

[P1-9]

Se nutritional status according to life cycles in adults females measured using neutron activation analysis method

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With increasing age, oxidative stress is increased. Also, most degenerative diseases are known to be associated with the reduction of antioxidative capacity. Therefore, many studies assessed change of antioxidive nutrients such as vitamin E and β -carotene level with people in various life cycle. However, little reports investigated change of antioxidative micro-mineral levels according to life cycles in adults. This study aims to show serum Se level in healthy korean adult women according to age (age of 20, 40 and 60s) and association of blood metabolic indicators. Participants (n=102) who have no high blood HBA1c level, were chosen through nutritional survey around public health center. Serum Se concentration was analyzed by Neutron activation method using Hanaro research reactor after freeze drying of serum. The serum Se levels were decreased significantly with the increasing age, showing $13.3\mu\text{g/dl}$, $11.0\mu\text{g/dl}$, $10.6\mu\text{g/dl}$ respectively in women of age 20s, 40s, and 60s years. The variances of the serum Se level were explained to 62.7% by the age, serum Zn and albumin level. In conclusion, serum Se level decreased with ageing and influenced by the protein nutritional state.