

Epithelial Tissues:

Cell Arrangement	Shape	Description	Function	Location
Simple	Squamous	<ul style="list-style-type: none"> • Flat • Irregular Shape • Oval Nuclei • Single Layer 	<ul style="list-style-type: none"> • Diffusion • Filtration 	<ul style="list-style-type: none"> • Air sacs of lungs (Alveoli) • Blood vessels of kidneys
	Cuboidal	<ul style="list-style-type: none"> • Cube-shaped cell • Round nuclei • Single Layer 	<ul style="list-style-type: none"> • Secretion • Absorption 	<ul style="list-style-type: none"> • Kidney tubules • Ovary surface
	Columnar	<ul style="list-style-type: none"> • Tall & thin cells • Oval nuclei • Single layer 	<ul style="list-style-type: none"> • Secretion • Absorption 	<ul style="list-style-type: none"> • Small intestine
	Pseudostratified	<ul style="list-style-type: none"> • Jumbled layers of nuclei • Often with goblet cells and cilia 	<ul style="list-style-type: none"> • Secretion • Absorption 	<ul style="list-style-type: none"> • Respiratory passages (nasal cavity, trachea, & bronchi)
Stratified	Squamous	<ul style="list-style-type: none"> • 2-3 layers • Cuboidal at the base • Squamous at the surface • Outermost cells without nuclei 	<ul style="list-style-type: none"> • Protection from abrasion 	<ul style="list-style-type: none"> • Skin • Mouth
	Cuboidal	n/a – not covered in our book		
	Columnar	n/a – not covered in our book		
	Transitional	<ul style="list-style-type: none"> • Five or more layers of different shaped cells • Dome-shaped at free surface • As stretched, cells flatten 	<ul style="list-style-type: none"> • Stretches • Protects underlying structures from caustic effects of urine 	<ul style="list-style-type: none"> • Urinary bladder
	How Secreted			
Glands	Exocrine	<ul style="list-style-type: none"> • Secrete products into ducts 	<ul style="list-style-type: none"> • Several types: <ul style="list-style-type: none"> ○ Unicellular - goblet cells in mucous membranes ○ Simple tubular – sweat glands & stomach glands ○ Simple acinar (or alveolar) – sebaceous glands ○ Compound tubular – duodenal glands ○ Compound acinar (or alveolar) - pancreas 	
	Endocrine	<ul style="list-style-type: none"> • Secrete directly into blood & body fluids 	<ul style="list-style-type: none"> • Secretions are called hormones 	

Connective Tissues:

Type		Description	Function	Location
Loose (Areolar)		<ul style="list-style-type: none"> • Gel-like matrix • Contains fibroblasts, collagen & elastic fibers 	<ul style="list-style-type: none"> • Diffusion • Cushions organs (fills spaces) 	<ul style="list-style-type: none"> • Beneath epithelial tissue
Adipose		<ul style="list-style-type: none"> • Contains collagen & elastic fibers • Nuclei pushed to the side • Irregular shaped 	<ul style="list-style-type: none"> • Fat (energy) storage • Pads & protects parts of the body • Acts as a thermal insulator 	<ul style="list-style-type: none"> • Beneath skin • Around joints • Around internal organs
Cartilage	Hyaline	<ul style="list-style-type: none"> • White • Abundant collagen fibers 	<ul style="list-style-type: none"> • Support 	<ul style="list-style-type: none"> • Ends of bones • Respiratory passages • Tip of nose
	Elastic	<ul style="list-style-type: none"> • Matrix of elastic fibers 	<ul style="list-style-type: none"> • Shape maintenance • Flexibility 	<ul style="list-style-type: none"> • Outer ear • Parts of larynx
	Fibrocartilage	<ul style="list-style-type: none"> • Abundant collagen fibers • Tough 	<ul style="list-style-type: none"> • Shock-absorption 	<ul style="list-style-type: none"> • Intervertebral disks • Knees • Pelvic girdles
Bone		<ul style="list-style-type: none"> • Rigid • Contains mineral salts & collagen 	<ul style="list-style-type: none"> • Support • Protection • Forms muscle attachments • Blood cell formation 	<ul style="list-style-type: none"> • Throughout body: skeleton
Blood		<ul style="list-style-type: none"> • Contains 3 components: red cells, white cells, and platelets in liquid plasma 	<ul style="list-style-type: none"> • Transportation of: <ul style="list-style-type: none"> ○ Nutrients ○ Wastes ○ Gases 	<ul style="list-style-type: none"> • Heart • Blood vessels

Muscle Tissues:

Type	Type of Control	Description	Function	Location
Skeletal	Voluntary	<ul style="list-style-type: none"> • Long, thin fibers with many nuclei and striations 	<ul style="list-style-type: none"> • Move bones 	<ul style="list-style-type: none"> • Attached to bones
Smooth	Involuntary	<ul style="list-style-type: none"> • Spindle shaped cells with one centrally located nucleus, lacks striations 	<ul style="list-style-type: none"> • Move substances through passageways (i.e. food, urine, etc.) • Constriction of blood vessels 	<ul style="list-style-type: none"> • Walls of visceral hollow organs • Irises of eyes • Walls of blood vessels
Cardiac	Involuntary	<ul style="list-style-type: none"> • A network of striated cells with one centrally located nucleus attached by intercalated disks 	<ul style="list-style-type: none"> • Pump blood to lungs & body 	<ul style="list-style-type: none"> • heart

Nervous Tissues:

Type	Description	Function	Location
Nervous	Consists of neurons & support cells (neuroglia) Nerve Cells – consist of cell body, axons, & dendrites	<ul style="list-style-type: none"> • conduct electrical signals for coordination & control of many body activities 	<ul style="list-style-type: none"> • brain • spinal column • nerves