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DIURNAL AND LONG-TERM VARIATIONS OF LYMPH CAPILLARY PRESSURE IN HEALTHY SUBJECTS

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ABSTRACT

The variability of pressure in the cutaneous lymph capillaries on the forefoot was determined in 2 groups of healthy volunteers. In group A, including 12 healthy subjects (8 men, 4 women; mean age 28 years, range 22 to 37 years), measurements were performed in the morning and late afternoon of the same day. In group B (12 healthy subjects, 5 women, 7 men; mean age 53 years, range 23 to 72 years), measurements of lymph capillary pressure were repeated with an interval of 7 weeks. The superficial microlymphatics were visualized by intravital fluorescence microlymphography, cannulated with glass micropipettes, and the lymph capillary pressure was measured using a servo-nulling pressure system.

In group A, lymph capillary pressure measured in the morning (mean 7.5 ± 4.4 mmHg; range -4 to 16 mmHg) did not differ ($p>0.05$) from the pressure in the late afternoon (mean value 5.6 ± 3.4 mmHg; range -1 to 13 mmHg).

In group B, initial lymph capillary pressure (mean 3.9 ± 2.9 mmHg, range -1.1 to 9.7 mmHg) was not different ($p>0.05$) compared with the pressure after 7 weeks (2.9 ± 2.7 mmHg, range -1.0 to 6.8 mmHg).

We conclude that lymph capillary pressure in healthy subjects does not exhibit significant changes during the daytime or over the long term.