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## Acta Medica Iranica

2009;47(4) : 117-127

### IMMUNE DYSFUNCTION IN THE ELDERLY: THE ROLE OF NUTRITION

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#### Abstract:

Elderly people experience significantly greater morbidity and mortality from infectious diseases than the general population. This apparent susceptibility to infection in the elderly has been attributed to a decline of immune function with age, termed "immune senescence." The main age-associated immune alterations can be listed as follows: (i) Thymic involution resulting in the decreased number of lymphoid precursor T cells, (ii) Reduced proliferative capacity of T cells to antigenic or mitogenic challenges, (iii) Qualitative deficiency of B cells with a reduced response to exogenous antigens, (iv) Alterations in the production and secretion of various cytokines, (v) Compromised activity of the accessory cells, both directly by depressing the chemotactic and phagocytic responses, and indirectly by increasing the prostaglandin production that inhibit the proliferation of T cells, (vi) Other factors like the general physiological conditions, the nutritional state, psychological habit and various hormone levels. The elderly are particularly susceptible to undernutrition that can be caused by a variety of factors including physiologic and psychologic that affect the desire to eat and pose physical or economic barriers that challenge healthy eating behavior. Clinical trials of nutritional supplementation have achieved varied outcomes. Multivitamin/mineral supplementation enhanced in vitro immune responses in most trials and clinical benefit in a few studies.

#### Keywords:

[Immune function](#)

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