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Long-term effects of percutaneous estrogens and oral progesterone on serum lipoproteins in postmenopausal women.
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Abstract
Serum lipids and lipoproteins were examined in a group of 45 healthy postmenopausal women who were treated for 2 years with either 3 mg of percutaneous estradiol (n = 20) or placebo (n = 25). Percutaneous estradiol was given alone during the first year of treatment and in combination with oral micronized progesterone (200 mg) for 12 days of each cycle during the second year. The women were examined every 3 months throughout the 2 years. Percutaneous estrogen therapy significantly reduced total serum cholesterol and low-density lipoprotein cholesterol, whereas no significant differences were observed in serum triglycerides and high-density lipoprotein cholesterol. Addition of oral progesterone during the second year of treatment did not produce any significant alterations in serum total cholesterol or low-density lipoprotein cholesterol, both of which remained significantly reduced. Serum triglycerides remained virtually unchanged, whereas a slight but significant increase (p less than 0.05) was observed in high-density lipoprotein cholesterol levels at the end of the study period. We conclude that percutaneous estrogen administration produces changes in total serum cholesterol and low-density lipoprotein cholesterol levels similar to those observed after oral estrogen administration. However, the magnitude and time course of the response seem to be modulated by the route of administration. Addition of oral micronized progesterone does not influence the beneficial estrogenic actions on serum lipids and lipoproteins and seems to be a proper “progestogen” in percutaneous estrogen therapy.