EXERCISE AND SPORT SCIENCES REVIEWS

AMERICAN COLLEGE of SPORTS MEDICINE
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ESSR Journal Club

Covered Article: "Fiber Typing in Aging Muscle" by Fennigje M. Purves-Smith, Nicolas Sgarioto, and Russell T. Hepple.
Exercise and Sport Sciences Reviews. 42(2), April 2014.

1. What is the evidence that aging muscle does not consistently exhibit a reduction in the proportion of fast fibers?

2. What happens to the pattern of MHC isoform expression after denervation of the muscle?

3. What factors contribute to the co-expression of MHC in single muscle fibers of aging muscle?

4. How could MHC co-expression obscure our understanding of the atrophy experienced by slow twitch muscle fibers in aging muscle?

5. What is the impact of pH during the pre-incubation step of a histochemical analysis on the mATPase activity of the different MHC isoforms?

6. How might the results obtained with mATPase histochemistry influence the interpretation of slow fiber atrophy in the aging rat soleus muscle?

7. Why is it not appropriate to target only fast twitch fibers in the development of countermeasures for aging?

