The Brookbush Institute Publishes NEW Glossary Terms: Eccentric Contraction and Concentric Contraction

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

NEW YORK, NY, UNITED STATES, February 24, 2025 /EINPresswire.com/ -- - Excerpt from the term: Eccentric Contraction
- Additional Glossary Term: Concentric Contraction
- Related Article: The Best Weight Lifting Tempo: Maximum Velocity Concentrics

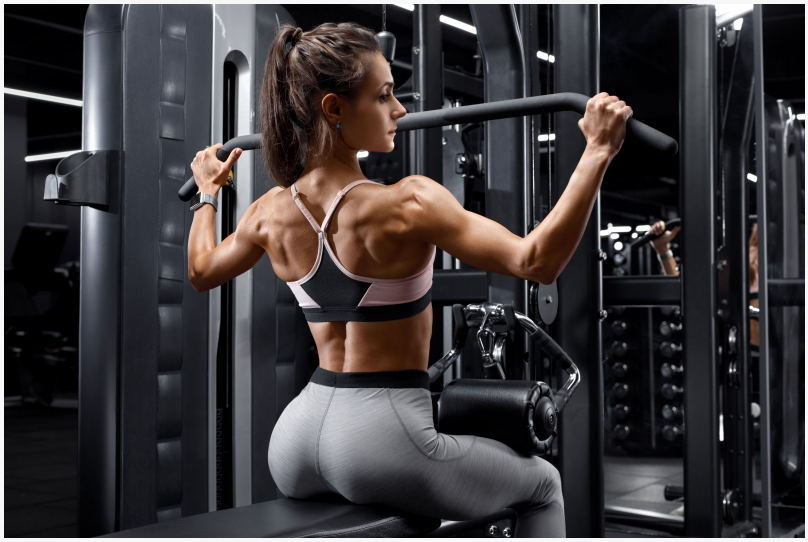
> Eccentric Contraction: The word is formed from two parts: "ecc" (out of) and "centric" (center). Lengthening could be considered as coming "out of" a shortened position or, perhaps, out of the center."
>
> *Dr. Brent Brookbush, CEO of Brookbush Institute*

DEFINITION:
Eccentric Muscle Contraction: A type of muscle contraction in which, despite activation of motor units and the production of force, the external resistance forces the muscle to lengthen. This occurs when the force produced by the muscle is less than the external resistance. Functionally, eccentric contractions can be thought of as actions that slow down or decelerate the body or a body segment, helping us to "absorb" resistance.
- Etymology: The word is formed from two parts: "ecc" (out of) and "centric" (center). Lengthening could be considered as coming "out of" a shortened position or, perhaps, out of the center.

Key Characteristics:
- Muscle fibers lengthen while generating tension.
- Decelerates or slows down the progress of an external resistance/load (e.g., slowing down a barbell as it descends toward the floor).

CONTRACTION TYPES
- Shortening Contraction: Concentric contraction
- Same-length Contraction: Isometric contraction
- Lengthening Contraction: Eccentric contraction

EXAMPLES OF ECCENTRIC CONTRACTIONS:
Note: During an eccentric contraction, the same muscles are active as during the concentric phase; however, external resistance causes the opposite joint actions to occur.
- Biceps Curl (Downward Phase): The biceps brachii contract eccentrically and lengthen to slow the weight down as the elbow extends.
- Squat (Downward Phase): The gluteus maximus and quadriceps contract eccentrically and lengthen to slow the weight down as the hips and knees flex.



The eccentric contraction occurs on "the way up" during a lat pull down - https://brookbushinstitute.com/glossary/eccentric-contraction

- Push-Up (Downward Phase): The pectoralis major and triceps brachii contract eccentrically and lengthen to slow the body down as the shoulders horizontally abduct and the elbows flex.
- Dumbell Chest Press (Downward Phase): The pectoralis major and triceps brachii contract eccentrically and lengthen to slow the weight down as the shoulders horizontally abduct and the elbows flex.
- Seated Row (Forward Phase): The latissimus dorsi and biceps brachii contract eccentrically and lengthen to slow the resistance down as the shoulders flex, the elbows extend, and the handle moves further from the body.
- Lat Pull Downs (Upward Phase): The latissimus dorsi and biceps brachii contract eccentrically and lengthen to slow the resistance down as the shoulders abduct, the elbows extend, and the bar moves further from the body.
- Reverse Flye/Horizontal Abduction (Forward Phase)...

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