

# A Comparison of the Effects of Lipo Prostaglandin E1 and Prostaglandin E1-CD on Free Flap Circulation

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**Abstract:** We investigated the effects of prostaglandin E1 derivatives, prostaglandin E1-CD and lipo prostaglandin E1, on free flap circulation after the administration of these drugs. Using a laser Doppler flow meter, the blood flow on the flap in fifteen patients was measured continuously after microvascular anastomosis. The intravenous administration of both prostaglandin E1-CD (60  $\mu$ g) and lipo prostaglandin E1 (10  $\mu$ g) increased the blood flow by up to 50%. After prostaglandin E1-CD was administered, the flap blood flow increased rapidly, while maintaining its peak level for two hours. It decreased to its original level within 2 more hours. The lipo prostaglandin E1 group required almost one hour to increase its flap blood flow and this effect continued for eight hours.

**Key words :** Free Flap, Circulation, Prostaglandin E1, PGE1- CD, Lipo - PGE1