

GLOSSARY OF TERMS

TERM	DEFINITION
24-hour urine	does not mean "23 hours" / a collection of ALL urinations within a 24 hour period / a key to determining kidney health
acidosis	When a substance is too acidic. If the blood is too acidic it can lead to hypercalcemia
acquired	arising in response to an act of the environment on an organism
aemia (prefix)	"of the blood"
albumin	A protein that coagulates with heat or is dissolvable in water. Present in blood, but a good example of albumin is egg-whites
alkalosis	When a substance is too alkaline (the opposite of acidic). In the blood this can lead to hypocalcemia
anemia	condition where the blood doesn't have enough red blood cells, hemoglobin, or blood volume
antibodies	produced in response to an antigen to bond with and neutralize that antigen / the body's way of destroying foreign invaders
antigen	any substance foreign to the body that invokes an immune response and can be bound to an antibody / foreign invader
autocrine	a substance of a cell that acts on that cell
autoimmune	a state in which the body produces an inappropriate immune response against its own tissues
basal ganglion	any of the four deeply placed areas of grey matter in each hemisphere of the brain
bone turnover	the process of existing bone being broken down to free up calcium and then new bone being built up to replace it and that bone becoming calcified
calcilytic	over-reduces the effect of calcium sensing receptors; increases PTH function
calcimimetic	over-increases the effect calcium sensing receptors; reduces PTH function
calcitonin	the hormone responsible for decreasing levels of calcium in the blood
Calcitriol	"1,25 dihydroxycholecalciferol", "Vitamin D 1,25", "activated vitamin D" - The body makes calcitriol in the presence of vitamin D2/3 and parathyroid hormone. Calcitriol stimulates the absorption of calcium in the intestines.
Calcium	A mineral stored in the teeth and bones. Calcium is necessary for nerve function, muscle contraction, and elasticity of blood vessels. The calcium levels in the blood are regulated by calcitonin and parathyroid hormone
carbonate	"bound to carbon" - calcium carbonate is more alkaline and thus must be taken with food
CaSR	<u>C</u> alcium <u>S</u> ensing <u>R</u> eceptor - in the parathyroid gland, the Calcium Sensing Receptor receives messages that tell the gland if there is not enough calcium in the blood (hypocalcemia), which then triggers the parathyroid gland to release parathyroid hormone
cataracts	a clouding of the lens of the eye that obstructs light

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Chvostek's sign	A spasm of the facial muscle triggered by tapping the cheek. A sign of hypocalcemia. Chvostek's sign is a form of tetany
citrate	"bound to citric acid" - calcium citrate is more acidic and does not need to be taken with food
comorbidity	More than one condition occurring simultaneously in one individual. E.g., having hypertension and hypoparathyroidism
condition	a usually defective state of health, but more accurately, a situation or mode of being
constipation	abnormally delayed or infrequent passage of, usually, dry/hardened feces
DiGeorge Syndrome	A condition resulting from a congenital deletion of a section of the 22nd chromosome. Part of the syndrome is an autoimmune hypoparathyroidism. Other aspects include <u>c</u> ardiac abnormality, <u>a</u> bnormal facial expression, <u>t</u> hymic aplasia (underdeveloped thymus gland), <u>c</u> left palate, and <u>h</u> ypocalcemia ["CATCH 22"]
disease	an impairment of the normal state of a being or part of a being that interrupts or modifies the performance of its vital functions, usually due to environmental factors, infective agents, or to defects of the organism, or a combination of same
disorder	an abnormal physical or mental condition
eGFR	(estimated Glomerular Filtration Rate) a blood test that estimates the kidneys ability to filter effectively
electrolytes	Substances vital to the conduction of electricity in the body, as in the brain. E.g., calcium, chloride, bicarbonate, sodium, potassium
elemental calcium	the amount of a calcium compound (such as carbonate or citrate) that is made of actual calcium
enamel hypoplasia	under formation of the enamel of teeth; seen as white spots, yellow spots or other deformities on the tooth
endocrine	referring to hormones and the glands that secrete them
etiology	the science of cause or causation
gland	a specialized cell, group of cells or organ that selectively removes things from the blood, then possibly altering them, and secreting them for further use in the body
goiter	swelling of the thyroid tissue causing a visible mound on the throat
heterogeneous	of a different type
homeostasis	the body's directive to maintain a stable internal environment in the face of factors that would make it unstable
homogenous	of the same type
hormone	a messenger cell whose role it is to cause a change in another cell, group of cells, or an organ

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hyper (prefix)	high amount
hypercalcemia	high levels of calcium in the blood
hypercalciuria	too much calcium in the urine
hypermagnuria	high amount of magnesium in the urine
hypo (prefix)	low amount
hypocalcaemia	low levels of calcium in the blood
hypomagnesaemia	low levels of magnesium in the blood
hypomineralization	insufficient mineralization; that is, not enough minerals supporting or hardening a structure such as tooth or bone
hypothesis	an idea that that be proved or disproved by comparing it with observed facts - every research study begins with a hypothesis
idiopathic	rising from an unknown cause
ionized calcium	Measurement of the charged calcium in your blood; part of the body's electrical system. Serum calcium, in contrast, does not distinguish between the electrically charged calcium, and the non-charged calcium.
ischemia	insufficient blood supply to a body part
ism (suffix)	a state or condition of
laryngospasm	involuntary muscle contractions in the larynx (voice box) - manifests commonly as "raspy voice"
magnesium	A mineral in the body responsible for muscle contraction and nerve function. A low magnesium increases the likelihood of tetany.
malabsorption	faulty absorption of nutrients
MCG	microgram / one millionth of a gram
MG	milligram
nephrocalcinosis	calcification of the tissue of the kidney
nephrolithiasis	the condition of having kidney stones
orphan product/disease	An orphan disease is a disease too rare to attract pharmaceutical companies to try to market a treatment. E.g. Hypoparathyroidism
osis (suffix)	state of disease

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osteoblast	cells that build bone
osteoclast	cells that chew up bone
osteopenia	a reduction in bone volume, below normal, but less severe than osteoporosis
osteoporosis	"porous bone" - a state in which bone is brittle or porous and thus more prone to fracture
paracrine	a substance of a cell that acts on nearby cells
parathyroid hormone	the hormone responsible for increasing levels of calcium in the blood
paresthesia	a sensation of tingling, prickling or numbing in a patient's skin, aka "pins and needles"
pharmacokinetics	study of the process of absorption, distribution, metabolism, and elimination from the body
phosphates	compounds containing phosphoric acid: cola being an example
phosphorous	A nonmetallic element in the blood. When phosphorous levels are high, calcium tends to be low
PO	by mouth
PRN	as needed
PTH	parathyroid hormone
PTH1-34	A recreation of parathyroid hormone featuring the first 34 amino acids of the molecule. An example being FDA-approved Forteo
PTH1-84	A recreation of parathyroid hormone featuring all 84 amino acids that comprise the molecule. An example being NPS Pharmaceutical's NPSP558
reabsorption	An action of the kidney that allows calcium to remain in the blood rather than be urinated out. Reabsorption is triggered by PTH
receptor	the specific receiver for a specific hormone, prevents hormones from affecting cells that they should not
recombinant DNA	genetic material built from scratch ("re-combined"); a manmade phenomenon
renal calculi	kidney stone
sequelae	the after effects of a disease; a secondary result
serum calcium	Measurement of the calcium in your blood. Differs from ionized calcium
sestamibi scan	a nuclear imaging test that can find overactive parathyroid tissue
sign	An objective evidence of disease, observable by a physician. I.e., rash, fever, Chvostek's sign, Trousseau's sign

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symptom	Subjective evidence of disease or physical disturbance as observed by a patient. I.e., headache
teriparatide	PTH1-34
tetany	the involuntary contraction of muscles, usually resulting from imbalance of calcium, phosphorus or magnesium
thyroid	controls energy metabolism and sensitivity to other hormones
Trousseau's sign	A cramping of the wrist/hand that occurs when the upper arm is compressed, as in when taking blood pressure. It is a sign of hypocalcemia or hypomagnesaemia
urinary calcium	The amount of calcium measured in urine. A means of determining kidney health
urinary citrate	The amount of citrate (citric acid) in the urine. A low urine citrate level can increase the chance of kidney stones