Exercise order: Differences on neuromuscular performance

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An optimal resistance training program may include acute load variables (intensity, volume, rest intervals, and velocity), exercise order, and periodization model. The sequence of exercises (multi-joint vs. single-joint exercises) significantly affects several acute responses such as repetition performance, neuromuscular activity, oxygen consumption, and rating of perceived exertion. Multiple-joint exercises, such as bench press and back squat, requires a more complex neural responses, considering a high amount of active muscles; when compared to single-joint exercises, such as triceps pushdown, and it has been used to target specific muscle groups, a reduced level of skills and technical involvement. There are several different ways to build the exercise order in a resistance training program; many of them are related to combine both single- and multiple-joint exercises. The purpose of this presentation is to show the acute differences between pre-exhaustion and traditional exercise order on neuromuscular performance in trained men.

Biography

Paulo Marchetti is Supervisor of Human Movement Sciences Graduate Program at UNIMEP and has over 16 years experience in researching stretching, resistance training and biomechanics. He is Post-doctoral Research Fellow in the Institute of Orthopedics and Traumatology at Medical School (USP), PhD in Biomechanics and Motor Control and MSc in Kinesiology (Biomechanics and Motor Control) at USP, Specialist in Exercise Physiology and Physical Training at UNIFESP, and he has over fifty research publications. He is a NSCA member, Cybex Institute Member, and Chief Editor in section of Sports Medicine of the International Archives of Medicine.

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