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A concise cheat sheet summarizing key aspects of special senses, endocrine, reproductive, and respiratory systems in human anatomy. Perfect for quick review and study.

Special Senses: Vision & Hearing

Vision: Eye Structure

Cornea:	Transparent outer layer; refracts light.
Iris:	Colored part; controls pupil size.
Pupil:	Opening in the iris; allows light to enter.
Lens:	Focuses light onto the retina.
Retina:	Inner layer containing photoreceptors (rods & cones).
Rods:	Sensitive to dim light; black & white vision.
Cones:	Sensitive to bright light; color vision.
Optic Nerve:	Transmits visual information to the brain.

Hearing: Ear Structure

Outer Ear:	Pinna (auricle) and auditory canal; collects sound waves.
Middle Ear:	Tympanic membrane (eardrum) and ossicles (malleus, incus, stapes); amplifies sound.
Inner Ear:	Cochlea (hearing) and vestibular system (balance).
Cochlea:	Contains hair cells that transduce sound vibrations into electrical signals.
Vestibular System:	Semicircular canals and otolith organs; detect head position and movement.
Auditory Nerve:	Transmits auditory information to the brain.

Other Special Senses

Taste (Gustation): Taste buds on the tongue detect different tastes (sweet, sour, salty, bitter, umami).

Smell (Olfaction): Olfactory receptors in the nasal cavity detect odors.

Touch (Somatosensation): Receptors in the skin detect pressure, temperature, pain, and position.

Endocrine System: Hormones & Glands

Key Endocrine Glands

Pituitary Gland:	Master gland; secretes hormones that regulate other glands.
Thyroid Gland:	Regulates metabolism; secretes thyroxine (T4) and triiodothyronine (T3).
Parathyroid Glands:	Regulate calcium levels; secretes parathyroid hormone (PTH).
Adrenal Glands:	Produce cortisol (stress hormone) and aldosterone (regulates sodium and potassium).
Pancreas:	Secretes insulin (lowers blood sugar) and glucagon (raises blood sugar).
Ovaries (Female):	Produce estrogen and progesterone; regulate menstrual cycle and reproduction.
Testes (Male):	Produce testosterone; regulates male sexual development and reproduction.

Hormone Types & Action

Steroid Hormones: Lipid-soluble; bind to intracellular receptors (e.g., estrogen, testosterone, cortisol).

Peptide Hormones: Water-soluble; bind to cell surface receptors (e.g., insulin, growth hormone).

Hormone Action: Hormones travel through the bloodstream to target cells, where they bind to receptors and trigger cellular responses.

Endocrine Disorders

Diabetes Mellitus: Insulin deficiency or resistance; high blood sugar.

Hyperthyroidism: Overactive thyroid; high metabolism.

Hypothyroidism: Underactive thyroid; low metabolism.

Reproductive System: Male & Female

Male Reproductive System

Testes:	Produce sperm and testosterone.
Epididymis:	Stores and matures sperm.
Vas Deferens:	Transports sperm to the ejaculatory duct.
Seminal Vesicles:	Secrete fluid that nourishes sperm.
Prostate Gland:	Secretes fluid that protects sperm.
Urethra:	Transports semen and urine.
Penis:	Male reproductive organ.

Female Reproductive System

Ovaries:	Produce eggs and estrogen/progesterone.
Fallopian Tubes:	Transport eggs to the uterus; site of fertilization.
Uterus:	Site of implantation and fetal development.
Cervix:	Lower part of the uterus; connects to the vagina.
Vagina:	Female reproductive canal.

Gametogenesis

Spermatogenesis: Production of sperm in the testes.

Oogenesis: Production of eggs in the ovaries.

Respiratory System: Gas Exchange

Respiratory Structures

Nasal Cavity:	Filters, warms, and moistens air.
Pharynx:	Throat; passageway for air and food.
Larynx:	Voice box; contains vocal cords.
Trachea:	Windpipe; transports air to the lungs.
Bronchi:	Branch into the lungs.
Lungs:	Main organs of respiration; contain alveoli.
Alveoli:	Air sacs where gas exchange occurs.

Gas Exchange

Oxygen: Diffuses from alveoli into blood.
Carbon Dioxide: Diffuses from blood into alveoli.

Breathing Mechanics

Inspiration (Inhalation): Diaphragm contracts, chest cavity expands.
Expiration (Exhalation): Diaphragm relaxes, chest cavity decreases.