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Infographic

INFOGRAPHIC: Developmental Coordination Disorder (part II) - recommendations for motor interventions

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ABBREVIATIONS

BF	Body Function and Structure
CO-OP	Cognitive Orientation to Daily Occupational Performance
DCD	Developmental Coordination Disorder
ICF	International Classification of Functioning
NTT	Neuromotor Task Training

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INTRODUCTION

Children with Developmental Coordination Disorder (DCD) have motor coordination below expectations for their chronologic age and are commonly described as clumsy [1]. The goal of this infographic is to provide information on recommendations for motor intervention of DCD based on information available on a recent study [2]. Overall, the literature affirms that children with a diagnosis of DCD should receive intervention. Both physical and occupational therapy are recommended and can help children perform everyday tasks. According to the international clinical practice guidelines [3], when planning a program of intervention, it is recommended that both the strengths and weaknesses of the individual in their environmental context should be taken into account in order to improve motor function, activity, and participation.

Smits-Engelsman and colleagues [2] classified motor interventions with basis on the International Classification of Functioning (ICF) framework: 1) body function and structure (BF) oriented, where the activity engaged in is designed to improve targeted body functions considered to underlie the reported functional motor problem; 2) activity oriented where the activity engaged in is designed to improve performance in that activity; and 3) participation oriented, where the activity engaged in is designed to improve participation in that activity in an everyday life situation. Overall, positive benefits were evident for activity-oriented approaches, body function-oriented when combined with activities, active video games, and small group programs [2]. However, the authors explained the need for more rigorous RCTs with follow-up to demonstrate sustained change rather than just short-term gains in performance.

A specific approach that shows overall effectiveness is the Cognitive Orientation to daily Occupational Performance (CO-OP), which is an individualized, task-specific (activity-oriented), cognitive-based, problem-solving approach for individuals experiencing difficulties performing the skills they want or need to do. A recent randomized waitlist-control trial showed that CO-OP was effective in achieving and maintaining functional motor goals after 3 months for children with DCD [4].

Other specific recommendations involve the incorporation of physical fitness (cardiorespiratory fitness and functional strength) protocols, Neuromotor Task Training (NTT), and the use of motor imagery training [3]. The severity of motor impairment affects not only the presentation of DCD but also participation, which has important implications for treatment [3]. Different interventions may be required at key stages of development or periods of transition to target participation [5]. Overall, it is recommended that individuals with DCD are given ample opportunity to practice movement skills to learn them and to participate in daily activities (e.g., at home, school, in community and leisure settings, and in sports).

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