

**THE TESTOSTERONE  
KILLERS  
(LOW T/DECREASED T)**

**BY  
T-NEXUSPLAYBOOK**

# Nutrition

## Caloric deficit / undereating (low energy availability)

- In men, short bouts of low energy availability (LEA)—achieved via low intake and/or high expenditure—suppress the reproductive axis and lower testosterone within days. This is well-documented in endurance athletes and military training models and increasingly in controlled LEA studies. ([pagepressjournals.org](http://pagepressjournals.org))

## Low-fat diets

- Meta-analysis of intervention studies (six trials) shows **low-fat vs higher-fat** diets reduce total and free testosterone; no effect on LH/SHBG, suggesting a gonadal (not pituitary) effect. A classic controlled trial lowering fat and raising fiber likewise reduced serum and urinary androgens. ([PubMed](http://pubmed.ncbi.nlm.nih.gov/))

## Very high protein (especially when carbs are restricted)

- Systematic review/meta-analysis: **low-carb, high-protein** diets (>3.4 g/kg/day protein) decreased men's total T by ~5.2 nmol/L on average; cortisol tended to increase—consistent with a stress/urea-cycle load and reduced carbohydrate availability. Mechanism likely multifactorial (less carbohydrate = more cortisol; displacement of dietary fat). ([journals.sagepub.com](http://journals.sagepub.com))

## Junk food / high-PUFA seed-oil pattern

- Observational data are mixed for PUFAs and T (some studies even link higher PUFAs to **higher** T), so “PUFAs kill T” is too strong. However, diets that drive adiposity and systemic inflammation (ultra-processed, high-sugar/fat “junk”) contribute to obesity-related hypogonadism via insulin resistance, SHBG changes, and **increased adipose aromatase** (T→E2). Focus the critique on poor-quality, pro-obesity diets rather than PUFA per se. ([pmc.ncbi.nlm.nih.gov](http://pmc.ncbi.nlm.nih.gov))

## Micronutrient deficiency (zinc, magnesium, vitamin D)

- **Zinc:** Restriction lowers T; repletion raises it in deficient men. (Foundational work by Prasad et al.) ([PubMed](http://pubmed.ncbi.nlm.nih.gov/))

- **Magnesium:** Small RCT showed Mg supplementation increased total and free T (effect sizes modest; larger trials needed). ([PubMed](#))
- **Vitamin D:** One RCT in overweight/deficient men reported increases in total and free T with supplementation; another RCT in eugonadal men found **no** effect—so benefit likely limited to deficiency. ([PubMed](#))

### **Vegan / “bodybuilder chicken-rice-broccoli” patterns**

- Large cohort data: vegan men often show **similar free T** but **higher SHBG** (so total T can look higher while bioavailable T is unchanged). Conclusion: vegan diets don’t inherently “crush” T if calories/fats/micronutrients are adequate; watch zinc, B12, iron, iodine, and overall fat intake. ([PubMed](#))
- Contest-prep, ultra-lean “bro” diets (very low fat + chronic deficit) are repeatedly associated with big drops in T in **natural** bodybuilders; levels normalize with recovery. ([PubMed](#))

### **Low-carb**

- If *protein is very high and carbs are very low*, testosterone tends to drop and cortisol rises during training. But not all low-carb diets are equal—higher-fat ketogenic approaches may not have the same effect as low-fat/low-carb. Keep carbs adequate if you train hard. ([journals.sagepub.com](#))

## **Training & Recovery**

### **Excessive endurance / overtraining**

- Chronic high-volume endurance training is linked to the “**exercise-hypogonadal male condition**”: persistently lower basal T (25–50% below age-expected) without compensatory LH rise—an adaptive down-shift. Prolonged endurance sessions raise cortisol and depress T acutely; inadequate recovery compounds it. ([Frontiers](#))

### **Inactivity**

- Physical inactivity correlates with lower T; conversely, structured exercise (including HIIT) in older sedentary men raised total and free T ~17% in an RCT. Mechanisms: improved body comp/insulin sensitivity and reduced inflammation. ([pmc.ncbi.nlm.nih.gov](https://pubmed.ncbi.nlm.nih.gov))

### **Skipping resistance training**

- Resistance exercise triggers acute T rises; chronic programs modestly improve/restore T in older men, with strong musculoskeletal benefits even when T changes are small. ([pmc.ncbi.nlm.nih.gov](https://pubmed.ncbi.nlm.nih.gov))

## **Supplements**

### **“Testosterone boosters”**

- Independent reviews find **scarce high-quality evidence** that typical “T-boosters” (tribulus, blends) meaningfully raise serum T in eugonadal men; many products are under-dosed or mislabeled. Adulteration with **prescription drugs or steroids** is worryingly common (and FDA keeps flagging offenders). Safer: correct deficiencies (vitamin D if low, zinc/magnesium if low), manage sleep/stress/weight. ([pmc.ncbi.nlm.nih.gov](https://pubmed.ncbi.nlm.nih.gov))

### **Ecdysterone / turkesterone**

- The best human trial (10 weeks resistance training) found **greater muscle/mass gains** with **ecdysterone**—but no evidence it raises **testosterone**; WADA placed ecdysterone on its **monitoring** program due to anabolic-like effects. Supplements vary wildly in content and may be contaminated. Food sources (spinach/quinoa) contain tiny amounts. ([PubMed](https://pubmed.ncbi.nlm.nih.gov))

## **Habits**

### **Alcohol**

- Acute high doses and chronic heavy intake suppress T (via LH suppression and direct Leydig cell toxicity), worsen semen parameters, and raise oxidative

stress. Dose and chronicity matter. ([BioMed Central](#))

## Smoking

- Cross-sectional studies often show **higher total T and SHBG** in smokers (a hepatic/SHBG effect), *not* healthier androgen action. Smoking still harms fertility and vascular/endocrine health—so net negative for male reproductive function. ([pmc.ncbi.nlm.nih.gov](http://pmc.ncbi.nlm.nih.gov))

## Sexual/romantic exposure & activity

- Brief interactions with young women or erotic stimuli can **acutely raise** T in men (minutes to an hour). That doesn't mean chronic sexual abstinence boosts T: the famous “day-7 spike” study has not been robustly replicated and has been heavily criticized; overall, masturbation/sex **don't** lower baseline T. ([PubMed](#))

## Competition & status

- Meta-analyses show winners often exhibit **post-competition T increases** (especially in real-world sport), while losers don't—supporting the “biosocial” status model. Lack of challenge/competition removes these recurrent anabolic cues. ([sciencedirect.com](http://sciencedirect.com))

## Myths (and what studies actually say)

### “Semen retention / NoFap increases T long-term”

- Evidence doesn't support sustained T elevation. One small study reported a **single** peak around day 7 of abstinence; broader evidence finds **no meaningful lasting increase**, and orgasm itself doesn't depress T below baseline. ([PubMed](#))

### “Porn lowers T”

- Erotic visual stimulation typically **raises** arousal and can raise or leave T unchanged acutely; the bigger risk with compulsive porn is

behavioral/psychological, not chronically suppressed T. ([sciencedirect.com](https://www.sciencedirect.com))

### “Low-carb is optimal for T”

- For trained men, very *low* carb (especially paired with **very high protein**) tends to **decrease T** and **increase cortisol**. Make carbs training-appropriate. ([journals.sagepub.com](https://journals.sagepub.com))

## Psychological & body-composition factors

### Chronic stress / anxiety (high cortisol)

- Repeated psychosocial stress raises cortisol and is associated with **lower salivary testosterone**; glucocorticoids also **cross-talk** with androgen signaling in multiple tissues (the “dual-hormone” literature: high T effects are blunted when cortisol is high). ([pmc.ncbi.nlm.nih.gov](https://pubmed.ncbi.nlm.nih.gov))

### Excess body fat

- Obesity is among the strongest modifiable risk factors for low T. Mechanisms: insulin resistance → lower SHBG-adjusted bioavailable T; **adipose aromatase** increases conversion of T→E2, and elevated E2 feeds back to suppress LH/T. **Weight loss** reverses much of this. ([pmc.ncbi.nlm.nih.gov](https://pubmed.ncbi.nlm.nih.gov))

### Being too lean

- Natural bodybuilders dropping to ~4–6% body fat during contest prep show **marked T declines** that normalize with refeeding/recovery—classic energy-availability effect. ([PubMed](https://pubmed.ncbi.nlm.nih.gov))

### Fasting & competitive gaming

- Prolonged fasting and high-arousal competitive contexts often **raise cortisol**; effects on T vary by study (some esports/competition paradigms show no T change). Net: don't stack fasting, sleep loss, and high-stress competition if you're protecting T. ([Nature](https://www.nature.com))