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Steven L. Lehman and Ladora V. Thompson

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The neuromuscular system of healthy older adults exhibits adaptations that can facilitate relatively greater resistance to muscle fatigue.

- 10 Striding Toward Social Justice: The Ecologic Milieu of Physical Activity
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Critical evaluation of physical activity research within a social justice framework following Spence and Lee's Ecological Model of Physical Activity.

- 18 Dual and Beneficial Roles of Macrophages During Skeletal Muscle Regeneration

Benedicte Chazaud, Madly Brigitte, Houda Yacoub-Youssef, Ludovic Arnold, Romain Gherardi, Corinne Sonnet, Peggy Lafuste, and Fabrice Chretien

During skeletal muscle regeneration recruited inflammatory monocytes/macrophages stimulate myoblast proliferation. Upon phagocytosis, they become anti-inflammatory and stimulate muscle differentiation and growth.

- 23 Why Eating Less Keeps Mitochondria Working in Aged Skeletal Muscle
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Caloric restriction helps preserve skeletal muscle mitochondrial health with aging via enhancing mitochondrial biogenesis and degradation, thereby keeping mitochondria "young."

- 29 Sarcoplasmic Reticulum–Mitochondrial Symbiosis: Bidirectional Signaling in Skeletal Muscle

Ann E. Rossi, Simona Boncompagni, and Robert T. Dirksen

Bidirectional local sarcoplasmic reticulum (SR)–mitochondrial communication in skeletal muscle couples activity-dependent calcium signaling with mitochondrial bioenergetics and redox control.

- 36 Linking Biomechanics to Mobility and Disability in People With Knee Osteoarthritis

Monica R. Maly

This review summarizes the integration of gait biomechanics with qualitative methods to study mobility and disability in knee osteoarthritis.

- 43 Can Robots Help the Learning of Skilled Actions?

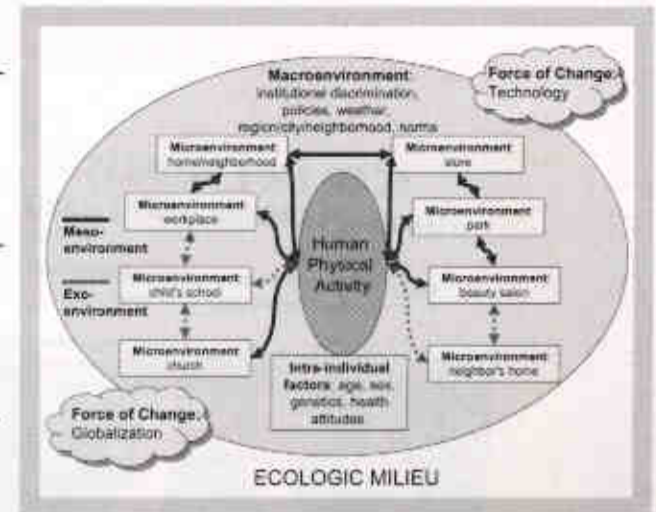
David J. Reinkensmeyer and James L. Patton

This paper critically analyzes the hypothesis that robotic devices can temporarily alter task dynamics in ways that enhance motor learning.

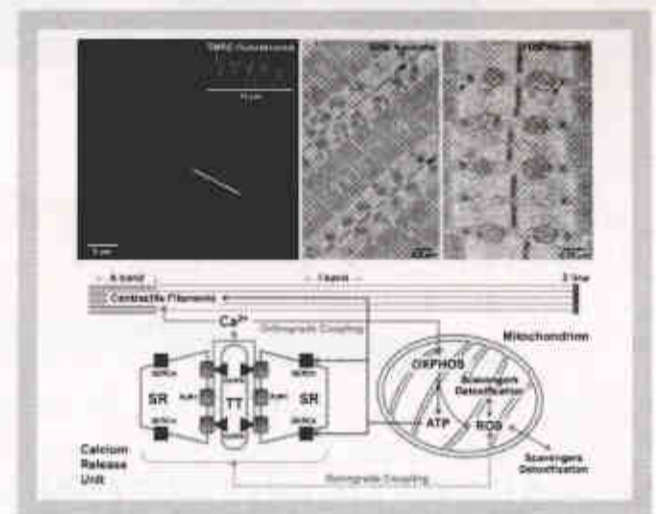
- 52 Potential Applications of Pulsating Joint Loading in Sports Medicine

Ping Zhang, Kazunori Hamamura, Hiroki Yokota, and George M. Malacinski

A recently developed pulsating-joint-loading modality is reviewed focusing on its unique features and potential usages.



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