

## **Moderate Food Intake/Oxygen Consumption Suppress Life Style-Related Diseases**

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### **Summary**

Provision of excess food and elevated oxygen consumption with hard exercise may shorten the longevity of animals. Increased oxygen consumption results in generation of more reactive oxygen species (ROS) in the body that cause random damage to DNA, proteins and lipids. Lipids composed of polyunsaturated fatty acids (PUFA) are more susceptible to ROS than DNA and proteins, but peroxidation of highly unsaturated n-3 fatty acids is not greater than that of n-6 fatty acids when they are taken into the body. PUFA intake at an appropriate ratio of 1:2 for n-6/n-3 fatty acids is recommended to prevent life style-related diseases. For removal of ROS and peroxidized lipids in the human body, intake of exogenous antioxidants, vitamin E, vitamin C, selenium together with a wide variety of polyphenolics, carotenoids and curcumin is recommended. Self-limited food ingestion, PUFA intake with a good n-6/n-3 fatty acid balance, adequate antioxidant intake and moderate oxygen consumption may suppress life style-related diseases