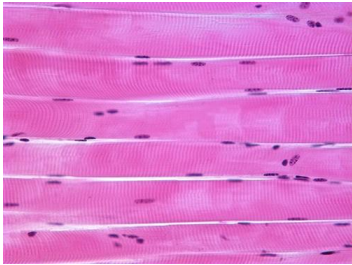
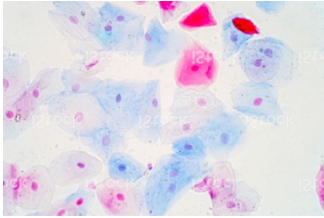
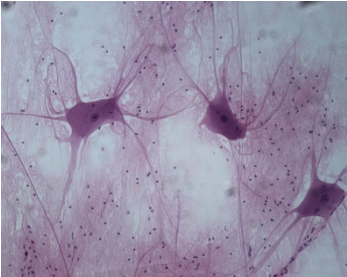
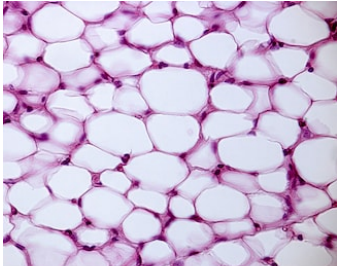


Tissue Investigation SOLUTIONS



Procedure:

1. Find a microscope image of the 4 different types of tissue (epithelial, muscular, connective, & nervous tissue). Sketch the tissues.
2. Describe the appearance of the tissue you examined in your own words beside the sketch.

Tissue Sketches			
Tissue: Muscular (skeletal) 	Description: <ul style="list-style-type: none"> - Long - Skinny - Strands - Striped/ striations 	Tissue: Epithelial (squamous) Cheek cells 	Description <ul style="list-style-type: none"> - Irregular shape - Randomly placed - Overlapping - Thin
Tissue: Nervous 	Description <ul style="list-style-type: none"> - Large center - Thin strands coming out - Many projections 	Tissue: Connective (fat) 	Description <ul style="list-style-type: none"> - Large - Round - Blob-like - A lot of empty space in cells

Analysis & Conclusions:

1. For **each** of the four general tissue types you examined, **explain** how the **structure** (shape, density, arrangement, extracellular material, etc.) is related to its **function**.

Epithelial	Thin, flat, multilayered, easily replaced if/when damaged. Minimized damage to a few small cells rather than 1 large cell like body armour. Can shed cells easily if damaged.
Muscle	Long, thin, bundled together. Can contract + stretch to produce + allow for movement. Can have a few or many work together to increase from if needed.
Nerve	Long, thin, branched to allow for many connections and increase contact/communication with many cells at once.
Connective Tissue	Various structures due to wide variety of function. Pick 1 to outline here.

2. Squamous epithelial cells are very susceptible to cancer. Provide a *hypothesis* (a theory with explanation) for this observation.

They are the cells exposed to the environment. They contact more carcinogens.

3. Correctly identify the role of the major tissue types and enter the appropriate letter in the box.

C	Forms membranes	M	Its cells shorten to exert force
M	Allows for the movement of limbs and for organ movements within the body	E	Forms endocrine (hormone) and exocrine (ie salivary, mucous) glands
N	Uses electrochemical signals to carry out its function	M	Allows you to smile, grasp, and swim, ski and throw a ball
C	Supports and reinforces body organs	C	Surrounds and cushions body organs
E	Cells of this tissue may absorb and/or secrete substances	C	Forms the bone
N	Basis of the major controlling system of the body	N	Forms the brain and spinal cord