



EpiCor® Immune Ingredient Offers Support for Women's Evolving Health Needs



Summary: The role of women in American society has changed dramatically since World War II resulting in increased stress levels for modern women.

- Fifty to sixty percent of American women work outside the home, while retaining up to eighty percent of the household responsibilities.
- Research suggests that women may respond to stress differently than men.
- One of the major effects of stress is to reduce the efficiency of the immune system.
- Chronic stress can lead to reduction of Natural Killer (NK) cell activity.
- Hormonal cycling due to menstruation or menopause is thought to reduce the efficiency of the immune response.
- The many effects of stress and hormonal changes suggest that EpiCor, taken daily, would be of great benefit to women concerned about their overall health.



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Health Sciences

Embria Health Sciences
2105 SE Creekview Dr.
Ankeny, IA 50021

TF: 877.362.7421
P: 515.963.9100

More information contact:
info@embriahealth.com or
sales@embriahealth.com

embriahealth.com

World War II

had many profound effects on American society. The industrial effort required to manufacture planes, vehicles and weaponry needed for the war effort mandated that women leave their homes and expand their role in society. With almost every able-bodied man enlisted or drafted into the armed services, women working in wartime factories discovered new skills, strengths and abilities in themselves, and the careers and earning potential open to women expanded greatly. These experiences no doubt contributed to the Women's movement of the 1970's and girls grew up expecting to have careers in any field that interested them. The expanding work lives of women did not, however, diminish their natural roles as caregivers and the era of "Superwoman"—or perhaps "Super Stressed Woman" began.

Fifty to sixty percent of women in the US work outside the home while retaining 75 to 80 percent of household responsibilities^{i, ii}. The pressures of work and home lead to stresses that in turn can adversely affect healthⁱⁱⁱ. A recent study of 562 women found that daily stressors were correlated with reports of physical symptoms such as headache, muscle soreness, cough, cold, sore throat, nausea, stomach problems, chest pain, dizziness and other discomforts reported by women of all ages^{iv}. In this study the authors discussed the role of stress-related daily symptoms in inhibiting immune function and even exacerbating serious health conditions.

Of course, men also experience stress and their health is undoubtedly affected as a result. A study of twenty-one male and thirty four female school teachers with high work stress demonstrated that both sexes exhibited lower Natural Killer (NK) cell activity and higher levels of pro-inflammatory immune activity^v. However, other studies show that women appear to physiologically respond to stress differently than men^{vi, vii, viii}. Results of one study indicated that women are more susceptible to herpes simplex virus than men^{ix}. Research also shows that estrogen enhances the immune system but that hormonal fluctuations due to menstrual cycle or menopause can render a woman's immune system less responsive than ideal^{x, xi, xii}.

Proper immune system function is essential to maintaining good health. The immune system is a complex web of signaling molecules and specialized cells that have the task of protecting a stressed body from harm. The cells and signaling molecules of the innate immune system circulate in the blood stream to detect and respond to invading organisms or foreign substances. NK cells are an important part of this primary, immediate-response defense system. These white blood cells can recognize and destroy infected cells. Their actions are generalized to many types of invaders but lead to activation of the adaptive immune system, which produces antibodies specific to particular foreign particles.

The immune system is also affected by other body systems. Many immune cells respond to levels of stress hormones such as cortisol and glucocorticoids as well as to the neurotransmitters epinephrine and norepinephrine^{xiii}. Reaction to the stress hormones causes the immune system to ramp up expression of its own signaling molecules, which in turn further affects immune system cells. Stress alters both the innate and adaptive immune systems^{xiv}. Brief exposures to stress activate, while chronic stress suppresses both immediate, generalized innate immunity as well as adaptive, specific immunity^{xv}. Sometimes portions of this wonderfully complex system are over active and launch a robust response to foreign particles, such as pollen, that do not pose a health threat. The immune system can also miss-identify the body's own tissues as foreign, resulting in autoimmune disorders such as lupus, rheumatoid arthritis, Crohn's disease and others.

Chronic stress leads to reduction in NK cell activity and in gamma interferon levels^{xvi, xvii}. These reductions render us less able to fight illnesses. Stress can also affect the immune system's ability to respond to administration of flu vaccine^{xviii}. A yearlong study on faculty and staff at the University of Santiago de Compostela, Spain found that stress was highly correlated with naturally occurring incidences of the common cold^{xix}. Stress had been previously correlated with susceptibility to the common cold when subjects were inoculated with cold-causing viruses^{xx}.

What's a "Superwoman" to do about the daily stresses and normal hormonal changes that make her want to take off her cape for good? Our studies indicate that EpiCor would be of great benefit. This one-of-a-kind, all-natural ingredient has been shown to support the activity of NK cells in as little as two hours, as well as B cells, defenders from the innate and adaptive immune systems, respectively^{xxi, xxii}.

Two recent double blind, placebo-controlled studies showed that 500mg of EpiCor per day reduced the occurrence and duration of symptoms of cold and flu over twelve weeks. One of these studies was carried out in people who had received the flu vaccine^{xxiii}; the other was in non-vaccinated individuals^{xxiv}. These effects on the innate and adaptive immune systems indicate that EpiCor can help maintain a balanced immune response. In a later study, people with allergies experienced significantly reduced nasal congestion due to their over-active immune systems when given 500mg of EpiCor daily for 12 weeks^{xxv}.

Whether immediate or adaptive, in-balance or out-of-balance, immune system responses result in inflammation. Animal studies have shown that EpiCor can help balance this aspect of immunity as well. Studies using two different animal models demonstrated that feeding EpiCor reduced the level of inflammatory immune molecules associated with swelling. These as well as studies on the antioxidant capacity of EpiCor should be of interest to anyone concerned about maintaining their health.

The various effects of stress and hormonal level fluctuation on women's immune health make it clear that today's "Superwomen" may benefit from regular dietary supplementation with EpiCor.

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TF: 877.362.7421 | P: 515.963.9100 | info@embriahealth.com | sales@embriahealth.com

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