Normal aging is associated with physiological, functional and cognitive decline. Today retired seniors strive to live an active life, including both social and physical activities. In older people subjective well-being is considered an important determinant of health outcomes. Also, physical activity in older people is related to health benefits. In this thesis I studied whether serum biomarkers of somatic health together with physical activity can be a determinant of subjective well-being. I also address the importance of genetic background by genotyping functional polymorphisms in genes with proven roles for cognition (APOE) and dopaminergic neurotransmission (COMT). The findings suggested an interaction between PA and COMT genotype affecting subjective well-being in elderly men but not in women.