

## COMMENTARY TO HABILITATION THESIS<sup>1</sup>

The main purpose of the habilitation thesis entitled "High-intensity functional training" is to introduce a relatively new sports discipline and to describe selected aspects in detail. High-intensity functional training (HIFT) represents a specific variable and effective form of exercise that is designed for both the general and performance-oriented population. The full establishment of any sports discipline also requires scientific research activities covering various areas. This thesis is a compilation of scientific articles in which the author has made significant contributions. It is divided into thematic sections: Definition of HIFT, Training, Performance, Air bike, and Health aspects.

**[1] Schlegel, P. (2020).** CrossFit training strategies from the perspective of concurrent training: A systematic review. *Journal of Sport Science and Medicine*. 19, 670-680.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
100	100	100	100

**[2] Schlegel, P. (2020).** Nový trend v používání zakázaných látek v CrossFitu. *Tělesná kultura*. 43 (1), 41-50.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
100	100	100	100

**[3] Schlegel, P. (corresponding author), Režný, L., & Fialová, D. (2020).** Pilot study: Performance-ranking relationship analysis in Czech crossfitters. *Journal of human Sport and exercise*. (16)1.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
80	75	90	100

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<sup>1</sup> The commentary must correspond to standard expectations in the field and must include a brief characteristic of the investigated matter, objectives of the work, employed methodologies, obtained results and, in case of co-authored works, a passage characterising the applicant's contribution in terms of both quality and content.

**[4] Schlegel, P.** CrossFit ve výuce školní tělesné výchovy. In Schlegel, P. a kolektiv. (2020). *Funkční trénink v tělesné výchově* (s. 113-126). Hradec Králové: Gaudeamus. ISBN: 978-80-7435-803-6.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
100	100	100	100

**[5] Schlegel, P. (corresponding author), & Křehký, A.** (2020). Anaerobic Fitness Testing in Crossfit. *Acta Facultatis Educationis Physicae Universitatis Comenianae*, 60(2), 217-228.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
85	100	95	100

**[6] Schlegel, P. (corresponding author), Hiblbauer, J., Agricola, A.** (2020). Near infrared spectroscopy and spiroergometry testing in Crossfit. *Studia Sportiva*, 14, 6-14.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
65	95	95	90

**[7] Schlegel, P.** (2021). Vymezení aktuálních pojmů z oblasti fitness: vysoce intenzivní funkční trénink, vysoce intenzivní intervalový trénink, funkční trénink, kruhový trénink, CrossFit®. *Tělesná kultura*. 44 (1). 1-8.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
100	100	100	100

**[8] Schlegel, P.** (2022). Health benefits of using air biking: a systematic review. *Journal of Sport and Health Research*. 14(3), 345-358.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
100	100	100	100

**[9] Schlegel, P. (corresponding author), Křehký, A.** (2022). Performance sex differences in CrossFit. *Sports*. 10, 165.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
85	95	100	100

**[10] Schlegel, P. (corresponding author), Křehký, A., Hiblbauer, J.** (2022). Physical Fitness Improvement after 8 Weeks of High-intensity Interval Training with Air Bike. *Sport Mont*. 20 (3), 75-80.

Experimental work (%)	Supervision (%)	Manuscript (%)	Research direction (%)
80	90	95	95

[11] Schlegel, P. (2022). High-intensity functional training in pregnancy: a case study. *Studia Sportiva*.

<b>Experimental work (%)</b>	<b>Supervision (%)</b>	<b>Manuscript (%)</b>	<b>Research direction (%)</b>
100	100	100	100