

# **Sport and autism spectrum disorders: proposed recommendations based on current literature**

Célia Ruffino<sup>a\*</sup>, Nicolas Gueugneau<sup>b</sup>, Cyrielle Derguy<sup>c</sup>, Sidney Grosprêtre<sup>a</sup>

<sup>a</sup>*C3S Laboratory, Besançon, France*

<sup>b</sup>*ELLIAD Laboratory, Besançon, France*

<sup>c</sup>*Psychopathology and Health Processes Laboratory, Boulogne-Billancourt, France.*

\*corresponding author: [celia.ruffino@univ-fcomte.fr](mailto:celia.ruffino@univ-fcomte.fr)

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## ***Context***

Autism Spectrum Disorders (ASD) are generally described in terms of two major characteristics: 1) deficits in communication/social interaction and 2) restricted and repetitive behaviours/interests. More recent literature also mentions associated motor disorders (1). Among the activities offered to them, physical activity (PA) seems to be a good candidate for alleviating, at least, all the disorders associated with this spectrum (2). Despite this, there are no clear recommendations as to which activities are preferable.

## ***Material and method***

In a review of the literature, we proposed an original summary to help the various stakeholders their PAs more effectively. Three experimenters used three databases (PubMed, Science Direct, Web Of Science), and using different keywords ('autism', 'sport', 'physical activity', 'autism spectrum disorder', etc.) have selected from over 2,000 articles (up to July 2023) only longitudinal studies that tested the chronic effects of a PA intervention on an autistic population.

## ***Results***

In the end, only 75 articles were retained after application of our criteria. Of these, the average duration of the protocols was  $11.6 \pm 6.1$  weeks, with an average frequency of  $2.7 \pm 1.5$  sessions per week. The sessions lasted an average of  $49.1 \pm 16.5$  minutes. As regards the type of sport to be favoured, the authors show that individual sports (such as martial arts) offer many advantages in terms of motor and physical skills, but also in terms of certain characteristics specific to autism. Team sports, although potentially destabilising in terms of the communication problems that autistic people may experience, seem to offer more benefits. The literature takes very little account of the type of environment. In spite of everything, indoor activities, favouring a controllable and predictable environment, should be favoured. However, outdoor activities, such as golf or horse riding, also induce a reassuring environment.

Finally, with regard to the closed (such as gymnastics) or open (such as team sports) nature of the activity, the literature shows that team sports, for example, are beneficial for both social and motor aspects, despite their highly unpredictable nature.

## ***Discussion and conclusion***

No consensus seems to have been reached on the type of practice to be favoured, with scientific studies showing benefits for many of them. Many authors agree that the choice of activity should ultimately be dictated mainly by the autistic person's personal preference. However, even if quantitative data in terms of duration and frequency emerge from the articles, they are far from being accessible and sustainable in terms of the reality in the field.

## ***Bibliographical references***

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