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Upper respiratory tract infection (URTI) regime

This is a regime to address acute upper respiratory tract viral infections and is to be taken for a period of 7 days. It includes the below supplements and their benefits are described as follows:

Vitamin A[1]

Vitamin A may help to prevent most bacterial and viral disease and vitamin A deficiency increases susceptibility to bacterial and viral diseases via numerous mechanisms that involve the immune system.

Vitamin A (50,000-150,000 IU per day for 3-5 days) may exert anti-viral effects against the viruses that cause the common cold and influenza.

Vitamin A may increase the effectiveness of the cells that produce antibodies and increase the proliferation of lymphocytes in response to challenges by antigens and mitogens.

Vitamin A may enhance the function of macrophages, neutrophils and white blood cells.

Vitamin A deficiency may cause a reduction in the production of B-lymphocytes, cause a decline in the production of helper T-cells and impairs the function of NK lymphocytes.

Vitamin C

Bacterial and viral diseases may increase the body's vitamin C requirements and vitamin C may help to counteract many types of bacterial and viral diseases,[1] including the influenza virus.[2]

Vitamin C may help to prevent respiratory tract infections, may reduce the severity of respiratory tract infections and may accelerate the recovery from respiratory tract infections.[1]

Vitamin C may inhibit some types of viruses due in part to its ability to stimulate interferon production.[1]

Vitamin C may help to prevent the common cold and may reduce the severity of symptoms and duration of the common cold in people who become infected with the various viruses that cause the common cold.[1]

Vitamin C may enhance the ability of white blood cells to function as phagocytes and increase the motility and facilitate their transport to the sites of infection.[1]

Vitamin E[3]

Vitamin E is a potent antioxidant and has the ability to modulate host immune functions. It also plays an important role in the differentiation of immature T cells in the thymus.

Vitamin B12

Vitamin B12 has important immunomodulatory effects on cellular immunity, may facilitate the production of antibodies and may accelerate the recovery from bacterial and viral diseases.[1,4]

B12 was also shown to reduce the level of cytokines, increase lymphocytes, increase the CD4/CD8 ratio, restore originally depressed natural killer cell activity and increase the level of immunoglobulins.[4.5]

Folinic acid[1]

Folinic acid is essential for the production of white blood cells and may help to prevent allergies.

Vitamin D3

Results of a randomized controlled trial support the theory that 2,000 IU of vitamin D per day for one year virtually eliminated self-reported incidence of colds and influenza.[1]

Considerable evidence has been presented that influenza epidemics, and perhaps even the common cold, are brought on by seasonal deficiencies within the innate immune response secondary to seasonal deficiencies in vitamin D.[6]

Observational studies suggest that serum levels of 25-hydroxyvitamin D (25[OH]D) are inversely associated with acute respiratory tract infections (ARIs).[7] Vitamin D supplementation significantly reduced the risk of ARIs in winter among Mongolian children with vitamin D deficiency.[7]

Maintenance of a 25-hydroxyvitamin D serum concentration of 38ng/ml or higher should significantly reduce the incidence of acute viral respiratory tract infections and the burden of illness cause thereby, at least during the autumn and winter months.[8]

Flavonoids[9-13]

The stimulated activities of numerous immunity related cell types, including mast cells, basophils, neutrophils, eosinophils, T & B lymphocytes, macrophages, platelets, smooth muscle, hepatocytes, and others, can be influenced by particular flavonoids.[9,10]

Research has highlighted quercetin, hesperetin and catechin as being particularly effective in anti-infective and anti-replicative activity. Good sources of these flavonoids are:

Quercetin	Apples, peppers, dark cherries, all berries, tomatoes, cruciferous vegetables (broccoli, cauliflower, Brussels sprouts, cabbage, kale), green tea
Hesperetin	Citrus fruits (in membrane and peel), apricots, plums, bilberry, green and yellow peppers, broccoli, buckwheat
Catechin	Chocolate (dark 70% +), apple peel, apricots, cherries, peaches, blackberries, black grapes, strawberries, blueberries, raspberries, green tea, pecans, pistachio, almonds, hazelnuts

A considerable body of evidence suggests that plant flavonoids may be health-promoting, disease-preventing and anti-inflammatory dietary compounds.[13]

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