



## HOLTORF MEDICAL GROUP, INC.

CENTER FOR HORMONE IMBALANCE, HYPOTHYROIDISM AND FATIGUE

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## Women with low estrogen look significantly older than women the same age with more optimal levels of estrogen

**L**OW ESTROGEN LEVELS are associated with accelerated aging, including the loss of collagen and moisture content of skin as well as increased facial wrinkling. Conversely, natural estrogen replacement has been shown to improve collagen levels and moisture content of the skin and reduce wrinkles.

- A panel of independent reviewers estimated the ages of 100 women, ranging in age from 35 to 55 years old, on their first office visit to a gynecology practice. The women's estimated age was then compared to their real age and the level of estrogen.
- It was found that women with low estrogen levels looked significantly older than their age, and those with more optimal levels looked much younger than their age.
- There was a direct correlation with the level of estrogen and looking older or younger than one's real age. Those with the lowest level of estrogen looked 8 years older than their age and those with the most optimal levels looked 8 years younger than their age (16 year differential).
- The authors state, "*The age of women with low estradiol serum concentrations was systematically overestimated; with increasing serum estrogen levels the reverse was the case. Women with high estrogen concentrations looked younger, while women with low estradiol concentrations looked older than they really were. The discrepancy between estimated and real age could be as high as 8 years in either direction [16 year differential]. These data suggest that serum estrogen concentrations have a pronounced impact on the estimation of age.*"

