

Andarine (S-4) Overview

Why We Need It

Andarine (S-4) is one of the first-generation SARMs, originally developed to treat muscle wasting, osteoporosis, and benign prostatic hyperplasia (BPH). It is known for promoting lean muscle retention, fat loss, and muscle hardening effects. While Andarine shows promise in preclinical models, it remains experimental with no FDA-approved medical use.

Mechanism of Action

Andarine (S-4) functions by selectively binding to androgen receptors (AR) in muscle and bone tissue, stimulating anabolic activity without strongly affecting reproductive organs like the prostate.

In addition to muscle growth, S-4 has demonstrated:

- Partial agonist activity in muscle and bone ARs
- Anti-androgenic activity in prostate tissue, potentially reducing prostate size
- Increased fat oxidation via muscle preservation and metabolic enhancement
- Its partial activation profile makes it milder than stronger SARMs but useful for cutting, recomposition, and muscle retention phases.

Functions and Benefits

- Promotes lean muscle retention during calorie deficits
- Enhances fat loss while preserving muscle mass
- Provides muscle hardening and improved definition
- May reduce prostate enlargement risk due to partial anti-androgenic effects
- Lower water retention compared to anabolic steroids
- Supports bone density and skeletal integrity

Medical-Grade Dosing

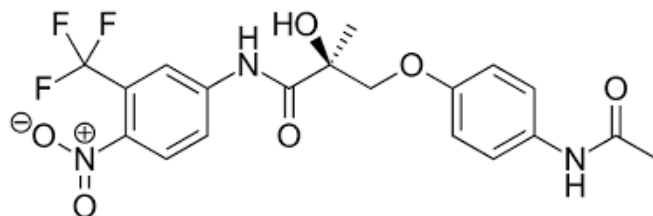
Dose: 25–50 mg per day

Frequency: Split into two doses daily (half-life ~4–6 hours)

Cycle Duration: 4–8 weeks

Post-Cycle Therapy (PCT): Recommended; Clomid or Nolvadex suggested for hormonal recovery

Liver Support: Optional NAC or TUDCA for extended use or higher dosing



Pharmacology and Bioavailability

- Orally bioavailable with rapid absorption
- Partial agonist at androgen receptors
- Low liver toxicity in animal models
- Chemically synthesized and restricted to research applications

Administration Guidelines

- Split daily dose (morning and evening) for stable blood levels
- Monitor for vision-related side effects (night vision disturbance or yellow tint)
- Implement PCT to restore natural hormone production post-cycle
- Consider liver and hormone panel monitoring during extended use

Conclusion

Andarine (S-4) is a mild to moderate SARM ideal for cutting cycles, body recomposition, and muscle hardening without significant androgenic side effects. Its partial agonist profile offers balanced results with fewer risks, though vision-related side effects are commonly reported. Responsible experimental use requires hormonal monitoring, cycle management, and professional oversight.