The Brookbush Institute adds 2 New Glossary Terms: "Sets to Failure" and Reps-in-Reserve (RIR)"

The Brookbush Institute continues to enhance education with a glossary that is so much more than definitions. Definitions, examples, common questions, and more!

NEW YORK, NY, UNITED STATES, January 15, 2025 /EINPresswire.com/ -- - Excerpt from the term: Sets-to-Failure

> Sets-to-failure are more correlated with hypertrophy than strength gains. While they help to fatigue more muscle fibers, max strength may benefit from maintaining rep velocity/force for multiple sets."
>
> *Dr. Brent Brookbush, CEO of Brookbush Institute*

- Related term: Reps-in-Reserve

- Related to the course: Acute Variables: Performing Sets to Failure

SETS TO Failure

Sets to Failure (reps-to-failure/set): Sets-to-failure is a resistance training strategy in which an individual performs repetitions of an exercise until they can no longer complete a repetition. The word "failure" in this context may include:

- Mechanical failure is performing repetitions until another repetition cannot be performed through a full range of motion (ROM), regardless of effort.

- Volitional failure is an exerciser performing repetitions until they choose to stop, depsite encouragement to continue (presumably due to fatigue).

- Form failure is performing repetitions until another repetition cannot be performed with optimal posture /form.

Opposite Strategy: Reps-in-Reserve (RIR)

EVIDENCE-BASED SUMMARY STATEMENT ON SETS TO FAILURE

Sets to Failure - https://brookbushinstitute.com/glossary/sets-to-failure

Based on a systematic review of all available peer-reviewed and published research, the Brookbush Institute recommends reps-to-failure/set for the optimal improvement of hypertrophy, strength endurance, and/or max strength. However, reps-in-reserve/set is recommended for the improvement of power outcomes and athletes performing high-frequency training (with goals of sports performance, hypertrophy, strength, or power).

Note that performing 1-2 reps-reserve/set and 1 additional set/exercise will result in the maintenance of rep velocity and reps/set during a session, reduce post-exercise decreases in performance and recovery, and maintain volume and the majority of the improvements that would result from reps-to-failure/set training. It is also important to note that for most goals, reps-to-failure/set is not the most influential variable.

For example, 1 set of reps-to-failure/set is likely to result in less improvement for hypertrophy than 3 sets of reps-in-reserve/set (e.g., volume is more influential). Similarly, load and concentric velocity are more influential for strength, and explosive eccentric and concentric tempos are more influential for power.

Reps-to-failure/set recommended for:

- Hypertrophy
- Strength Endurance
- Max Strength

1-2 Reps-in-reserve/set and an additional set/exercise is recommended for:

- Power
- Athletes performing high-frequency training (with hypertrophy, strength, or power goals).

Acute variables that are likely more influential than sets to failure:

- Volume: 1 set-to-failure is less effective than 3 sets-not-to-failure.
- Load: Load is more influential than reps-to-failure/set for strength goals.
- Velocity/force (repetition tempo): Concentric velocity and force production are likely to have a

larger influence on strength and power (and potentially hypertrophy) than reps-to-failure.

FREQUENTLY ASKED QUESTIONS
Are sets-to-failure necessary for muscle growth (hypertrophy)?
- No, sets-to-failure are not strictly necessary for muscle...

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