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Medical Encyclopedia: Serum chloride

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Definition

Serum chloride test measures the amount of chloride in serum, the fluid portion of the blood.

How the test is performed

Blood is drawn from a vein or capillary. The laboratory centrifuges the blood to separate the cells from the serum. The chloride test is done on serum.

How to prepare for the test

Your doctor may instruct you to withhold drugs that can affect the test, such as:

- Drugs that may increase serum chloride measurements include acetazolamide, ammonium chloride, androgens, cortisone, estrogen, guanethidine, methyl dopa, and NSAIDs.
- Drugs that may decrease serum chloride measurements include aldosterone, drugs containing bicarbonate, some diuretics, and triamterene.

Never stop taking medication unless instructed by your doctor.

Why the test is performed

Chloride (Cl⁻) is the major negative ion in the fluid outside the body's cells. Its main function is to maintain electrical neutrality, mostly as a counter-ion to sodium. Changes in the chloride level often accompany sodium losses and excesses.

Normal Values

Normal values may vary slightly from laboratory to laboratory. A typical normal range is 96 - 106 mEq/L.

Note: mEq/L = milliequivalents per liter

What abnormal results mean

Greater-than-normal levels may indicate:

- Respiratory alkalosis
- Metabolic acidosis due to GI bicarbonate loss
- Bromism (excess intake of bromide, usually with sub-standard anticonvulsants)
- Excess infusion of normal saline
- Carbonic anhydrase inhibitors

- Renal tubular acidosis

Lower-than-normal levels may indicate:

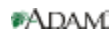
- Addison's disease
- Burns
- Chronic compensated respiratory acidosis
- Congestive heart failure
- Gastric suction or vomiting
- Over hydration
- Excessive sweating
- Salt-losing nephritis
- Syndrome of inappropriate ADH secretion
- Metabolic alkalosis

Additional conditions under which the test may be performed:

- Multiple endocrine neoplasia (MEN) II
- Primary hyperparathyroidism

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