History of Chelation and EDTA

The Beginning of Chelation Chemistry

The father of modern biochemistry was the French-Swiss chemist, Alfred Werner; who in 1893 developed the theory of coordination compounds, today referred to as chelates. For this turning point in reclassifying inorganic chemical compounds, Werner received the Nobel Prize in 1913. He went on to create accounting for the process by which metals bind to organic molecules, which is the basis for chelation chemistry.

Industrial Production of EDTA Chelation

The first applications of Werner's monumental discovery were in the field of industrial production. Starting in the 1920's, many new materials such as paints were introduced, and in their manufacturing the elimination of heavy metal contamination was crucial. Citric acid was found to be helpful, but in the mid 1930's Germany was motivated to develop its own chelating material and not be dependent on importing citric acid. The synthetic substance they invented was **EDTA** (Ethylene-diamine-tetra-acetate). While the Germans created EDTA for their own purposes, they produced more than they could use and chose to sell it for industrial use in the global market.

Applications for EDTA Chelation

When EDTA was first introduced on the market, medical applications were not yet being considered. However, with war approaching, military workers were looking for possible antidotes for the poison gases that posed an imminent threat. Englandï¿½s experience with poison gasses during World War I prompted researchers at Oxford University to find a chelating substance that could diminish the effects of poison gas exposure.

After World War II, the new threat was atomic warfare. At the time, EDTA was starting to gain recognition for its effective cleansing of toxic materials from the body. As it was found to be more reliable than the British chelation materials that had been previously devised, the United States of America began producing and stockpiling large quantities of EDTA.

In 1983, the formation of the American Board of Chelation Therapy was formed to set parameters for the education and testing of physicians for competence in the administration of EDTA chelation.