

**THE EFFECTS OF MANUALLY APPLIED INTERMITTENT  
PULSATION PRESSURE TO RAT VENTRAL THORAX ON  
LYMPH TRANSPORT**

M.A. Dery, G. Yonuschot, B.J. Winterson

Departments of Osteopathic Manipulative Medicine (MAD), Biochemistry (GY), and Physiology & Pharmacology (BJW), University of New England, Biddeford, Maine, USA

*ABSTRACT*

*The present study evaluated the effects of tissue massage on a part of the body remote from the region of lymph uptake into the initial lymphatics. Lymph uptake was assessed with a fluorescent probe placed in a potential space of the lower extremity of anesthetized female Sprague-Dawley rats. Tail blood was assayed at intervals over 15 hours for fluorescence. A total of 63 animals were utilized (treatment = 32 and control = 31). The manipulated group received lymph flow enhancing treatment (LFET) five minutes per rat per hour until they were aroused. The control group were left lying prone in cages until a blood sample was taken. The LFET procedure was bilateral finger pressure applied to the lower ribs of a supine rat followed immediately by a light tap to the sternum. These maneuvers were repeated for 5 minutes. The rate of appearance of fluorescent probe was greater during the first nine hours of the experiment in the treatment group than in the controls but not at hours 12 and 15. This study demonstrates that mechanical pressure to body regions physically distant from the location of lymph formation enhances lymph uptake.*