



FREE GUIDE · WHAT THE RESEARCH SAYS

From Coach Mike Lipsey · CPT · Certified Sports Nutrition Coach

NATURAL CEILING GUIDE

How big can you get without drugs? Nobody knows your exact limit. But the research gives honest ranges, and the habits that get you closest are boring and proven.

01 THE FFMI "CUTOFF" (AND ITS LIMITS)

Fat-free mass index (FFMI) is lean mass scaled to height, like BMI for muscle. In a 1995 study of 157 male athletes (83 steroid users, 74 non-users), the non-users' height-normalized FFMI went up to about **25**. Many users were well above it. 20 pre-steroid-era Mr. America winners averaged an estimated 25.4.

Kouri, Pope, Katz & Oliva 1995, Clin J Sport Med 5(4):223-228

WHY 25 IS A RED FLAG, NOT A RULE

- One small study that its own authors called preliminary: 74 non-users, men only.
- It describes a group, not your genetics. Rare people sit above 25 naturally; most never get near it.
- In 235 college football players scanned by DXA, about 26% were above 25. The study didn't report drug use.

Limitations: Kouri 1995 (methods) · Trexler et al. 2017, J Strength Cond Res 31(10):2719-2727

02 GENETICS: THE BIGGEST VARIABLE

In 585 people on the **same** 12-week arm-training program, muscle size changes ranged from about **-2% to +59%**. Same plan, wildly different results. Your ceiling is personal.

Hubal et al. 2005, Med Sci Sports Exerc 37(6):964-972

03 HOW FAST CAN YOU GAIN?

Honest answer: no study gives a precise rate by training age. Experienced lifters need more advanced programming to keep progressing, and most coaches see gains **slow as you get more trained**. Rough coach's rule of thumb (opinion, not a guarantee):

YEAR 1

Fastest gains. Often a few kg of lean mass with good training and eating.

YEARS 2-3

Roughly half the rate of year one, give or take.

YEARS 4+

Slow. Small, hard-won gains measured over years, not months.

Novice vs. advanced programming: ACSM position stand 2009, Med Sci Sports Exerc 41(3):687-708 · Ranges above are coaching heuristics (popular models such as McDonald's and Aragon's are not peer-reviewed). Age, sex, sleep, and genetics shift them.

04 WHY ENHANCED PHYSIQUES MISLEAD

- In a controlled trial, men given high-dose testosterone who did **not** train still gained more arm and leg muscle and strength than men on placebo who didn't train. Testosterone plus training gained the most. Different rules.
- Photos aren't data: lighting, pump, posing, dehydration, filters, and editing all change how a physique looks.
- Use is often not disclosed, so you usually can't know what you're comparing against.

Bhasin et al. 1996, N Engl J Med 335(1):1-7 · Photo factors: coach's observation

05 "IS HE NATTY?" THINK, DON'T ACCUSE

You can't diagnose anyone from a photo, and accusing people isn't the point. Some patterns make a natural claim **statistically less likely**, not impossible:

- Estimated FFMI well above ~25 while very lean (remember: estimates can be off).
- Large gains in a very short time, especially after years of training.
- Staying stage-lean and full year-round.

Use these to set **your** expectations, not to judge someone else.

06 FFMI CALCULATOR: WORKED EXAMPLE

STEP 1

Height 70 in $\times$ 0.0254 = **1.778 m**. Weight 180 lb $\div$ 2.2046 = **81.6 kg**.

STEP 2

Lean mass = 81.6 $\times$ (1 - 0.15 body fat) = **69.4 kg**.

STEP 3

FFMI = 69.4 $\div$ 1.778² = **22.0**.

STEP 4

Normalized FFMI = FFMI + 6.3 $\times$ (1.8 - 1.778) = **22.1**. Well within the natural range, with room to grow.

Body-fat estimates (scales, calipers, eyeballing) can be off by several points, which moves FFMI a lot. Treat the result as a ballpark.

07 HOW TO GET CLOSE TO YOUR CEILING

- ▮ **Progressive overload:** add reps, load, or sets over time, with an emphasis on multi-joint lifts. (ACSM 2009)
- ▮ **Protein ~1.6 g/kg/day:** in a meta-analysis, extra benefit for muscle levelled off around 1.6 g/kg (uncertainty range up to ~2.2). (Morton 2018)
- ▮ **Sleep 7+ hours:** adults need at least 7. One night without sleep cut muscle protein synthesis by ~18% in a small lab study. (Watson 2015 · Lamon 2021)
- ▮ **Consistency:** years of good training beat any perfect 12-week plan.

EDUCATION ONLY. TALK TO YOUR DOCTOR.

No doses, no sources, no DMs asking for them. Ask your doctor: should I check my hormones? Are my symptoms normal? Is my plan safe for my health history?

DM FREAK

Want a natural plan built around you? Online coaching from \$199/mo

SOURCES

Kouri 1995 Clin J Sport Med 5:223 · Trexler 2017 J Strength Cond Res 31:2719 · Hubal 2005 Med Sci Sports Exerc 37:964 · ACSM 2009 Med Sci Sports Exerc 41:687 · Bhasin 1996 N Engl J Med 335:1 · Morton 2018 Br J Sports Med 52:376 · Watson 2015 Sleep 38:843 · Lamon 2021 Physiol Rep 9:e14660. Full list: sources.md