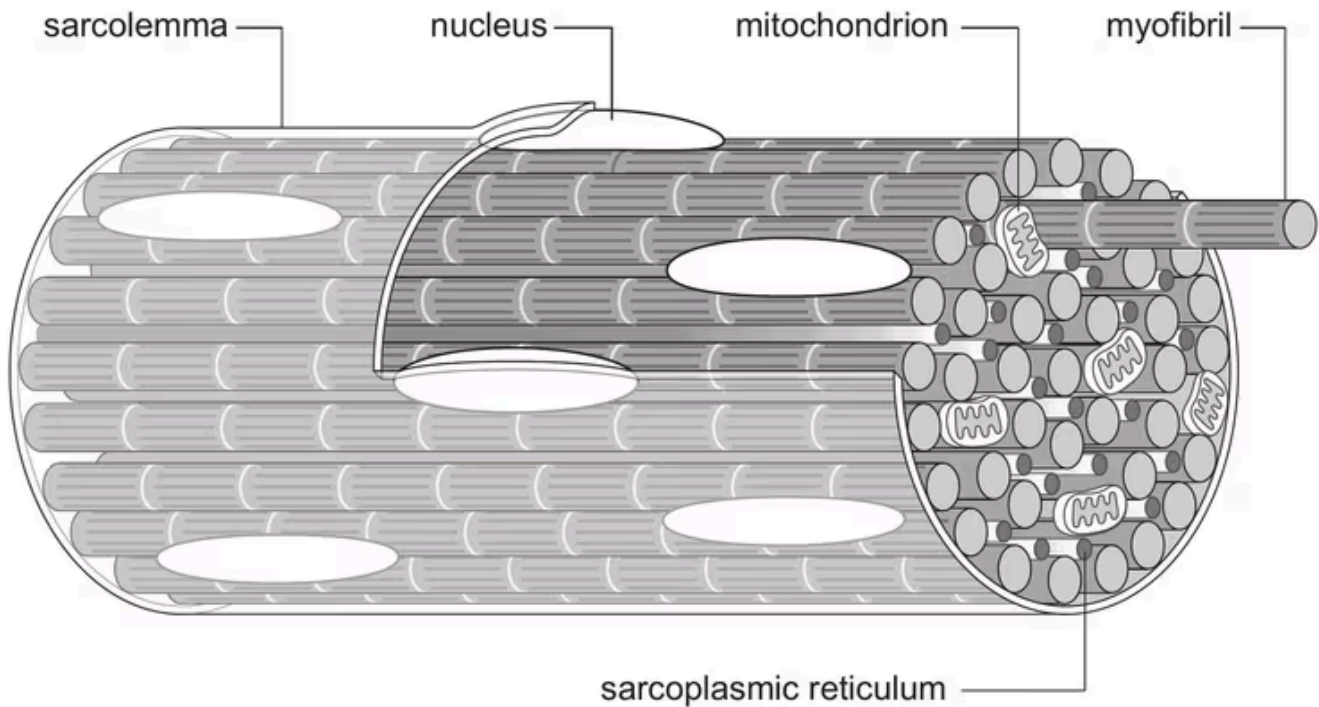


Anterior view

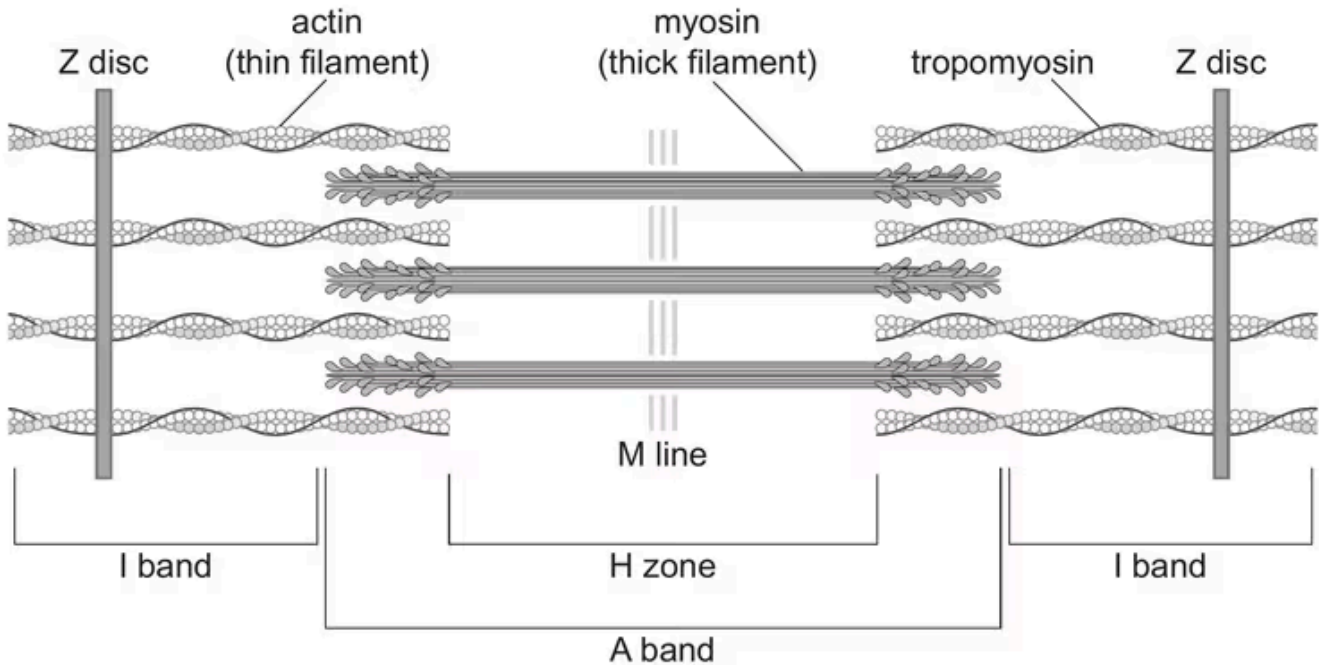


Posterior view

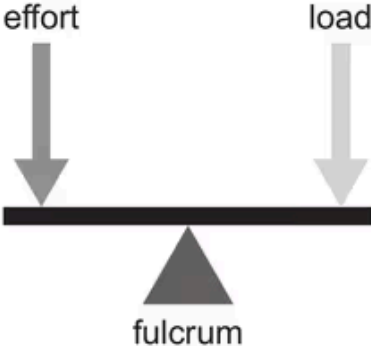
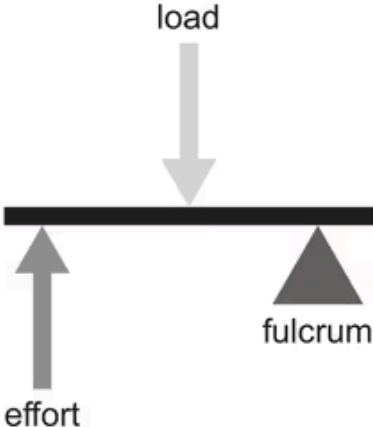
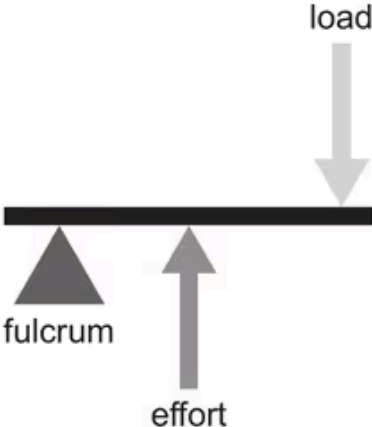
10. Muscle fibre



11. Sarcomere in a relaxed myofibril



12. Classes of lever

<i>first-class lever</i>	<i>second-class lever</i>	<i>third-class lever</i>
		

13. Metric (SI) multipliers

Prefix	Abbreviation	Value
mega	M	10^6
kilo	k	10^3
hecto	h	10^2
deca	da	10^1
deci	d	10^{-1}
centi	c	10^{-2}
milli	m	10^{-3}
micro	μ	10^{-6}
nano	n	10^{-9}
pico	p	10^{-12}

14. Unit conversion and constants

- 1 hour = 60 minutes = 3600 seconds
- 1 litre = 1 dm^3
- 1 joule = 0.239 calories
- Acceleration due to gravity on Earth (g) = 9.81 ms^{-2}

15. Equations of motion and mechanics

(a) Motion and mechanics

Speed	$s = \frac{d}{t}$
Acceleration	$a = \frac{(v-u)}{t}$
Linear velocity	$v = \frac{\Delta s}{\Delta t}$
Angular velocity	$v = \frac{2\pi r}{T} = \omega r$
Force and weight	$F = ma = \frac{\Delta p}{\Delta t}$ $F_g = mg$
Impulse	$J = F\Delta t$
Linear momentum	$p = mv$
Coefficient of restitution	$C_R = \frac{v_b - v_a}{u_a - u_b}$
Coefficient of static friction	$F_f \leq \mu_s F_N$
Coefficient of dynamic friction	$F_f = \mu_d F_N$

(b) Energy, work and power

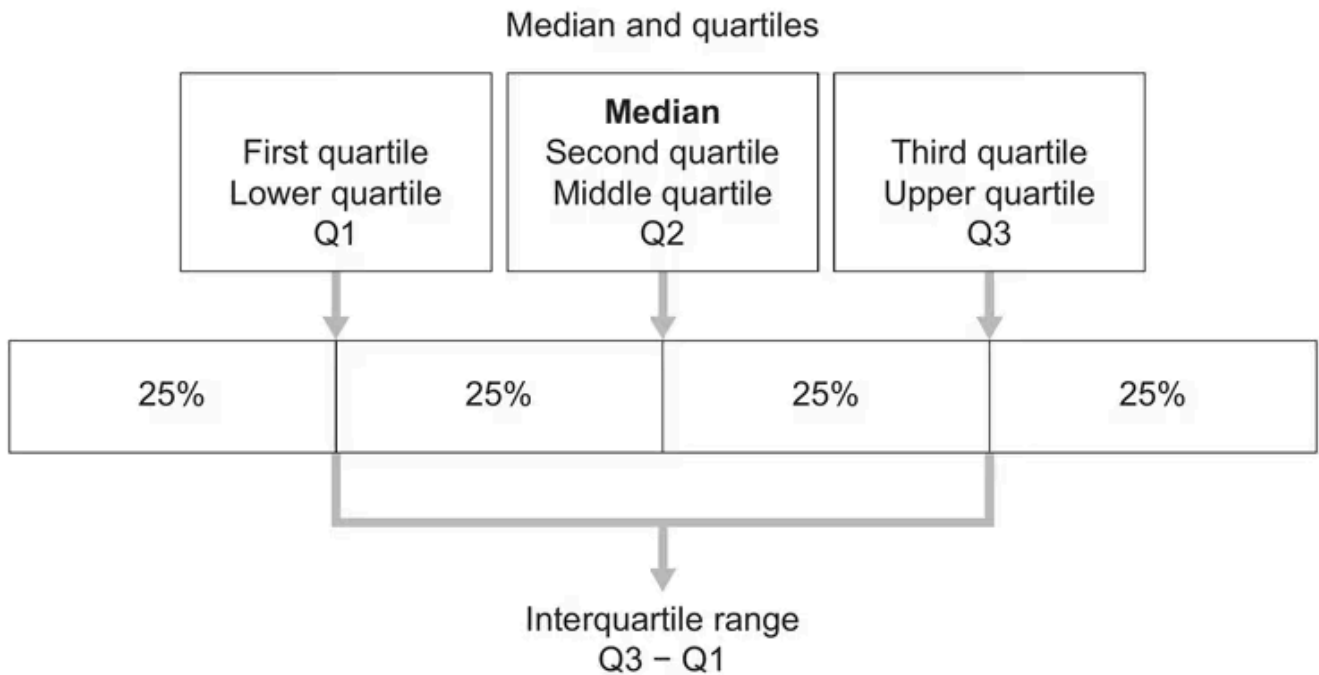
Work done	$W = Fd$
Power	$P = \frac{\Delta W}{\Delta t} = Fv$

16. Uncertainties

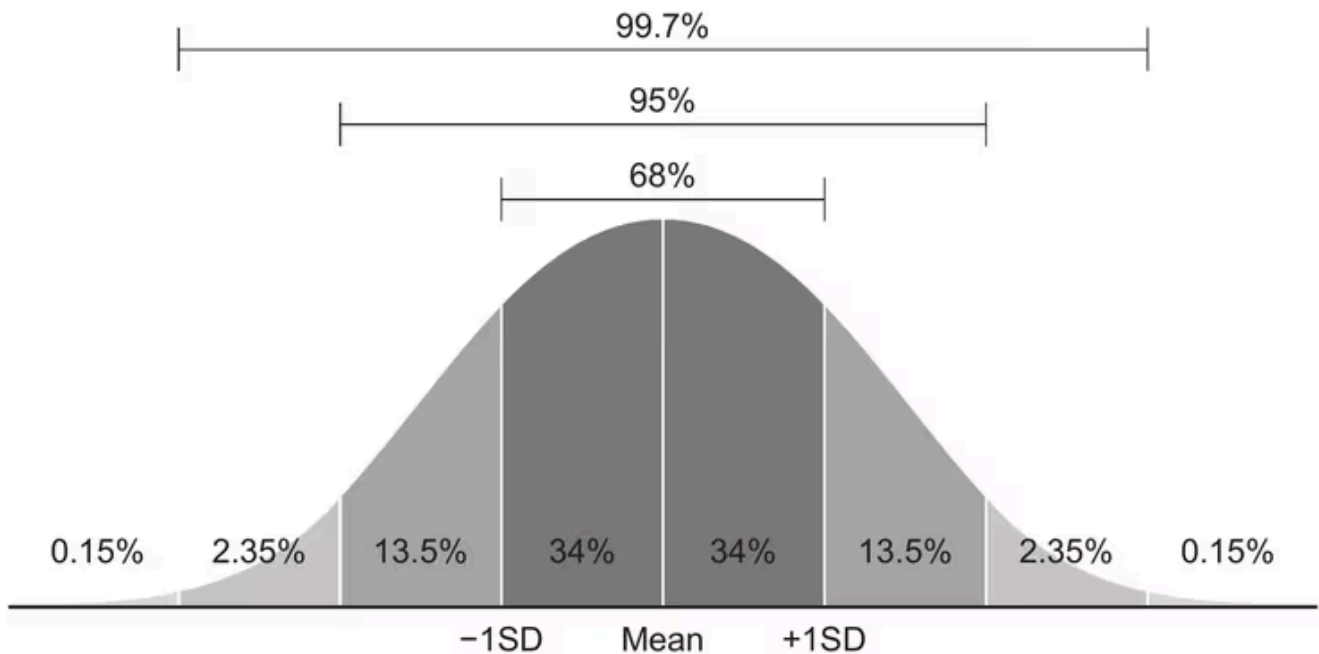
If: $y = a \pm b$	then: $\Delta y = \Delta a + \Delta b$
If: $y = \frac{ab}{c}$	then: $\frac{\Delta y}{y} = \frac{\Delta a}{a} + \frac{\Delta b}{b} + \frac{\Delta c}{c}$
If: $y = a^n$	then: $\frac{\Delta y}{y} = \left n \frac{\Delta a}{a} \right $

17. Variation in data sets

Interquartile range



Standard deviation



Coefficient of variation, V

$$V = \frac{100 \times SD}{\text{mean}}$$