

Coffee polyphenols (CPPs), including chlorogenic acid, exert various physiological activities. The purpose of this study was to investigate the effects of CPPs on skin properties and microcirculatory function in humans. In this double-blind, placebo-controlled study, 49 female subjects with mildly xerotic skin received either a test beverage containing CPPs (270 mg/100 mL/day) or a placebo beverage for 8 weeks. The ingestion of CPPs significantly lowered the clinical scores for skin dryness, decreased transepidermal water loss, skin surface pH, and increased stratum corneum hydration and the responsiveness of skin blood flow during local warming. Moreover, the amounts of free fatty acids and lactic acid in the stratum corneum significantly increased after the ingestion of CPPs. These results suggest that an 8-week intake of CPPs improve skin permeability barrier function and hydration, with a concomitant improvement in microcirculatory function, leading to efficacy in the alleviation of mildly xerotic skin.

Eight-Week intake of coffee polyphenols improves skin hydration and permeability barrier function, with a concomitant improvement of microcirculatory function.

