

Chronic stress, glucocorticoid resistance and inflammatory Response
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The scientific literature provides initial evidence that chronic stress influences the responsiveness of a person's immune system to stress hormones and that tangible social support can buffer these effects. However, it remains unclear whether this observation represents a causal phenomenon. One way to more directly examine the causal nature of the relationship between immune responses and stress hormones is to intervene to reduce levels of stress and determine whether this intervention alleviates the associated changes in the responsiveness of the immune system. The primary goal of this project is to provide preliminary data needed to examine more formally whether a stress-management intervention known to reduce levels of distress and designed to increase tangible support among mothers of children with cancer can also result in a decrease in stimulated levels of certain immune parameters and in the responsiveness of those parameters to stress hormones. In other words, the project can improve upon the existing intervention literature by collecting the preliminary data needed to examine whether an effective stress management intervention alleviates the immune dysregulation that accompanies stress and, as a consequence, may be of both mental and physical health benefit.

This project is an outgrowth of activities of the Pittsburgh Mind-Body Center and represents a supplemental protocol added to a recently NCI-funded study, which is designed to examine the efficacy of a multi-modal psychosocial intervention for children newly diagnosed with cancer and their families. The parent grant does not explore any biological factors but presents an exceptional opportunity to begin to investigate whether a stress-management intervention known to reduce levels of psychological distress among a highly stressed population also benefits the hormonal and immune responses that typically accompany chronic stress and are postulated to result in adverse physical health outcomes.