

Thermography and laser-Doppler flowmetry for monitoring changes in finger skin blood flow upon cigarette smoking.

Bornmyr S, Svensson H.; Department of Clinical Physiology, Allmänna Sjukhuset, Malmö, Sweden. Haemodynamic changes after smoking two 1.1 mg nicotine cigarettes were monitored in 24 smokers on two different occasions. Smoking caused an increase in heart rate and arterial blood pressure, whereas finger temperature as measured by thermography and finger skin blood flow as measured by laser-Doppler flowmetry (LDF) decreased. Lowest values were seen within 15 min by LDF, and after 30 min by thermography. Changes in the two methods correlated closely, however, when maximum responses during a 45-min period after smoking were compared. The wider distribution of LDF values would seem to be due to the small measuring volume which is susceptible to differences in vascular anatomy and reactivity. In both methods, responses showed a high degree of reproducibility.