

# Loneliness triggers unhealthy immune response, study finds

February 8 2011, By Mark Wheeler

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Loneliness is no fun — and now it appears it's bad for you as well. UCLA researchers report that chronically lonely people may be at higher risk for certain types of inflammatory disease because their feelings of social isolation trigger the activity of pro-inflammatory immune cells.

In their analysis of 93 older adults, UCLA researcher Steven Cole and his colleagues screened for gene function among different types of immune [cells](#) and found that genes originating from two particular cell types — plasmacytoid dendritic cells and monocytes — were overexpressed in chronically lonely individuals, compared with the remainder of the sample.

These cell types produce an inflammatory response to tissue damage, and are part of the immune system's first line of defense, which produces an immediate inflammatory response to tissue damage.

It's this same [inflammatory response](#) that, over the long-term, can promote cardiovascular disease, cancer and neurodegeneration.

The report provides further evidence of how lifestyle and social environments can impact human health. In addition, the researchers suggest that evolutionarily ancient immune system cells may have developed a molecular sensitivity to our social environment in order to help defend us against socially transmitted pathogens.

The research appears in the Feb. 7-11 issue of the journal *Proceedings of*

*the National Academy of Sciences.*

Provided by University of California Los Angeles

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