

Hemp Seed:

The Most Nutritionally Complete Food Source in the World

Part One

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Seeds of the plant *cannabis sativa*, hemp seed, contain all the essential amino acids and essential fatty acids necessary to maintain healthy human life. No other single plant source has the essential amino acids in such an easily digestible form, nor has the essential fatty acids in as perfect a ratio to meet human nutritional needs.

The importance of hemp seed nutrients to human health cannot be fully appreciated without some understanding of biochemistry in life. Unfortunately, any attempt to understand the flow of life leads into the realm of the most troublesome of the three infinities — the infinitely complex.

Some deep thinkers believe life is a paradox not to be understood but experienced to the fullest. However, the Sages have said, "Know thyself." At any rate, it is paradoxical to attempt simplifying the infinite complexity of flowing life. Yet, it is far better for the health and development of any thinking and feeling, uniquely individual human being, to pursue knowledge than to lounge in ignorance.

One out of two Americans will die from the effects of cardiovascular disease (CVD). One out of four Americans will die from cancer. Researchers believe cancers erupt when immune system response is weakened. Pioneers in the fields of biochemistry and human nutrition now believe CVD and most cancers are really diseases of fatty degeneration caused by the continued over-consumption of saturated fats and refined vegetable oils that turn essential fatty acids into carcinogenic killers. And if this is not scary enough, more Americans are succumbing to immune deficiency diseases than ever before. Sadly it is ignorance of human nutritional needs that will cause this overwhelming majority of Americans to die slowly from these afflictions — the greatest killers in affluent nations.

HEMP SEED PROTEINS AND THE BUILDING BLOCKS OF LIFE AND IMMUNITY

There are eight amino acids the human body cannot make and two more the body cannot make in sufficient quantity, so they are essential to life. A diet without any one of them will eventually cause disease and death. These essential

amino acids, along with eleven others the body can make from them, are chained together in accordance to genetic guidelines, via RNA formats from DNA blueprints, into structural proteins that give body to life, and into enzymes (globular proteins) that carry out the mechanics of living.

Nearly three quarters of body solids are proteins. The body is literally constructed and maintained by an infinitely complex system that simply builds proteins from amino acid sub units. Every amino acid consists of an amine and a carboxyl bound to the same carbon atom. All but the smallest amino acid have one, more or less complex, carbon containing side chain connected to the carbon atom shared by the amine and carboxyl groups. The amine group, NH_2 , is slightly basic; the carboxyl group, $COOH$, is a mild acid. The amine group of one amino acid unites with the carboxyl group of another, forming a peptide link. Proteins are made of amino acid peptide chains in specific sequences. The number of possible amino acid peptide combinations is infinite.

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