



## Family Members Caring for Relatives with Alzheimer's May Have Shortened Lifespans

The chronic stress that spouses and children develop while caring for family members with Alzheimer's disease may shorten the caregivers' lives by as much as 4 to 8 years, according to a study published in the *Journal of Immunology*.

The study also provides concrete evidence that the effects of chronic stress can be seen at both the genetic and molecular level in caregivers' bodies.

The findings come from a nearly 30-year program at Ohio State University investigating the links between psychological stress and a weakened immune status. Researchers from Ohio State and the National Institute of Aging, using earlier evidence that mothers caring for chronically ill children developed changes in their chromosomes that effectively amounted to several years of additional aging, sought to identify the exact cells involved in the change.

They focused on telomeres, areas of genetic material on the ends of a cell's chromosomes. Over time and with age, telomeres shorten, losing genetic instruction. An enzyme—telomerase—normally works to repair that damage.

For the study, researchers compared a group of Alzheimer's disease

caregivers with an equal number of noncaregivers matched for age, gender, and other aspects, analyzing blood samples and looking for differences in telomeres, telomerase, and immune cells.

Results indicated that the caregivers showed the same kind of patterns present in the study of mothers of chronically ill children and that these changes also amounted to a shortened lifespan of 4 to 8 years.

Other findings included:

- The cells studied represent the whole cell population, suggesting that all the body's cells have aged the same amount. The telomeres of blood cells were also shorter than those of the control group.
- Caregivers' symptoms of depression were twice as severe as those of the control group.
- Caregivers had fewer lymphocytes (key to the immune system) and higher levels of cytokines (key to the inflammation response) than did the control group.

For an emotional perspective of the caregiver role, see Sorrell's article in the November issue of the *Journal of Psychosocial Nursing and Mental Health Services*, which highlights the importance of National Family Caregivers month.

Sources. "Chronic Stress Can Steal Years from Caregivers' Lifetimes." (2007, September 18). Retrieved September 20, 2007, from <http://www.newswise.com/p/articles/view/533485/>.

Sorrell, J.M. *Caring for the caregivers*. *Journal of Psychosocial Nursing and Mental Health Services*, 45(11), 17-20.