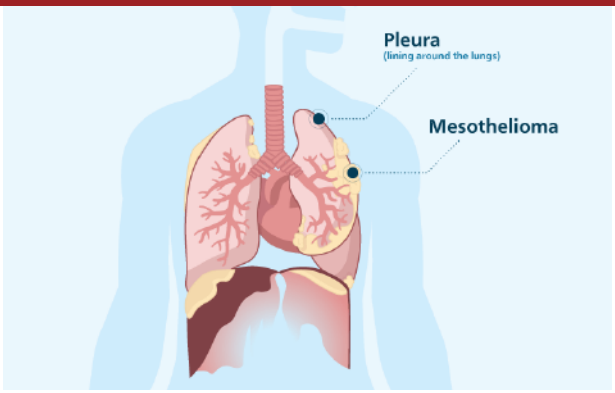
Health Science News Page

Exclusive Information from the Dr. Rath Research Institute

Issue: 1921

# MICRONUTRIENTS CAN BENEFIT IN COMBATTING MESOTHELIOMA




Mesothelioma is an aggressive cancer that affects the lining of the lungs, heart, or abdomen. Although rare, mesothelioma is a very aggressive cancer which is difficult to treat. Its main risk factor is long-term exposure to asbestos. Asbestos exposure is most common in people working in the mining, textile, construction and ship building industries. It takes many decades to develop mesothelioma and this type of cancer is more commonly diagnosed in men over 70 years of age. Every year in the United States close to 3,000 people are diagnosed with mesothelioma. Depending on the stage of the cancer at the time of diagnosis, the average life expectancy of mesothelioma patients varies from 4-18 months. The diagnosis is commonly delayed because the symptoms of mesothelioma are nonspecific such as a cough, difficulty in breathing, fatigue, loss of appetite, and abdominal or chest pain. At the present time, the only treatments available for malignant mesothelioma are surgery, chemotherapy and radiation, and none of them cure mesothelioma.

In our previous cancer research, the researchers at Dr. Rath Research Institute have shown that a specific mixture of micronutrients can block enzymes such as metalloproteinases (MMPs) that are essential for cancer to spread.[1] The natural micronutrient mixture, which includes vitamin C, lysine, proline, and green tea extract, can also increase the level of inhibitors of MMP enzymes (TIMP) which are generated in tissues. The TIMPs are produced internally during the early phases of the development of cancer to slow down the cancer's spread. In the presence of the micronutrient combination production of MMPs decreases and TIMPs increase which facilitates the blocking of the spread of cancer.

In a more recent study at the Dr. Rath Research Institute, we investigated the effect of a synergistic combination of the micronutrients on inducing "suicide" (apoptosis) in mesothelioma cells.[2] Apoptosis is programmed cell death. All normal cells undergo apoptosis and regeneration, however cancer cells change their internal mechanism and escape this step and continue to grow uncontrollably. Another group of enzymes known as caspases, act in earlier stages of apoptosis in normal cells. The study of apoptosis by activation of caspase enzymes is an emerging area of research. Several drugs, including Aspirin and other nonsteroidal anti-inflammatory drugs (NSAIDs), are being researched in cancer cells for their usage as apoptosis inducers. However, all pharmaceutical drugs have side effects of varying severity. Our results indicated that, in addition to inhibition of the spread of mesothelioma, our synergistically acting micronutrient mixture was also able to induce apoptosis in more than 80% of mesothelioma cells, while preserving the normal cells.

Our study has opened an opportunity to explore natural methods to control mesothelioma. By using micronutrients working in synergy, various cellular mechanisms were affected, specifically invasion and metastasis, and apoptosis.

*1. Roomi MW, et al., International Journal of Oncology 42: 1883-1889.*

*2. Roomi MW, et al., Global Journal of Cancer Therapy 5(1): 007-011*

This information is provided to you by the Dr. Rath Research Institute a leader in the breakthrough of natural health research in the field of cancer, cardiovascular disease and other common diseases. The Institute is a 100% subsidiary of the non-profit Dr. Rath Foundation.

The ground-breaking nature of this research poses a threat to the multi-billion dollar pharmaceutical "business with disease". It is no surprise that over the years the drug lobby has attacked Dr. Rath and his research team in an attempt to silence this message. To no avail. During this battle, Dr. Rath has become an internationally renowned advocate for natural health. Says he: "Never in the history of medicine have researchers been so ferociously attacked for their discoveries. It reminds us that health is not given to us voluntarily, but we need to fight for it."



You can print this News Page at: **www.drrathresearch.org,** to share it with your practitioner and others.