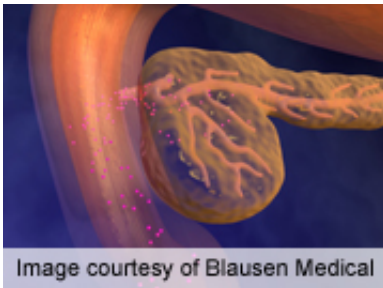


## Dietary PA/OA fat ratio may affect T2DM risk in women only

December 28 2012

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A diet low in palmitic acid and high in oleic acid improves insulin sensitivity and is associated with lower levels of markers of metabolic and oxidative stress in women only, according to a study published online Dec. 13 in *Diabetes*.

(HealthDay)—A diet low in palmitic acid (PA) and high in oleic acid (OA) improves insulin sensitivity and is associated with lower levels of markers of metabolic and oxidative stress in women only, according to a study published online Dec. 13 in *Diabetes*.

C. Lawrence Kien, M.D., Ph.D., from the University of Vermont in Burlington, and colleagues performed comprehensive lipidomic profiling on samples from 18 healthy men and women who were part of a randomized crossover trial comparing a high PA diet to a low PA/high OA diet. Women were studied in the luteal phase of the menstrual cycle.

The researchers found that, in women only, insulin sensitivity and

disposition index were higher with the low PA/high OA diet. Physical fitness at enrollment was positively associated with the effect of the high OA diet on insulin sensitivity, while medium-chain acylcarnitines correlated negatively with insulin sensitivity. One factor was associated with diet and the PA/OA ratio of serum and muscle lipids, and inversely correlated with [insulin sensitivity](#) in women. The high OA diet was accompanied by lower serum and muscle [ceramide](#) levels as well as lower levels of molecular biomarkers of inflammatory and [oxidative stress](#).

"This study provides evidence that the dietary PA/OA ratio impacts [diabetes risk](#) in women," Kien and colleagues conclude.

**More information:** [Abstract](#)  
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