

Medical terminology 2

Pathologist/medical examiner/coroner

- **Pathologist** specialist in pathology, a physician who interprets and diagnoses the changes caused by disease in tissues and body fluids.
- **A medical examiner** (M.E) is a pathologist who specializes in forensic (legal) medicine related to criminal issues.
- **Coroner** is an elected official (administrator) who investigates any suspicious death this official may or may not be a medical examiner.

- **Medical Examiner**

- A licensed physician in the state in which she/he practices forensic pathology and has been hired by the jurisdiction to investigate sudden and unexpected deaths

- **Coroner**

- An elected official in the jurisdiction who investigates sudden and unexpected deaths. May or may not be a physician

Suffixes

SUFFIX	MEANING	MEDICAL TERM	MEANING
-al	pertaining to	neural _____	
-algia	pain	arthralgia _____	
-cyte	cell	leukocyte _____	
-ectomy	cutting out; removal, excision	gastrectomy _____ <i>In a partial or subtotal gastrectomy, only a portion of the stomach is removed.</i>	
-emia	blood condition	leukemia _____ <i>Large numbers of immature, cancerous cells are found in the bloodstream and bone marrow (inner part of bone that makes blood cells).</i>	
-globin	protein	hemoglobin _____	
-gram	record	arthrogram _____ <i>This is an x-ray record of a joint.</i>	

Suffixes

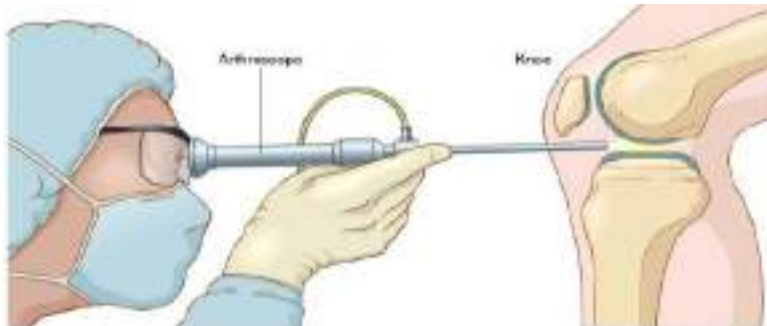
-ia	condition	neuralgia _____
-ic	pertaining to	gastric _____
-ism	condition, process	hyperthyroidism _____ <i>HYPER- means excessive. The thyroid gland is in the neck. It secretes the hormone thyroxine, which helps cells burn food to release energy. See Figure 1-10.</i>
-itis	inflammation	gastroenteritis _____
-logist	specialist in the study of	neurologist _____
-logy	study of	nephrology _____ <i>See Table 1-2 on page 16 for a list of other terms using -LOGY.</i>
-oma	tumor, mass	hepatoma _____ <i>This is a cancerous (malignant) tumor, also called hepatocellular carcinoma.</i>

Terms using logy – study of

cardiology	Study of the heart
dermatology	Study of the skin
endocrinology	Study of the endocrine glands
gastroenterology	Study of the stomach and intestines
gynecology	Study of women and women's diseases
hematology	Study of the blood
neurology	Study of the nerves and the brain and spinal cord
oncology	Study of tumors (cancerous or malignant diseases)
ophthalmology	Study of the eye
pathology	Study of disease
psychology	Study of the mind and mental disorders
rheumatology	Study of joint diseases (RHEUMAT/O = flow or watery discharge, which was once thought to cause aches and pains, especially in joints)


Terms using logy – study of

-scope	instrument to visually examine	gastro <u>scope</u> _____ laparo <u>scope</u> _____
-scopy	process of visual examination	laparo <u>scopy</u> _____ <i>Small incisions are made near the navel, and instruments are inserted into the abdomen for viewing organs and performing procedures such as tying off the fallopian or uterine tubes.</i> arthro <u>scopy</u> _____
-sis	state of	_____
-tomy	process of cutting into; incision	neuro <u>tomy</u> _____



Arthroscopy of the knee. A surgeon (orthopedist) performs an arthroscopic examination to make a diagnosis or treat disease of the joints.


Prefixes

PREFIX	MEANING	MEDICAL TERM	MEANING
a-, an-	no, not	<u>anemia</u> 	<hr/> <i>Literally, anemia means a condition of “no blood.” Actually, it is a decrease in the number of red blood cells or a decrease in their ability to carry oxygen resulting from less hemoglobin, a protein that helps carry oxygen in red blood cells.</i>
aut-	self	<u>autopsy</u>	<hr/> <i>Viewing and examining a dead body with one’s own (self) eyes. Here the root OPS- (viewing) is embedded in the suffix -OPSY (process of viewing).</i>

Prefixes

dia-	complete, through	<u>diagnosis</u> _____ <i>In this term, DIA- means complete.</i>
		<u>diameter</u> _____ <i>The suffix -METER means measurement. DIA- means through in this term.</i>
dys-	bad, painful, difficult, abnormal	<u>dysentery</u> _____ <i>The suffix -Y means condition or process.</i>
endo-	within	<u>endocrine glands</u> _____ <i>CRIN/O means to secrete (to form and give off). Examples of endocrine glands are the thyroid gland, pituitary gland, adrenal glands, ovaries, and testes. All of these glands secrete hormones within the body and into the bloodstream.</i>
		<u>endocardium</u> _____ <i>The valves and chambers within the heart are lined with endocardium. The suffix -UM indicates a structure.</i>


Prefixes

exo-	outside	<u>exocrine glands</u> _____ <i>Examples of exocrine glands are sweat, tear, and mammary (breast) glands, which secrete substances to the outside of the body.</i>
hyper-	excessive, more than normal, too much	<u>hyperglycemia</u> _____ <i>GLYC/O means sugar. Hyperglycemia may be a sign of diabetes mellitus. Mellitus means “sweet.” </i>
hypo-	below, less than normal, under	<u>hypoglycemia</u> _____ <i>This condition results from too much insulin in the bloodstream. Symptoms are weakness, headache, and hunger.</i>
peri-	surrounding	<u>pericardium</u> _____

Hyperglycaemia and diabetes

- People with hyperglycaemia lack insulin (type 1 diabetes) or have ineffective insulin (type 2 diabetes). Insulin is hormone normally released by the pancreas, an endocrine gland near the stomach.
- Insulin allows sugar to leave the bloodstream and enter cells.
- When insulin is either absent or not working, sugar remains in blood, resulting in hyperglycaemia and diabetes.

Prefixes

pro-	before, forward	<u>prostate gland</u> _____ <i>This exocrine gland “stands” (-STATE) before or in front of the urinary bladder (see Figure 1-2, page 7) in males.</i>
re-	back	<u>resection</u> _____ <i>-SECTION means cutting into an organ, but RESECTION means removing some or all of an organ in the sense of cutting back or away. The Latin resectio means “a trimming or pruning.”</i>
retro-	behind	<u>retrogastric</u> _____
sub-	below, under	<u>subhepatic</u> _____
trans-	across, through	<u>transdermal</u> _____ <u>transurethral</u>  _____ <i>The urethra is a tube that leads from the urinary bladder to the outside of the body.</i>

Transurethral resection of the prostate gland

- This is a surgical procedure to remove noncancerous (benign) growth of prostate gland. Pieces of the enlarged gland are removed through the urethra

Clinical case (living with a particular medical condition)

Jake Sheldon is a 14-year-old boy who has type 1 diabetes mellitus, which was diagnosed when he was 8. The following narrative was written by his mother, Ruthellen Sheldon.

TEXT

On school days, I wake Jake up at 6:30 AM. He tests his blood sugar by pricking his finger until it bleeds, and then sticks a test strip into the drop of blood. Then he inserts the strip into a small hand-held glucometer and waits 3 to 5 seconds for a reading of his blood sugar. If this is 120 mg/dL or higher, he gives himself insulin 10 to 15 minutes before breakfast. I calculate how many carbohydrates (by reading labels and measuring food quantities precisely) he will have in his breakfast so that he can bolus [give himself enough insulin to cover the food he will eat] correctly. He has an insulin pump, so he types in the amount of carbohydrates he will eat, plus his current blood sugar reading. The pump calculates how much insulin he needs to cover the carbs and any extra insulin he may need to bring down a high blood sugar. If Jake's blood sugar is less than 120 mg/dL when he wakes up, he will wait until he takes his first bite of food to give himself his insulin to avoid hypoglycemia.

Clinical case

As I make his lunch, I count carbs and place an index card in his lunch to help him calculate his lunchtime bolus. Before lunch, Jake checks his blood sugar in the classroom and self-administers his insulin via his insulin pump.

Throughout the school day, if his blood sugar is high or low, he visits the nurse. I worry about his exposure to all the sick kids at school when he visits the nurse. If it's high, he gives himself an insulin bolus, or correction, by pump, he drinks water and then checks his urine for ketones, which may indicate ketoacidosis. If it is positive for ketones, he is sent home from school. If his blood sugar is low or less than 70, he eats or drinks some fast-acting sugar (Skittles, Smarties, or Sprite) and waits in the healthroom for his blood sugar to rise so he can return to class. He misses a lot of classroom time to manage his diabetes.

Clinical case

During the night, his dad and I set an alarm to wake up around 3 hours after bedtime. If his blood sugar is high while he sleeps, we use his pump to give him extra insulin, “a correction.” If it is low, we wake him and have him drink Sprite or eat Smarties. If his blood sugars are high or low, we often check him again a few hours later until his numbers are in range. Even if his numbers are stable, it’s not a guarantee that he won’t drop suddenly and have a seizure (this happened once after we had tested him at 11 PM and 2 AM and he was steady). The pump is connected to his body with a small cannula [tube]. It is inserted manually through a needle into his hip region. The needle is then removed and the tiny Teflon cannula remains in his body, delivering fast-acting insulin under the skin. His pump is always connected to him with plastic tubing, and he carries it with him in his pants pocket. When he bathes, he can disconnect the pump, and when he sleeps, he places it on the mattress next to his body.

Clinical case

His body naturally rejects the Teflon cannula, so after 2 days Jake must change his pump site, or his blood sugar numbers will start to rise. Although changing the pump site is time-consuming and expensive, a bad site means that not enough insulin is getting into his body, which can quickly spiral into stomach pains and DKA [diabetic ketoacidosis].

When Jake is playing sports, he times his meals with the start of the activity so his blood sugar is around 150 mg/dL. He disconnects his pump during sports, and at halftime he tests his blood sugar. If it is low, he needs to eat. If it is high, he needs to reconnect his pump and administer more insulin. After sports, his blood sugar usually spikes because of an adrenaline rush and then may crash 3 to 10 hours later. This is unpredictable, so it takes guesswork to keep his blood sugar in range after a sports game or practice. If he has an evening practice, sometimes his blood sugar can even be low at school the next day.

Clinical case

In general, Jake's diabetes doesn't disrupt his life other than for his nighttime checks, wearing an insulin pump, and paying attention to how many carbs he eats. We encourage him to make good nutritional choices and to limit certain foods (doughnuts, Slurpees, candy) to special occasions. He also must carry a glucometer with him at all times and a sugar to take when his blood glucose is low.

Having a child with diabetes forces me to carefully plan the preparation and timing of meals. I always have certain foods and medical supplies in the house, and I also carry snacks and sugar sources wherever I go. I am always available to Jake and to the school nurse. My husband and I hope that keeping Jake's blood sugar in tight control will help avoid many of the complications frequently encountered later in life by people with type 1 diabetes.

Thank you