

Original Article

# The associations between club head speed and physical fitness factors, and between physical fitness factors and dietary intake in junior elite golfers

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## ABSTRACT

### **【Aim】**

The purpose of this study was to investigate the association between club head speed (CHS) and physical fitness factors in junior elite golfers. Moreover, it examined the link between the physical fitness factors involved in CHS and dietary intake.

### **【Methods】**

A total of ninety-seven (fifty-two male and forty-five female) Japanese elite junior golfers took part in this study. We collected data on basic attributes, body composition, CHS, physical fitness factors, and dietary intake. Physical fitness factors were evaluated using a field test measurement. Multiple regression analysis was used to determine the associations between CHS and physical fitness factors, and between the physical fitness factors involved in CHS and dietary intake.

### **【Results】**

Finally, the study analyzed ninety-five (fifty-two male, forty-three female) Japanese elite junior golfers. Multiple regression analysis revealed that the physical fitness factors associated with CHS among the male and female participants were grip strength, number of sit-ups, number of side-to-side steps, and standing long jump distance. Furthermore, the results showed a significant association between CHS and 50m sprint time, along with sit and reach length among the male participants. The results also revealed that grip strength was associated with grain intake in the male participants.

### **【Conclusion】**

The results showed that the physical fitness factors associated with CHS in Japanese elite junior golfers were upper-extremity strength, trunk-muscle strength and muscular endurance, explosive leg power, level of agility, sprinting ability, and core flexibility. This study also showed that grain intake may be important for the upper-extremity strength in male participants.

**Keywords:** golf, japanese junior elite golfers, club head speed, physical fitness factors, dietary intake