

Charles L. Stebbins, M.D.

Clinical Interests In general, my research interest is control of the circulation as it relates to regulation of blood pressure and blood flow during exercise. One research focus I have concerns afferent aspects of cardiovascular reflexes from skeletal muscle. This involves determination of various metabolic stimuli that are capable of eliciting or modulating cardiovascular responses.

I am also interested in the contribution of specific hormones/neuropeptides e.g. vasopressin, oxytocin, angiotensin II, and endothelin to peripheral, spinal, and central modulation of the cardiovascular response to exercise in normal and pathophysiological conditions i.e., heart failure and hypertension.

A recent research focus is vascular biology as it relates to endothelial function during exercise. We are studying human vascular endothelial cells to determine if supplementation with omega-3 polyunsaturated fatty acids enhances activation and/or expression of important proteins associated with nitric oxide production.

Studies of healthy individuals and heart failure patients are also being conducted to determine if these omega-3 fatty acids are capable of enhancing skeletal muscle blood flow and lessening systemic vascular resistance during dynamic exercise.

Title Professor

Specialty [Cardiology](#)

Department Internal Medicine

Division Cardiovascular Medicine

Center/Program Affiliation [Cardiovascular Services](#)

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Education M.D., University of Wisconsin, Madison, Wisconsin, 1981
M.A., UC Berkeley, Berkeley, California, 1974

Fellowships University of California, San Diego, CA, 1985

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Professional Memberships

American College of Sports Medicine, Fellow
American Heart Association, Council on High Blood Pressure Research
American Physiological Society
Society for Neuroscience

Select Recent Publications

Kim, H.B., Stebbins, C.L., Chai, J.H., and Song, J.K. Taekwondo training and fitness in female adolescents. *Journal of Sports Sciences* 2011 29: 133-138.

Stebbins, C.L., Hammel, L.E., Marshal, B.J., Spangenberg, E.E., and Musch T.I. Effects of dietary omega-3 polyunsaturated fatty acids PUFAs on the skeletal muscle blood flow response to exercise in rats. *International Journal of Sports Nutrition and Metabolism* 2010 20: 475-486.

Stebbins, C.L., J.P. Stice, C.M. Hart, F.N. Mbai, and A.A. Knowlton. Effects of dietary decosahexaenoic acid DHA on eNOS in human coronary artery endothelial cells. *Journal of Cardiovascular Pharmacology and Therapeutics* 2008 13: 261-268.

Walser, M., and C.L. Stebbins. Omega-3 fatty acid supplementation enhances stroke volume and cardiac output during dynamic exercise. *European Journal of Applied Physiology* 2008 97: 347-354.

Moore, J.L., J.D. Shaffrath, G.A. Casazza, and C.L Stebbins. Cardiovascular effects of cadence and workload. *International Journal of Sports Medicine* 29: 116-119, 2008.

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