

Why Infections may be Increasing with Human Populations

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- *From:* James Michael Howard <jmhoward@xxxxxxxxxxxxxxxxxxx>
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The increase in MRSA infections may be explained (N Eng J Med. 2006 Aug 17;355(7):666-74). It is my hypothesis that the "secular trend," the increase in size and earlier puberty of children, may be caused by an increase in the percentage of women of higher testosterone within the population over time. It is also my hypothesis that testosterone increases use of DHEA by tissues because of increased androgen receptors as a result of exposure to increased maternal testosterone in utero. I suggest the increase in MRSA and other infectious agents, such as the HIV, are increasing in the population as a result of the secular trend, especially among groups of high testosterone.

I suggest infections stimulate release of DHEA. If this release is too high, as might occur in high testosterone individuals, it causes problems with T cells. HIV infection is known to trigger a very large increase in DHEA and that T cell decline in AIDS. It has been demonstrated that "High doses of DHEA significantly inhibited proliferation of peripheral blood mononuclear cells and T cells induced by T cell mitogens hemagglutinin and concanavalin A." (J Steroid Biochem Mol Biol 2006; 99: 115-20). This may explain why T cells decline in AIDS / HIV. (It is my hypothesis that all of the symptoms of AIDS result from loss of DHEA.) Men and blacks produce more testosterone than whites and AIDS has just recently been labeled a "black disease" in America.

It has also been determined that vancomycin MIC is increased in MSSA (methicillin-sensitive *S. aureus*) and MRSA (methicillin-resistant *S. aureus*) are increased by DHEA, "only in the presence of DHEA, and was not related to altered generation time, indicating induction of phenotypic resistance." (Lett Appl Microbiol 2005; 40: 249-54). "*S. aureus* expresses exotoxins with biological properties of superantigens that induce T-cell activation with subsequent anergy and immunosuppression." (J Dermatol Sci 2006; 42: 203-14). This all may be due to an exaggerated DHEA response to infections.

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I suggest the increase in numerous infections within human populations is caused by an increase of the percentage of women of higher testosterone within the population with time. This increases androgen receptors in children which is causing both acute and long term problems as a result of sudden, excess DHEA and earlier arrival at the natural decline of DHEA production around age twenty to twenty-five years of age.