Identifying the Motivating Factors Influencing the Enjoyment of Kendo by International Practitioners: A Study to Support International Kendo Adoption and Growth

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(世界剣士が感じる剣道の楽しさの動機要因：国際剣道の普及発展に向けて)

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Abstract

Recent studies suggest that non-high-density lipoprotein cholesterol (non-HDL-C) may be a good marker of coronary heart disease and cardiovascular disease risk. We therefore investigated the relationship between cardiorespiratory fitness (CRF) and non-HDL-C. We evaluated CRF and incidence of high level of non-HDL-C in 4,067 Japanese men without dyslipidemia. Participants were given a submaximal exercise test, a medical examination, and questionnaires on their health habits in 1986. CRF was measured using a cycle ergometer and maximal oxygen uptake was estimated. Incidence of a high level of non-HDL-C (≥170 mg/dL) from 1986 to 2006 was ascertained based on fasting blood levels. During follow-up, a high level of non-HDL-C was found in 1,482 participants. Hazard ratios (HRs) and 95% confidence intervals (CIs) for the incidence of a high level of non-HDL-C were obtained using Cox proportional hazard models. Following age adjustment, and using the lowest CRF group (quartile I) as reference, the HRs and 95% CIs for quartiles II through IV were: 1.00 (95% CI: 0.87-1.15), 0.87 (95% CI: 0.76-1.00), and 0.70 (95% CI: 0.60-0.81), respectively (P for trend < 0.001). After additional adjustment for body mass index, systolic blood pressure, smoking, alcohol intake, and family history of dyslipidemia, the HRs and 95% CIs were: 1.05 (95% CI: 0.92-1.21), 0.94 (95% CI: 0.81-1.08), and 0.79 (95% CI: 0.67-0.92), respectively (P for trend = 0.001). In the present study, we demonstrated that Japanese men with high levels of CRF are less likely to have a high level of non-HDL-C. Our findings indicate that habitual aerobic exercise may prevent a high level of non-HDL-C, a risk factor for coronary heart disease.