Testosterone, Free and Total, Males (Adult), Immunoassay

CPT Code: 84270, 84403, 82040
Order Code: C942
Includes: Total Testosterone, % Free Testosterone (calculated), Free Testosterone (calculated), Sex Hormone Binding Globulin (SHBG) and Albumin)
ABN Requirement: No
Synonyms: % Free; Free Testosterone
Specimen: Serum
Volume: 2.0 mL
Minimum Volume: 1.0 mL
Container: Gel-barrier tube (SST, Tiger Top)

Collection:

1. Collect and label sample according to standard protocols.
2. Gently invert tube 5 times immediately after draw. DO NOT SHAKE.
3. Allow blood to clot 30 minutes.
4. Centrifuge for 10 minutes.

Note: All test requests for Total Testosterone on female and pediatric (<18 years) patients must use MS method. For free and total testosterone assessment on female and pediatric patients, the recommended alterative is test code 1300 – Testosterone, Free (Dialysis) and Total (MS).

Patient Preparation: Due to changes in testosterone levels throughout the day, two morning (8:00-10:00 a.m.) specimens obtained on different days are recommended by The Endocrine Society for screening.

Special Instructions: Samples should not be taken from patients receiving therapy with high biotin doses (>5 mg/day), until at least 8 hours following the last biotin administration.

Transport: Store serum at 2°C to 8°C after collection and ship the same day per packaging instructions included with the provided shipping box.

Stability:

Ambient (15-25°C): Not Acceptable
Refrigerated (2-8°C): 5 days
Frozen (-20°C): 1 month

Causes for Rejection: Specimens other than serum; improper labeling; samples not stored properly; samples older than stability limits; gross hemolysis; gross lipemia

Methodology: Immunoassay, Colorimetric Assay, Calculation

Turn Around Time: 1 to 3 days

Reference Range:

	Male ≥18 years old
Free Testosterone	4.5-25.0 ng/dL
% Free Testosterone	1.1-3.0%

	Age/Stage	ng/dL
Total Testosterone	18-49 years	249-836
Total Testosterone	≥50 years	193-740

Clinical Significance: Total testosterone circulates primarily as protein-bound (approximately 60% bound to sex hormone binding globulin (SHBG) and 50% to albumin). Only 2-3% exists in free, biologically-active form. Testosterone is weakly bound to albumin and can be reversed easily, therefore albumin-bound and free testosterone are considered to be bioavailable testosterone. The highest testosterone level peaks at 30 to 40 years of age, in adult men. The levels start to decline steadily after the fourth or fifth decade of adult male life. Decreased levels of testosterone and/or free testosterone indicate partial or complete hypogonadism. It is important to determine if low levels of testosterone are due to aging or a pathological disorder. In adult men, testicular or androgen abuse might

be suspected if testosterone levels exceed the upper limit of the normal range by more than 50%.

The free testosterone test may be used to evaluate infertility, erectile dysfunction, or osteoporosis in men, and to evaluate hirsutism, polycystic ovarian disease, and virilization in women. The test may also be used to monitor the efficacy of testosterone-lowering therapies in prostate cancer.

The CPT codes provided are based on AMA guidelines and are for informational purposes only. CPT coding is the sole responsibility of the billing party. Please direct any questions regarding coding to the payer being billed.