

# What are normal testosterone levels?

How to measure your testosterone for optimal results



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## **“What are my testosterone numbers and where should they be?”**

This is a common question asked every day by men of all ages when it comes to testosterone. Asking what's a normal amount of testosterone is like asking what's a natural amount of hair: that amount will change over the years. What may feel like a normal amount of testosterone to one guy may be completely off for another guy. How do we know what's healthy, let alone safe, when it comes to testosterone levels?

The CDC launched a hormone standardization program in 2010 to help hormone treatment labs establish a set of standard hormone testing procedures. ([CDC](#)) This is a good start, but the CDC program still has a ways to go since many labs still haven't agreed to the new CDC procedures.

Every lab should have what's called a “reference range,” a range of data that qualifies as “normal” for other patients who have tested at that same lab. The problem is reference ranges don't factor in important details, like the subject's age, weight, body composition, and other health conditions, like diabetes and pituitary gland issues. You may be tested by your local LabCorp and given a “normal” status according to the reference range, but is that normal compared to a 20-something in spectacular shape or a 70-year old with failing pituitary glands?

### **The three types of testosterone you need**

It helps to know what we're even measuring when it comes to testosterone. What many guys don't know is that there are actually three different types of testosterone inside your body: SHBG-bound testosterone, free testosterone, and albumin-bound testosterone. You need all three types of testosterone for your body to thrive.

#### **SHBG-bound testosterone**

SHBG (sex hormone-binding globulin) is your courier hormone. It's a protein created in your liver. Your testes can also produce SHBG in a form called androgen-binding protein. SHBG binds together three other hormones, estradiol (estrogen in men), DHT (dihydrotestosterone), and testosterone. ([Mayo Clinic](#)) Once bound, these hormones are inactive and safely transported through your bloodstream on the horsepower of SHBG. The bioavailability of your hormones is determined by your level of SHBG protein in your blood.

#### **Free testosterone**

Any unbound, or “free,” testosterone in your body is extremely minute compared to your “bound” testosterone, sometimes only as much as 2% of your total testosterone. Free testosterone can be difficult to measure at times because it's such a small amount, which is why it's usually measured in picograms per milliliter. This is why most testosterone-based

studies rely on total testosterone measurements instead of free testosterone to make scientific evaluations.

### Albumin-bound testosterone

Albumin is the most common protein often found in your blood. It helps repair tissue, promote body growth, and helps with fluid removal in certain medical procedures, such as kidney dialysis. ([Source](#)) Albumin-bound testosterone helps keep a man's body healthy and strong.

### Testing your testosterone

When it comes to testing your body for testosterone, you can test for your total testosterone or your free testosterone. Your total testosterone is a combination of all three testosterone types into one succinct measurement of ng/dl, or nanograms per deciliter. So, when your doctor tells you your total T is 300, they mean your total testosterone is currently measuring at 300 ng/dl.

Measuring your free testosterone is self-explanatory: you're measuring how much "unbound" testosterone you have. Testing for free testosterone often includes albumin-bound testosterone in its results because the bind between albumin and testosterone is weak and easily reversed.

### Average testosterone levels in men according to age range

Now we know what measurements we're using in testing for testosterone, whether it's free testosterone (picograms per milliliter) or total testosterone (nanograms per deciliter). Of course, it's always best to compare your test numbers against other men of your same age or at least within your age range.

Researchers from a study called [Declining Androgens with Age: An Overview](#) (published 1996) created a chart of "normal" reference ranges for men according to age:

Measurements in SI Units (nmol/L)

Age	Number of Subjects	Total Test	Stand. Dev.	Free Test	Stand. Dev.	SHBG	Stand. Dev.
25-34	45	21.38	5.90	0.428	0.098	35.5	8.8
35-44	22	23.14	7.36	0.356	0.043	40.1	7.9
45-54	23	21.02	7.37	0.314	0.075	44.6	8.2
55-64	43	19.49	6.75	0.288	0.073	45.5	8.8

<b>65-74</b>	47	18.15	6.83	0.239	0.078	48.7	14.2
<b>75-84</b>	48	16.32	5.85	0.207	0.081	51.0	22.7
<b>85-100</b>	21	13.05	4.63	0.186	0.080	65.9	22.8

Measurements in Conventional Units (ng/dl), SHBG in (nmol/L)

Age	Number of Subjects	Total Test	Stand. Dev.	Free Test	Stand. Dev.	SHBG	Stand. Dev.
<b>25-34</b>	45	617	170	12.3	2.8	35.5	8.8
<b>35-44</b>	22	668	212	10.3	1.2	40.1	7.9
<b>45-54</b>	23	606	213	9.1	2.2	44.6	8.2
<b>55-64</b>	43	562	195	8.3	2.1	45.5	8.8
<b>65-74</b>	47	524	197	6.9	2.3	48.7	14.2
<b>75-84</b>	48	471	169	6.0	2.3	51.0	22.7
<b>85-100</b>	21	376	134	5.4	2.3	65.9	22.8

### Normal testosterone levels in men without diabetes

There was another study also published in 1996 that further breaks down “normal” test findings into smaller age ranges with greater emphasis on the polarizing ends of the results. ([Source](#))

Measurements in SI Units (nmol/L)

Age	Number of Subjects	Mean Total Test	Stand. Dev.	Median Total Test	5th %	10th %	95th %
<b>&lt;25</b>	125	23.97	5.48	24.15	14.15	16.22	33.12
<b>25-29</b>	354	23.18	7.14	22.08	13.46	15.18	34.84
<b>30-34</b>	330	21.53	6.72	20.70	12.07	13.46	33.81
<b>35-39</b>	212	20.70	6.55	19.66	11.39	13.46	32.77

40-44	148	20.70	6.87	20.70	11.04	13.11	32.43
45-49	154	18.91	5.66	18.28	11.39	12.42	29.32
50-54	164	18.87	6.49	17.94	10.01	12.07	32.43
55-59	155	19.14	6.04	18.97	11.04	11.73	30.01

Measurements in Conventional Units (ng/dl)

Age	Number of Subjects	Mean Total Test	Stand. Dev.	Median Total Test	5th %	10th %	95th %
<25	125	692	158	697	408	468	956
25-29	354	669	206	637	388	438	1005
30-34	330	621	194	597	348	388	975
35-39	212	597	189	567	329	388	945
40-44	148	597	198	597	319	378	936
45-49	154	546	163	527	329	358	846
50-54	164	544	187	518	289	348	936
55-59	155	552	174	547	319	338	866

## What's "low" testosterone?

You may think, "These charts are great, but how do I know what truly qualifies as "low" testosterone? Like we said earlier, "normal" testosterone levels can vary from one man to the next. Some research, albeit anecdotal, suggests that you should keep your total testosterone levels at 500 ng/dl or higher. (**Peak Testosterone**) Many men start noticing signs and symptoms of low testosterone once their total testosterone dips into the 400s.

If your testosterone levels match up well with these charts, bully for you. Remember, testosterone levels tend to decrease by 1% or more every year starting in your mid-30s. It's always wise to keep an eye on your testosterone levels as you age.

## How do you measure testosterone levels?

As with many medical tests, there are plenty of DIY options for measuring your testosterone. You can order a DIY urine or saliva testosterone testing kit online, which are

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fairly inexpensive with quick results. Just take the test, pop your sample in the mail, and you'll get your results in about a week. However, urine and saliva testing tends to be very inaccurate, so what good does it do to get quick results if they're also inaccurate?

At Low T St. Louis, we rely on the highly regarded and proven method of blood testing. It's a simple blood draw, nothing too fancy in the actual drawing itself, and then we analyze your testosterone levels. Blood testing can be much more expensive (\$125+/-), but the accuracy alone is worth the investment. This gives us an exceptional starting point to helping you regain healthy levels of testosterone and enjoy your best life possible.

If you'd like to learn more about how Low T St. Louis can help naturally balance your testosterone, we'd love to hear from you.

**[CTA Box here]**



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