

# Physical and physiological profile in youth elite Chilean wrestlers

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**Background and Study Aim:** The most successful countries in wrestling have many studies that contribute development not only this sport. Results, conclusions and recommendations from these studies being essential to conduct research in Chilean wrestlers to establish indicators of evaluation for the needs of selection and training effects. The cognitive aim of this study is knowledge about physical and physiological profile in youth elite Chilean wrestlers and also correlation of measured specific and general adaptation indicators. **Material and Methods:** Special Wrestling Fitness Test (SWFT), maximum oxygen uptake ( $VO_{2max}$ ), squat jump (SJ), countermovement jump (CMJ), Abalakov's jump (ABK), relative strength index (RSI), handgrip strength, adipose and muscle tissues were measured on 20 young Chilean wrestlers, members of the national team of Chile. Data were analyzed with the GraphPad Prism 8 program, using t Student, Pearson and Spearman tests. For all cases, a significance value of  $p < 0.05$  was established. **Results:** There are significant differences between styles in age ( $p = 0.0139$ ), height ( $p = 0.0413$ ),  $VO_{2max}$  ( $p = 0.0232$ ), handgrip EE ( $p = 0.002$ ), handgrip EB ( $p = 0.0008$ ), SJ ( $p = 0.004$ ), CMJ ( $p = 0.0043$ ), ABK ( $p = 0.0038$ ) and muscle tissue t-score ( $p = 0.0088$ ). Significant correlations were found between the SWFT and  $VO_{2max}$  ( $p < 0.0001$ ), handgrip EE ( $p = 0.012$ ), handgrip EB ( $p = 0.0211$ ), SJ ( $p = 0.0015$ ), CMJ ( $p = 0.0002$ ), ABK ( $p = 0.0001$ ), RSI ( $p = 0.003$ ) and % adipose tissue ( $p < 0.0001$ ). **Conclusions:** All

tests provide relevant information about the wrestler's performance, verifying that there are different physical, physiological and anthropometric variables that can be modified according to the wrestler style. © 2019, the Authors.

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