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Validation of a specific machine to the strength training of judokas.

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With regard to judo players, like all sport activities, strength training can be divided into general and specific strength training. The specific exercises must correspond with the competitive movement. In addition, in terms of structure, they must correspond with regard to the strength time sequence, and they may be executed with overload. With respect to these important elements, we have envisaged the use of a judo-specific machine. The purpose of this study was to validate this judo-specific machine with regard to the strength training of judokas. To that end, we have measured the maximal pulling forces applied at each hand of judokas (n = 18), playing with the judo-specific machine and with a real partner. A significant difference was found between the maximal pulling forces (F collar and F sleeve) obtained utilizing the judo-specific machine (from 4.9 +/- 0.4 N.kg(-1) to 6.4 +/- 0.3 N.kg(-1) for F collar; from 4.8 +/- 0.2 N.kg(-1) to 6.3 +/- 0.3 N.kg(-1) for F sleeve) and performing with a partner (2.7 +/- 0.2 N.kg(-1) for F collar; 2.5 +/- 0.3 N.kg(-1) for F sleeve). This can be explained by the fact that the partner opposes a low resistance during the judo-throwing technique in comparison with the judo-specific machine. These results show that the judo-specific machine might be used by the judokas to execute specific exercises with overload.