The Strength Training Rules Just Got Rewritten

6 MIN READ

MAR. 20, 2026

BY HEATHER HURLOCK

The ACSM just published its most comprehensive resistance training update in 17 years.

You already know resistance training is non-negotiable. You've read the studies, felt the difference, probably convinced a few friends to pick up a weight. But the American College of Sports Medicine just published its most comprehensive update to resistance training guidelines in 17 years,and what they found is worth more than a quick scroll.

The new **ACSM Position Stand** synthesized 137 systematic reviews covering more than 30,000 participants to answer a deceptively simple question: what actually moves the needle in resistance training? The answer is more liberating than prescriptive. And for anyone who has ever felt overwhelmed by the sheer volume of conflicting advice about sets, reps, tempo, and periodization, that's worth sitting with.

The New Rules of Strength Training

The previous ACSM guidelines, published in 2009, set a fairly rigid standard: specific rep ranges, rest intervals, load percentages, and structured periodization cycles. The new position stand, published in ***Medicine & Science in Sports & Exercise***, takes a different posture entirely. Rather than handing you a precise program, it makes the case that many forms of resistance training work, and that just lifting consistently matters more than optimizing any single variable.

This is science catching up to a more honest picture of how we all actually build

strength and muscle over time.

The headline findings confirm what Super Age readers largely already practice: resistance training significantly improves muscle strength, size, power, endurance, balance, gait speed, and a range of functional measures that matter for how you move through daily life. These benefits hold across age groups, training experience levels, and equipment types, from free weights and machines to elastic bands and bodyweight.

But the more interesting story is what the evidence *doesn't* support as strongly as previously believed.

1. **Lifting to failure isn't necessary.** One of the most durable myths in resistance training is that you need to push to the point of muscular failure to get results. A **2022 meta-analysis in the *Journal of Sport and Health Science*** found no significant difference in strength or muscle size between training to failure and stopping short, and the ACSM now confirms that training to momentary failure does not consistently enhance strength, muscle size, or power gains. It may actually be inadvisable due to increased injury risk and cardiovascular strain from poor form at exhaustion. The researchers suggest aiming for "near-failure," stopping with 2–3 reps still in reserve. You're working hard. You're just not grinding yourself into the floor to do it.
2. **Periodization is less critical than previously thought, especially for muscle size.** Periodization is the practice of systematically cycling training variables like load and volume across weeks or months. It has long been treated as essential for continued progress. A **2022 meta-analysis in *Sports Medicine*** found that while periodized programs showed a small edge for strength gains, periodization produced no significant benefit for muscle size when total volume was matched. What matters is progressive overload: continuing to increase the stimulus in some meaningful way over time. That can mean adding weight, more reps, an extra set, or even slowing down the movement.

The structure of *how* you progress matters less than the fact that you do.

3. 3 **Heavier loads build more strength.** For strength specifically, the evidence now points clearly toward lifting at or above 80% of your one-rep maximum, through a full range of motion, for 2–3 sets, performed earlier in a session rather than later, at least twice a week. There's a dose-response relationship here (heavier tends to produce more strength gains) but the good news is that 2–3 sets per exercise is enough to see meaningful results, with diminishing returns beyond that.

4. 4 **Volume drives hypertrophy.** For muscle size, load matters less than total weekly volume. A **landmark meta-analysis by Schoenfeld, Ogborn, and Krieger** established a clear dose-response relationship between weekly training volume and muscle growth, and a **2025 meta-regression in *Sports Medicine*** further confirmed that volume gains continue to compound, though with diminishing returns. The ACSM now supports 10 or more sets per muscle group per week for meaningful hypertrophy. Eccentric contractions (the lowering or lengthening phase of a lift) also play a meaningful role: **research published in the *Journal of Strength and Conditioning Research*** found eccentric-focused training produced greater mean muscle growth than concentric-only training (10.0% vs. 6.8%). Slowing down the part of the movement most people rush through produces a disproportionate muscle-building stimulus.

5. 5 **Full range of motion matters more than most people think.** A **2021 meta-analysis in the *Scandinavian Journal of Medicine & Science in Sports*** found that full range of motion training produced significantly greater strength and lower-limb hypertrophy gains than partial range training. Cutting the movement short, a common compensation when loads get heavy, is quietly leaving results on the table.

6. 6 **Many forms of training work.** Elastic bands, circuit training, home-based programs, bodyweight, all show meaningful improvements in strength and function. This is real data showing that the form of resistance is far less important than the habit of it.

7 **The biggest finding of all: Consistency.** The ACSM makes it explicit: the most important factor in resistance training outcomes is participation. According to **National Health Interview Survey data**, only about 28% of American adults are meeting the muscle-strengthening guideline of two or more sessions per week, meaning nearly three in four adults are falling short. The researchers argue, with the full weight of 137 systematic reviews behind them, that getting people lifting in any form they'll sustain is more valuable than optimizing any prescription variable. The best program is the one you'll actually do.

5 Ways to Update Your Strength Training

1. Slow Your Descent: Next time you're doing a squat, press, or row, count 3–4 seconds on the way down. That's eccentric emphasis, and according to the research, it's one of the highest-return adjustments you can make without adding a single extra set. Notice what fires differently. That's not effort for effort's sake. That's the research working in real time.

2. Leave 2-Reps in Reserve: At the end of your next working set, ask: could I have done 2 more reps with good form? If yes, you're in the optimal training zone the ACSM now endorses. If no. if you ground out that last rep, you've likely crossed into failure territory. Recalibrate your load or volume for next time.

3. Count Your Sets Per Muscle Group: Pick one muscle group, say, your legs or your back, and count how many total sets you're training per week. The research now supports 10 or more sets per muscle group weekly for meaningful results. If you're at 4–6, there's room to grow without overhauling your whole program. Add one set per session for two weeks and notice the difference.

4. Do The Full Range of Motion: On your next lower-body session, film yourself from the side on a squat or hinge. Are you reaching full depth? Hip crease at or below knee? The research is clear that full range of motion produces significantly greater strength and muscle gains than partial range training. If you're cutting the range short, that's a free upgrade waiting.

5. Train Twice-a-Week Minimum If you're currently strength training once a week, the evidence is clear: twice weekly is the threshold where strength gains become consistent and meaningful. You don't need four days. You need two. Block the second session now, before the week fills in around it.

The rules haven't changed so much as they've clarified. Lift consistently. Go heavy enough to feel it. Slow down the lowering phase. Stop before failure. Come back twice a week. That's most of it, and the most comprehensive review of resistance training science ever published now has your back.

*The information provided in this article is for educational and informational purposes only and is not intended as health, medical, or financial advice. Do not use this information to diagnose or treat any health condition. Always consult a qualified healthcare provider regarding any questions you may have about a medical condition or health objectives.****Read our disclaimers****.*

WRITTEN BY:



Heather Hurlock