APTA Academy of Pediatric Physical Therapy

CLINICAL PRACTICE GUIDELINE Supplemental Digital Content

Physical Therapy Management of Children with Developmental Coordination Disorder:

A 2026 Evidence-Based Clinical Practice Guideline from the American Physical Therapy Association Academy of Pediatric Physical Therapy (2026 DCD CPG)

Supplemental Digital Content

Supplemental tools can be downloaded from the APTA Pediatrics website (https://pediatricapta.org/clinical-practice-guidelines)

Barbara Sargent, PT, PhD, PCS; Melinda Mueller, PT, DPT, PCS;
Erin Iverson, PT, DPT, PCS; Megan Frazier, PT, DPT, PCS;
Sandra L Kaplan, PT, DPT, PhD, FAPTA

This is a supplement to the content in the 2026 Physical Therapy Management of Children with Developmental Coordination Disorder Clinical Practice Guideline (2026 DCD CPG). Readers are advised to refer to both documents for explanations, and to share both documents if forwarding the 2026 DCD CPG to colleagues or families. Comments are welcome and may be sent to dcdguidelines@gmail.com.

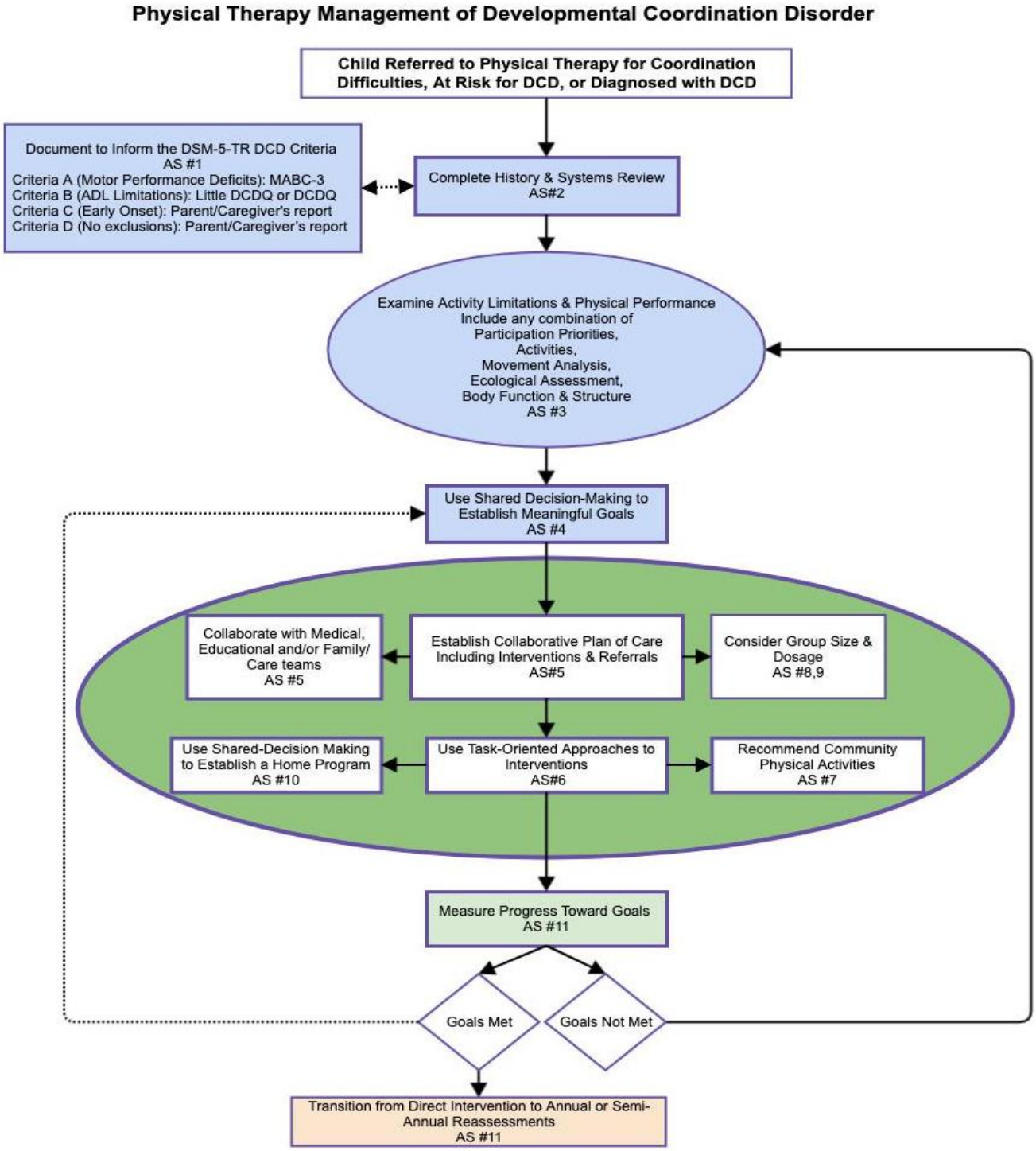
Supplemental Digital Content for: Sargent B, Mueller M, Iverson E, Frazier M, Kaplan SL. Physical therapy management of children with developmental coordination disorder: A 2026 evidence-based clinical practice guideline from the American Physical Therapy Association Academy of Pediatric Physical Therapy.

TABLE OF CONTENTS

All content: url to document

GUIDELINE RESOURCES

Figure S1: Physical Therapy Management of Developmental Coordination Disorder Algorithm



Abbreviations
ADL: Activities of daily living
AS: Action Statement
DCD: Developmental coordination disorder
DCDQ: Developmental Coordination Disorder Questionnaire
DSM-5-TR: The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition, Text Revision
MABC-3: Movement Assessment Battery for Children, 3rd Edition

Supplemental Digital Content for: Sargent B, Mueller M, Iverson E, Frazier M, Kaplan SL. Physical therapy management of children with developmental coordination disorder: A 2026 evidence-based clinical practice guideline from the American Physical Therapy Association Academy of Pediatric Physical Therapy.

Table S1: Summary and Status of Action Statements for the 2026 Developmental Coordination Disorder Clinical Practice Guideline

	I. PHYSICAL THERAPY EXAMINATION, EVALUATION, AND REFERRAL OF CHILDREN WITH COORDINATION DIFFICULTIES, AT RISK FOR DCD, OR DIAGNOSED WITH DCD
A	**Action Statement 1: DOCUMENT TO INFORM THE FOUR DSM-5-TR CRITERIA.** Physical therapists who are examining a child referred for coordination difficulties should document the following to inform the four DSM-5-TR criteria when the signs and symptoms are suggestive of DCD. The following are recommended to inform each criterion: ● Criterion A (Motor Performance Deficits): MABC-3; ● Criterion B (Participation and ADL Limitations): Little DCDQ or DCDQ; ● Criterion C (Early Onset): Parent/Caregiver's report of onset of coordination concerns; ● Criterion D (No Exclusionary Conditions): Parent/Caregiver's report of other medical conditions and/or the physical therapist's evaluation suggests that the motor performance deficits are not better explained by another condition affecting movement. (Evidence Quality: **I;** Recommendation Strength: **Strong**)
P	**Action Statement 2: COMPLETE A HISTORY AND SYSTEMS REVIEW.** Physical therapists should obtain and document a comprehensive history and systems review for a child referred for coordination difficulties, at risk for DCD, or diagnosed with DCD. (Evidence Quality: **V;** Recommendation Strength: **Best Practice**)
A	**Action Statement 3: EXAMINE ACTIVITY LIMITATIONS AND PHYSICAL PERFORMANCE.** When a child presents with coordination difficulties, physical therapists should perform a comprehensive physical therapy examination and evaluation targeting participation priorities, which should include any combination of: ● Measures of participation ● Measures of activity ● Movement analysis/observation ● Ecological assessment, if warranted ● Assessments of body functions and structures, if warranted (Evidence Quality: **I;** Recommendation Strength: **Strong**)
B	**Action Statement 4: USE SHARED DECISION-MAKING TO ESTABLISH MEANINGFUL GOALS.** For children at risk for DCD or diagnosed with DCD, physical therapists should use shared decision-making with the child and family to establish measurable child-centered functional goals based on their participation priorities during the initial and subsequent examinations. (Evidence Quality: **II**; Recommendation Strength: **Moderate**)
P	**Action Statement 5: ESTABLISH COLLABORATIVE PLAN OF CARE.** Physical therapists should use shared decision-making with the child, family, and other relevant service providers to establish a collaborative plan of care that may include referral of children to their primary care provider when signs and symptoms are suggestive of DCD and the child has not been diagnosed and/or if there are red flags or concerns for other medical conditions. (Evidence Quality: **V;** Recommendation Strength: **Best Practice**)
	II. PHYSICAL THERAPY INTERVENTION FOR CHILDREN AT RISK FOR DCD OR DIAGNOSED WITH DCD*
A	**Action Statement 6: USE TASK-ORIENTED APPROACHES TO INTERVENTION.** For children at risk for DCD or diagnosed with DCD, physical therapists should use and document task-oriented approaches to intervention, guided by the child's goals and meaningful activities, with body function and structure interventions used only when directly supporting the achievement of the child's goals. (Evidence Quality: **I;** Recommendation Strength: **Strong**)
A	**Action Statement 7: RECOMMEND COMMUNITY PHYSICAL ACTIVITIES.** After appraising the appropriateness for the child, physical therapists should recommend evidence-informed, community physical activities to complement task-oriented approaches to intervention for children at risk for DCD or diagnosed with DCD. (Evidence Quality: **I;** Recommendation Strength: **Strong**)
A	**Action Statement 8: USE SMALL GROUP OR INDIVIDUAL SESSIONS.** For children at risk for DCD or diagnosed with DCD, physical therapists should document and deliver interventions using individual (1:1) or small group (1:4-6) sessions. (Evidence Quality: **I;** Recommendation Strength: **Strong**)
B	**Action Statement 9: PROVIDE APPROPRIATE INTERVENTION DOSAGE.** For children at risk for DCD or diagnosed with DCD, physical therapists should design episodic intervention plans with high practice frequencies, using a combination of direct services and home, school, and community opportunities. (Evidence Quality: **II**; Recommendation Strength: **Moderate**)
B	**Action Statement 10: USE SHARED DECISION-MAKING TO ESTABLISH A HOME PROGRAM.** For children at risk for DCD or diagnosed with DCD, physical therapists should use shared decision-making with the child, parents/caregivers, and other relevant service providers to establish a meaningful home program that may include education, coaching, motor skill practice, or community physical activities to support attainment of the child's goals and participation in activities with family and peers. (Evidence Quality: **II;** Recommendation Strength: **Moderate**)
	III. MONITORING CHILDREN AT RISK FOR DCD OR DIAGNOSED WITH DCD
P	**Action Statement 11: MEASURE PROGRESS TOWARDS GOALS.** For children at risk for DCD or diagnosed with DCD, physical therapists should regularly measure progress towards their goals to determine with parents/caregivers whether physical therapy interventions should be modified, new goals should be established, or if the children should be transitioned from direct intervention to annual or semi-annual physical therapy re-evaluations. (Evidence Quality: **V;** Recommendation Strength: **Best Practice**)

Abbreviations: **ADL**, activities of daily living; **DCD**, developmental coordination disorder; **DCDQ**, Developmental Coordination Disorder Questionnaire; **Little DCDQ**, Little Developmental Coordination Disorder Questionnaire; **DSM-5-TR**, Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision; MABC-3, Movement Assessment Battery for Children, Third Edition.
*, the Action Statements in the Physical Therapy Intervention section are not in sequence, but should be considered together as a whole.

GENERAL GUIDELINE IMPLEMENTATION STRATEGIES

There is a growing body of evidence on implementing research into practice. The following suggestions are provided as general strategies for clinicians to implement the action statements of the 2026 DCD CPG but are not an exhaustive review. Many variables impact the successful translation of evidence into practice; clinicians will need to assess their own practice structures, cultures, and clinical skills to determine how to best implement the action statements as individuals and how to facilitate implementation by others. The guideline development group (GDG) recommends that:

- Education about the 2026 DCD CPG should be included in physical therapy curricula.
- Continuing education programs should be provided to physical therapists on the 2026 DCD CPG.
- PTs should distribute brochures developed by APTA Pediatrics (https://pediatricapta.org/clinical-practice-guidelines/) that summarize the applicable key points of the 2026 DCD CPG to parents, health care providers, and educators.

Strategies for Individual Implementation

- Seek training to use the recommended standardized measures and/or intervention approaches.
- Build relationships with referral sources to encourage early referral of children with delayed motor skill development or difficulty coordinating movement.
- Provide education to referral sources and community resources on developmental coordination disorder (DCD).
- Measure individual service outcomes of care (e.g., patient outcomes across the International Classification of Functioning, Disability and Health (ICF) domains, costs, parent/caregiver satisfaction).

Strategies for Facilitating Clinical Practice Guideline Implementation with Other Clinicians

- Recognize that adoption of the recommendations by others may require time to learn about the 2026 DCD CPG content, develop a positive attitude toward adopting the action statements, compare what is already done with the recommended actions, trial selected practice changes to determine their efficacy, and establish routine integration of the tested changes.
- Identify early adopting clinicians as opinion leaders to introduce the guideline via journal clubs or staff presentations.
- Identify gaps in knowledge and skills following content presentations to determine staff needs to implement recommendations.
- Use documentation templates to facilitate standardized collection and implementation of the recommended measures and actions.
- Institute quality assurance processes to monitor the routine collection of recommended data and implementation of recommendations and to identify barriers to complete collection.
- Measure structural outcomes (e.g., dates of referral, equipment availability), process outcomes (e.g., use of tests and measures, breadth of plan of care), and service outcomes (e.g., effects of intervention across the ICF domains, costs, parent/caregiver satisfaction) to describe service delivery patterns and publish results.

EVIDENCE TABLES

Table S2: Systematic Reviews of Test and Measures for Children with Developmental Coordination Disorder limited to the most recent 10 years						
Author, Year	**ROBIS Quality Rating/ Quality Rating**	**Aim**	**Test and Measures Reviewed**	**Date Range & Studies**	**Quality of Evidence**	**Clinical Implications**
Long et al, 2025	Low concerns, Level I	Systematically review current evidence on the content of physical therapy examination and evaluation to inform the update to the 2020 DCD CPG.	Over 40 tests used in the physical therapy management of DCD to screen children for DCD, inform diagnostic criteria, stratify children based on prognostic indicators, or measure motor outcomes in response to physical therapy intervention.	Jan 2018-July 2024 3 SR 30 cohort studies	ROBIS for SRs of assessment tools. All 3 SR were rated high concerns. COSMIN and modified GRADE for cohort studies of psychometric properties. Each psychometric property for each test was appraised. Evidence ranged from high to very low.	The recommendation strength for the use of the COPM remains moderate, the use of the DCDQ and MABC-2-C including culturally-adapted versions remains moderate, the use of the MABC-2 may increase from moderate to strong, the use of examining BFS remains moderate. Other tests the GDG may consider adding to the updated DCD CPG are the LDCDQ and DCDDaily.
Huang, et al, 2024	Moderate/unclear concerns (due to search limited to 2 languages, no justification of excluding individual studies, no information whether data extracted in duplicate, ROB not provided for individual studies), Level I	Systematically review instruments assessing the activity and participation of children with DCD and analyze the quality and current level of evidence regarding their measurement properties.	28 different outcome measure instruments in children with DCD separated into 12 standardized clinical tests (most common: MABC-2, BOT-2) and 16 questionnaires (most common DCDQ, LDCDQ).	1990-Jan 2023 96 studies	COSMIN and modified GRADE for cohort studies of psychometric properties. Each psychometric property for each test was appraised. Evidence ranged from high to very low.	The MABC-2 was recommended for assessing motor-based activity (DSM-5-TR criteria A) based on moderate-to high-quality evidence showing satisfactory ratings for most measurement properties. The DCDQ and LDCDQ were recommended to provide information on daily activity limitations (DSM-5-TR criteria B), supported by adequate measurement properties with moderate-to high-quality evidence.
Park & Kim, 2024	Moderate/unclear concerns (due to not pre-registered, references not checked or experts contacted, no justification of excluding individual studies, ROB not provided for individual studies), Level I	Systematically review studies on the predictive validity of the DCDQ and perform a meta-analysis on its diagnostic accuracy.	DCDQ	Inception-May 2023 27 studies	Quality Assessment of Diagnostic Accuracy Studies-2 5 studies had a low ROB across all domains. 22 studies had unclear or high ROB in 1 ≤ domains.	The DCDQ had high diagnostic accuracy (sROC AUC=0.90, SE=0.04) and good predictive validity (sensitivity = 0.87, specificity = 0.83) when the DSM was used as a reference standard (5 studies, 279 children).
De Roubaix et al, 2021	High concerns (due to search limited to 3 languages and references not checked or experts contacted, no justification of excluding individual studies, data extraction completed by one author), Level II	Systematically review the available standardized motor assessments before 5 years of age predicting DCD, cMND and motor delay assessed by a standardized motor test.	CAMPB, GmA/MOS, GMDS, PDMS	Inception-2020 Qualitative for DCD: 2 studies, Qualitative for probable DCD: 2 studies.	Quality Assessment Tool for observational cohort and cross-sectional studies. Fair quality in the 4 studies	The four studies suggest minor evidence that at 3 years the CAMPB, the GMDS locomotor scale, and the PDMS may have some predictive value for (probable) DCD, while the GmA and MOS at 3-5 months do not.

Supplemental Digital Content for: Sargent B, Mueller M, Iverson E, Frazier M, Kaplan SL. Physical therapy management of children with developmental coordination disorder: A 2026 evidence-based clinical practice guideline from the American Physical Therapy Association Academy of Pediatric Physical Therapy.

Table S2: Systematic Reviews of Test and Measures for Children with Developmental Coordination Disorder limited to the most recent 10 years						
Aertssen et al, 2020	High concerns (due to not pre-registered, search limited to English and no experts contacted, no justification of excluding individual studies), Level II	Systematically review field-based tests for strength and anaerobic capacity used in studies comparing children with DCD and TD, and summarize available evidence.	Over 28 field-based tests for strength and anaerobic capacity.	1980- July 2019 Qualitative for difference between DCD and TD: 23 studies. Qualitative for psychometric properties of tests for DCD: 1 study that investigated 4 tests.	Study quality was rated as very good for reliability, measurement error, construct validity; adequate for content validity; and doubtful for responsiveness for the MPST, 10 X 5 m spring (straight and slalom), and BOT-2 SR item.	Based on the results of 1 study, the BOT-2 SR item and the 10 X 5 m sprint (straight and slalom) are recommended to test anaerobic capacity of children with DCD.
Asunta et al, 2019	High concerns (due to ROB of individual psychometric properties not assessed, no justification of excluding individual studies), Level II	Systematically review the psychometric properties of questionnaire-based tools to identify motor difficulties in school-aged children to inform population-based screening of DCD	Teachers: ● ChAS-T ● Checklist ● GMRS ● MABC-2-C ● MOQ-T ● TEAF Parents: ● CAMP ● CBCL ● ChAS-P ● DCDQ ● DCDDaily-Q Children: ● CSAPPA	1994-2017 Qualitative: 45 studies	Modified GRADE approach High confidence in the results for 22%, moderate for 67%, low for 7%, and very low for 4% of studies	No questionnaire was valid for population-based screening of DCD as the only measurement tool due to low sensitivity or specificity or only superficially assessed reliability.

Abbreviations: **AUC**, area under the curve; **BFS,** body functions and structures; **BOT-2**, Bruininks-Oseretsky Test of Motor Performance, Second Edition; **BOT-2 SR item**, Bruininks-Oseretsky Test of Motor Proficiency Second Edition - shuttle run test; **CAMP**, Caregiver Assessment of Movement Participation; **CAMPB**, Combined Assessment of Motor Performance and Behavior; **CBCL**, Child Behavior Checklist; **ChAS-P**, Children Activity Scales for teachers; **ChAS-T**, Children Activity Scales for teachers; **cMND**, complex Minor Neurological Disorder; **COPM,** Canadian Occupational Performance Measure; **COSMIN,** COnsensus-based Standards for the selection of health Measurement INstruments; **CPG**, clinical practice guideline; **CSAPPA**, Children's Self-Perceptions of Adequacy in and Predilection for Physical Activity Scale; **DCD**, Developmental Coordination Disorder; **DCDDaily-Q**, DCD Daily – Parent Questionnaire; **DCDQ**, Developmental Coordination Disorder Questionnaire; **DSM-5-TR**, Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision; **GDG,** guideline development group; **GmA/MOS**, General Movements Assessment including Motor Optimality Score; **GMDS**, Griffiths Mental Development Scales; **GMRS**, Gross Motor Rating Scale; **GRADE**, Grading of Recommendations, Assessment, Development, and Evaluations; **LDCDQ,** Little Developmental Coordination Disorder Questionnaire; **MABC-2**, Movement Assessment Battery for Children, Second Edition; **MABC-2-C**, Movement Assessment Battery for Children Checklist - Second Edition; **MOQ-T**, Motor Observation Questionnaire for Teachers; **MPST**, muscle power sprint test; **PDMS**, Peabody Developmental Motor Scales; **ROB**, risk of bias; **ROBIS**, Risk of Bias in Systematic Reviews; **SE**, standard error; **SR,** systematic review; **SROC**, summary receiver operating characteristic; **TD**, typically developing; **TEAF**, Teacher Estimation of Activity Forms.

Table S3: Systematic Reviews/Meta-analyses of Interventions for Children with Developmental Coordination Disorder limited to the most recent 10 years							
Author, Year	**AMSTAR-2 Score/ Quality Rating**	**Aim**	**Intervention of Interest and Outcome Measures**	**Date Range & Studies (participants)**	**Quality of Evidence**	**Relative Effects**	**Clinical Implications**
Iwamoto et al, 2025	High confidence in results, Level I	Systematically review current evidence on physical therapy intervention for DCD to inform the update of the 2020 DCD CPG.	Intervention: gross motor intervention Outcome: Measures of motor function (participation, activity, BFS) Qualitative data that directly informs physical therapy intervention	Jan 2018-July 2024 4 SR, 10 RCTs, 2 qualitative studies	AMSTAR-2 for SRs. All 4 SR were rated low to critically low confidence in the results. Cochrane RoB 2 for RCTs. ROB was rated high for 8 studies and some concerns for 2 studies. CASP for 2 qualitative studies. Both studies had adequate methodological quality.	For children at risk for DCD or diagnosed with DCD, those who received task-oriented interventions, compared with those who received standard care, scored an SMD of 0.82 (95% CI -0.27 to 1.90, *p*=0.14) higher on the MABC-2 total score immediately post intervention (large effect but not statistically significant; substantial heterogeneity; 3 studies; 95 children). For children at risk for DCD or diagnosed with DCD, no difference was found between CO-OP and a standard care control group on MABC-2 total score immediately post intervention (SMD 0.27, 95% CI -0.29 to 0.83, *p*=0.35; low heterogeneity; 2 studies; 67 children). For children with DCD, no difference was found between AVG and task-specific intervention on MABC-2 total score immediately post intervention (SMD 0.11, 95% CI -0.55 to 0.76, *p*=0.75; substantial heterogeneity; 2 studies; 75 children).	New evidence reaffirms 3 of 5 action statements (Action statements 8, 10, 11) on intervention. The recommendation strength for motor skill training remains strong. The recommendation strength for CO-OP remains moderate. The recommendation strength for TKD remains moderate. Other physical activities that may be considered by the GDG for recommendation at the weak or moderate level include: equine therapy to improve gait parameters, teaching futsal using a specific approach to improve motor proficiency, table tennis to improve aiming and catching, tai chi or muscle power training to reduce falls, and trampoline training to improve motor performance. The recommendation strength for providing education and home management programs remains moderate, but newer evidence informs the parent/caregiver perspective on the benefits and challenges of implementing the CO-OP approach at home.

Supplemental Digital Content for: Sargent B, Mueller M, Iverson E, Frazier M, Kaplan SL. Physical therapy management of children with developmental coordination disorder: A 2026 evidence-based clinical practice guideline from the American Physical Therapy Association Academy of Pediatric Physical Therapy.

Table S3: Systematic Reviews/Meta-analyses of Interventions for Children with Developmental Coordination Disorder limited to the most recent 10 years							
Gao, et al, 2025	Critically low confidence in the results (due to only included studies in English, inadequate search because did not check references or consult experts, no justification of excluding individual studies), Level II	Systematically review: (1) the intervention effects of MBI on motor tests, BFS, activity and participation, and psychosocial factors of children with DCD, and (2) explore the differential effects of different types of interventions on outcome parameters.	Intervention: motor-based intervention (MBI) Outcome: Measures of motor function (standardized motor tests, participation and activity, BFS) and psychosocial factors. Also explored the differential effects of different types of interventions on outcome parameters.	Inception to Jan 2024 32 RCTs	Assessed studies with Cochrane RoB tool. 7 RCTs had a low risk of bias on > 6 criteria, 5 RCTs on 5 criteria, 12 RCTs on 4 criteria, 7 RCTs on 3 criteria, and 1 RCT on 2 criteria.	A total of 32 studies were included in one or more of 18 meta-analyses. The results showed that MBI significantly improved the overall motor skills (g = 1.00, 95%CI [0.48,1.52], p < 0.001), balance function (g = 0.57, 95%CI [0.17,0.97], p = 0.005), cognitive function (g = 1.53, 95%CI [0.67,2.39], p = 0.001), muscle function (g = 0.91, 95%CI [0.17,1.66], p = 0.017), coordination function (g = 0.47, 95%CI [0.04,0.90], p = 0.032), visual function (g = 0.61, 95%CI [0.15,1.08], p = 0.009), sensory function (g = 0.85, 95%CI [0.34,1.35], p = 0.001), sensory organization function (g = 0.61, 95%CI [0.27,0.96], p = 0.001) and activity performance (g = 0.71, 95%CI [0.23,1.19], p = 0.004), but improvements in children's psychosocial factors (g = 0.71, 95%CI [− 0.08,1.50], p = 0.079) were not significant, nor were improvements in children's participation levels.	For children with or with probable DCD, MBI significantly improves overall motor skills, body functions, and activity performance. However, no improvement in children's level of participation or psychosocial factors was found. Further analysis revealed that task-oriented training had a significant positive effect on overall motor skills, body function, and activity levels.
Alghadier & Alhusayni, 2024	Critically low confidence in the results (due to only included studies in English, inadequate search since did not check references or consult experts, no justification of excluding individual studies), Level II	Systematically review the effectiveness of gross-motor-based interventions for children with DCD	Intervention: gross-motor-based interventions (eg AVG, FMS, motor skill training, TKD), Outcome measures: Motor outcomes (participation, activity, BFS)	Jan 2010- Dec 2022 11 studies	Assessed studies with PEDro Scale and Cochrane RoB tool. PEDro scores ranged from 5-10, Cochrane RoB scores had at least 1 domain rated as high for 10 of 11 studies	No meta-analysis	Positive outcomes were observed for gross-motor-based interventions on activity and body function.

Table S3: Systematic Reviews/Meta-analyses of Interventions for Children with Developmental Coordination Disorder limited to the most recent 10 years							
Cantin et al, 2024	Critically low confidence in results (due to not pre-registered, no justification of excluding individual studies), Level II	Systematically review the efficacy and key elements of the CO-OP approach with children and adults with DCD.	Intervention: CO-OP approach Outcome: Measures of participation, performance of child-chosen activities (goal), generalization and transfer, and general motor skills. Measures of cognitive-strategy use, frequency of dynamic performance analysis, qualitative data, neuroplastic changes.	Feb 1998-July 2023 Qualitative: 31 studies (18 studies on effectiveness with 11 RCT/CCT, 7 other; 13 studies on key elements, 5 RCT, 8 other)	Assessed studies with Joanna Briggs Institute's checklists and GRADE 11 studies rated good quality, 4 studies rated acceptable quality, 8 studies not meeting criteria, 8 studies NR	Children with DCD who received the CO-OP approach scored an SMD of 1.72 (95% CI 1.21 to 2.23, p<0.00001; large effect; low heterogeneity: 3 studies; 63 children) higher on the PQRS compared with children who received a control intervention.	Evidence on the efficacy of the CO-OP approach for children with DCD is low for participation, moderate for performance of child-chosen goals, and very low for general motor skills and performance of untrained activity to measure generalization and transfer. Evidence on key elements was that CO-OP led to increased cognitive-strategy use, increased confidence of the child, and neuroplastic changes.
Pimental-Ponce et al, 2024	Critically low confidence in results (due to not preregistered, only included articles published in English and Spanish, inadequate search because did not check references or consult experts, no justification of excluding individual studies), Level II	Systematically review the use of gamification in the in physiotherapy treatments in children and adolescents with motor disorders (DCD, CP, other).	Intervention: gamification, the use of game-related elements in a non-play setting. Outcomes: functional capacity and subjective assessment using questionnaires	Inception-July 2020 Qualitative: 10 studies but only 4 studies on children with DCD or pDCD (4 RCT/CCT)	Assessed studies with PEDro Scale For the studies on DCD or pDCD: 1 study rated high, 1 study rated moderate, 1 study rated low, 1 study NR	No meta-analysis	For children with DCD, gamification resulted in improvements in motor performance in the short-term; no difference in isometric strength or motor performance in the medium-term but better results in functional strength and motor proficiency with the conventional PT control group; no difference in muscle force, self-efficacy, and functional performance in the long-term but better results in running performance in the control group.

Table S3: Systematic Reviews/Meta-analyses of Interventions for Children with Developmental Coordination Disorder limited to the most recent 10 years							
Lermanda et al, 2022	Critically low confidence in results (due to not pre-registered, inadequate search because did not check references or consult experts, no justification of excluding individual studies), Level II	Systematically review the effectiveness of school-based PE interventions on the enjoyment of physical activity, motor development and physical fitness outcomes of children and adolescents with DCD.	Intervention: PE program interventions (eg, strength training, Wii games, balance training, motor training, opportunities for physical activity) Outcomes: Measures of enjoyment of physical activity, motor development, physical fitness	Jan 2010-Jun 2020 Qualitative: 7 studies (6 RCT/CCT, 1 pre-post)	Assessed studies with PEDro Scale 3 studies rated fair, 4 studies rated good	No meta-analysis	Intervention programs based in the school environment can increase enjoyment, motor skills, and physical fitness of children with DCD.
O'Dea et al, 2020	Low confidence in results (due to no justification of excluding individual studies), Level II	Systematically review the effectiveness of motor, cognitive, and psychological interventions on participation of children with DCD.	Intervention: Motor, Cognitive, Psychological Outcome: Measures of participation	2001-November 2017 Qualitative: 12 articles (7 RCT, 2 CCT, 3 Pre/Post)	Assessed studies with RoB 2 9 studies with high ROB, 3 not assessed	No meta-analysis	Limited evidence on interventions to improve participation outcomes for children with DCD.
Cavalcante Neto et al., 2019	Low confidence in results (due to no justification of excluding individual studies, only included studies in English), Level II	Synthesis of evidence on the effectiveness of AVG interventions for motor performance improvement in children with DCD.	Intervention: AVG Outcomes: Measures for motor performance	January 2006 - 30 November 2017 Qualitative: 12 RCT/ CCT	Methodological quality was determined using PEDro Scale (only 5 out of 12 were considered low quality, <5). Quality of evidence was assessed by the GRADE (66% showed positive effects).	No meta-analysis.	Evidence on the efficacy of AVG for children with DCD is low for motor performance improvement.

Table S3: Systematic Reviews/Meta-analyses of Interventions for Children with Developmental Coordination Disorder limited to the most recent 10 years							
Mentiplay et al, 2019	Low confidence in results (due to no justification of excluding individual studies), Level II	Systematically review the effectiveness of virtual reality or video game based interventions on motor outcomes of children with DCD.	Intervention: virtual reality or video game interventions Outcomes: Measures of motor function (participation, activity, BFS)	Inception-July 2018 Qualitative: 15 articles (10 RCT/CCT, 5 pre-post)	Assessed studies with Downs and Black scale 1 article rated high quality, 10 articles rated moderate quality, 4 articles rated poor quality	No meta-analysis	Most children enjoyed and adhered to AVG interventions, but findings were conflicting with limited evidence supporting benefits for BFS and activity outcomes.
Smits-Engelsman et al., 2018	Low confidence in results (due to not pre-registered, search limited to English), Level II	To review systematically any study reporting new data on the motor outcomes of intervention for children or adults with DC.	Interventions: Motor-Based Intervention (AVG, CRT, CO-OP, CST, MI, MST, NTT, Soccer, Visual Training, Task-oriented Interventions, TKD) Outcomes: activity level (MABC-1 or 2, BOT-1 or 2 or agility and functional fitness tasks), body function and participation.	January 2012 - February 2017 Qualitative: 30 studies Quantitative: 19 studies	Level of evidence ranged from high quality RCTs (1++) to Clinical Trials (2-) with a high risk for bias based on a revised grading system adapted from Research System Agency for Health Care Policy.	A large effect size of *d = 1.06* (Cohen's d) across 25 intervention studies with variability listed below. 11 studies: large (> 0.80) 8 studies: moderate (> 0.50) 5 studies: small or negligible (< 0.50) CI not reported.	Results showed that activity-oriented and body function interventions can have a positive effect on motor function and skills. However, given the varied methodological quality and the large confidence intervals of some studies, the results should be interpreted with caution.
Yu et al., 2018	Critically low confidence in results (due to not pre-registered, search limited to English, no justification of excluding individual studies), Level II	To determine the characteristics and effectiveness of motor skill interventions in children with DCD and to identify potential moderators of training effects using meta-analysis.	Interventions: Motor Skills Intervention (Aquatics, AVG, CRT, CO-OP, CST, Horseback Riding, MI, MST, NTT, Soccer, Trampoline, Visual Training, Task-oriented Interventions) Outcomes: multiple measures for motor performance and cognitive, emotional, and other psychological factors.	1995 -August 2017 Qualitative: 66 studies Quantitative: 18 studies	Risk of bias assessed using a short scale of 6 criteria established by Cochrane Collaboration.	Effect size was moderate for motor performance (Hedges g = .63; 95% CI [31, .94]; P<.001) and cognitive, emotional, and other psychological factors (Hedges g= 0.65; 95% CI [0.25, 1.04]; P=.001). Effect size for process-oriented interventions (Hedge's g = 0.20, 95% CI [-0.45, 0.84]; P = 0.549). Task-oriented interventions (Hedge's g = 0.62; 95% CI [-0.05, -1.30]; P = 0.071. Task-oriented interventions combined with process-oriented (Hedge's g = 0.83; 95% CI [0.40, 1.27]; P < 0.001)	Motor skill interventions are effective in improving motor competence and performance on cognitive, emotional, and other psychological aspects in children with DCD in the short term. These effects are more robust in interventions using a large training dose and a practicing schedule of high frequency.

Supplemental Digital Content for: Sargent B, Mueller M, Iverson E, Frazier M, Kaplan SL. Physical therapy management of children with developmental coordination disorder: A 2026 evidence-based clinical practice guideline from the American Physical Therapy Association Academy of Pediatric Physical Therapy.

Table S3: Systematic Reviews/Meta-analyses of Interventions for Children with Developmental Coordination Disorder limited to the most recent 10 years							
Miyahara et al., 2017	High confidence in results, Level I	To assess the effectiveness of task-oriented interventions on movement performance, psychosocial functions, activity, and participation for children with DCD and to examine differential intervention effects as a factor of age, sex, severity of DCD, intervention intensity, and type of intervention.	Intervention: Task-oriented Intervention (Aquatics, CO-OP, MI, MST, Soccer, Table Tennis) Outcomes: Multiple measures for Motor performance. Only studies reporting on results from the MABC were part of the meta-analysis	Through April 2017 Qualitative: 649 (15) Quantitative: 169 (6)	Low quality overall using the GRADE approach and Cochrane's Risk of bias tool. Downgrading secondary to randomization and blinding.	Test for overall effect: z=3.17 (p=0.002), CI = -5.88 to -1.39	Task-oriented interventions may be useful for children with DCD in improving performance on movement tests. We cannot be sure about benefits in other areas. Higher-quality research is needed to investigate and establish the effect of task-oriented intervention for children with DCD.
Preston et al., 2017	Low confidence in results (due to not pre-registered, unclear if data extraction performed in duplicate), Level II	To identify effective motor training interventions for children with DCD from research graded as high quality to inform evidence-based clinical practice.	Interventions: Motor-Based Interventions: (AVG, Aquatics, CST, MI, MST, NTT, Soccer, Table Tennis, Task-oriented Interventions, TKD) Outcomes: 7 studies - activity (MABC-2), 1 study - activity (BOT-2), 1 study - body function (SOT)	January 2000 to March 2016 Quantitative: 311 (9)	High quality based on a score of 7 or higher on the PEDro scale.	No meta-analysis Forest plot was used to give the effect size and CI of the 9 studies individually as part of the qualitative analysis.	Large effect sizes associated with 95% confidence intervals suggest that NNT, Task-oriented Motor Training and MI + Task Practice Training are the most effective reported interventions for improving motor skills in children with DCD. Wii Fit, CST, self-concept training, TKD**,** table tennis and aquatic therapy are not supported by the available evidence.

Abbreviations: **AMSTAR**, A MeaSurement Tool to Assess systematic Reviews; **AVG**, active video gaming; **BFS**, body functions and structures; **BOT-1**, Bruininks-Oseretsky Test of Motor Performance-1; **BOT-2**, Bruininks-Oseretsky Test of Motor Performance-2; **CASP**, Critical Appraisal Skills Programme; **CCT**, controlled clinical trial; **CI**, confidence interval**; CO-OP**, Cognitive Orientation to daily Occupational Performance; **CP,** cerebral palsy; **CPG**, clinical practice guideline; **CRT**, cardiorespiratory training; **CST**, core stability training; **DCD**, Developmental Coordination Disorder; **GDG**, guideline development group; **FMS**, fundamental movement skills; **GRADE**, Grading of Recommendations Assessment, Development, and Evaluation; **MABC**, Movement Assessment Battery for Children; **MABC-1**, Movement Assessment Battery for Children 1st Edition; **MABC-2**, Movement Assessment Battery for Children 2nd Edition; **MBI**, motor-based intervention; **MI**, motor imagery; **MST**, motor skills training; **n,** sample size; **NR**, not reported; **NTT**, Neuromotor Task Training; **P**, p-value; **pDCD**, probable Developmental Coordination Disorder; **PE**, physical education; **PEDro**, physiotherapy evidence database; **PQRS**, Performance Quality Rating Scale; **PT**, physical therapy; **RCT**, randomized controlled trial; **ROB**, risk of bias; **RoB; RoB 2**, revised Cochrane risk of bias tool for randomized controlled trials; **SMD**, standardized mean difference; **SOT**, Sensory Organization Test; **SR**, systematic review; **TKD**, taekwondo.

Table S4: Randomized Controlled Trials on Task-Oriented Approaches to Intervention for Children with Developmental Coordination Disorder							
Author & Year	**Study Design / Level of Evidence / Overall ROB**	**Participants' Diagnostic Criteria**	**Experimental / Comparison Groups / Age and Gender of Participants / Country**	**Intervention Parameters**	**Intervention**	**Motor Outcome Measures**	**Clinical Implications**
Lee, 2024	RCT, Level II High ROB	DSM-5 Criteria A: MABC-2 <15th centile Criteria B: DCDQ <55 Criteria C: Implied Criteria D: Confirmed	EG: FMS, n=27 (10 F, 17 M) CG: Conventional PE, n=28 (10 F, 18 M) 8-9 yo, South Korea	Fr: 3x/week for EG, 2-3x/wk for CG I: NR T: 60 min for EG, NR CG D: 12 weeks Setting: school Instructor to child ratio: 2:4-6	EG: FMS including locomotor skills, object control skills, balance CG: Conventional PE	Activity Participation: •TGMD-2 * MABC-2 Body Function: *Reaction time *15m shuttle run *Handgrip strength *Leg strength *Sargent jump *Curl-up *Sit and reach	For children with DCD, a school-based FMS intervention resulted in improved motor skills, reaction time, cardiorespiratory fitness, muscle strength and endurance, and flexibility, compared to a regular PE program.
Rafiee, 2024	RCT, Level II High ROB	DSM-5 Criteria A: NR Criteria B: DCDQ <45 Criteria C: Implied Criteria D: NR	EG: fundamental motor skills intervention, n=20 (20 M) CG: No study intervention, n=20 (20 M) 8-11 yo, Iran	Fr: NR I: NR T: 30 min D: NR (16 sessions) Setting: NR Instructor to child ratio: NR	EG: Enhancing fundamental motor skills through sports, games, active creativity CG: No study intervention	Activity Participation: •Physical self-concept Body Function: *Modified stork test *Tandem walk test	For children with DCD, a fundamental skills intervention resulted in improved physical self-concept and balance, compared to no intervention.
Yasunaga et al, 2023	RCT Level II, High ROB	DSM-5 Criteria A: MABC-2 <16th centile Criteria B: DCDQ-J <40 Criteria C: Implied Criteria D: Confirmed	EG: CO-OP, n=14 (gender NR) CG: Control, n=14 (gender NR) 5-7 yo, Japan	Fr: 1x/week I: NR T: 40 min D: 8 weeks Setting: school Instructor to child ratio: 1-2:NR, but some 1:1	EG: CO-OP approach to teach activities including scissors, writing, and playing catch. CG: Regular kindergarten program.	Activity Participation: •MABC-2 *S-AMPS	For kindergarten children with DCD-t, CO-OP resulted in improved motor skills compared to a regular kindergarten program. Effect sizes for total motor skills increased 3 months post-intervention.
Navarro-Paton, et al, 2021	quasi-RCT, Level II, High ROB	DSM-5 Criteria A: MABC-2 < 5th centile Criteria B: NR Criteria C: Implied Criteria D: NR	EG: MABC-based PE class, n=12 (gender NR) CG: Regular PE classes, n=16 (gender NR) 4-5.9 yo, Spain	Both groups: Fr: 1x/week I: NR T: 40 min D: 6 weeks Setting: School Instructor to child ratio: 1:NR	EG: MABC-based PE focused on manual dexterity, balance, aiming and catching. CG: Regular PE classes.	Activity Participation: •MABC-2	For preschool children at high risk of DCD, MABC-based PE resulted in improved motor skills, compared to regular PE.

Table S4: Randomized Controlled Trials on Task-Oriented Approaches to Intervention for Children with Developmental Coordination Disorder							
Jahanbakhsh et al, 2020	RCT, Level II, High ROB	DSM-5 Criteria A: BOT <16th centile Criteria B: DCDQ <15th centile Criteria C: Implied Criteria D: Confirmed	EG1: Single-Task, n=13 (gender NR) EG2: Dual-Task, n=13 (gender NR) CG: No study intervention, n=13 (gender NR) 7-9 yo, Iran	Both groups: Fr: 3x/week I: NR T: 45 min D: 8 weeks Setting: Gymnasium Instructor to child ratio: 3:NR	EG1: Single leg balance activities on multiple surfaces with heel to toe walking, forward hops on marking sheets. EG2: Similar motor tasks as single task group with additional cognitive tasks. CG: No study intervention.	Body Function: *SBST *DYBT	For children with DCD, dual-task training resulted in improved static and dynamic balance, compared to single-task training or no intervention. After 2 months, the dual-task group showed better static and dynamic balance, compared to the single-task and/or no intervention group.
Thornton et al., 2016	quasi-RCT, Level I, ROB Some Concerns	DSM-IV Criteria A: MABC-2 Criteria B: NR Criteria C: Implied Criteria D: Confirmed	EG: CO-OP, children with DCD, n = 10 (10 M) CG: No study intervention, children with DCD, n = 10 (10 M) 8 to 10 yo, Australia	Fr: 1x/week I: NR T: 60 min D:10 weeks Daily HEP x 15 min Instructor to child ratio: 2:3-4	EG: Individual CO-OP to create problem-solving strategies to improve child's functional performance and goal achievement. The group program was developed to address at least 2–3 goals for each child. CG: No study intervention.	Activity Participation: •MABC-2 •HST •COPM •GAS Body Function: •3D motion analysis •Flex-sensor glove	For children with DCD, CO-OP resulted in improved ratings of perceived performance and satisfaction, improved handwriting, and decreased motor overflow, compared to no intervention. However, there were no differences in motor proficiency based on the results of the MABC-2.
Wilson, et al 2016	RCT, Level I, ROB Some Concerns	DSM-V Criteria A: MABC < 10^{th} centile Criteria B: PE teachers confirmed Criteria C: Implied Criteria D: Confirmed	EG1: MI training, children with DCD, n=12 (gender NR) EG2: traditional PMT, n=13 (gender NR) CG: No study intervention, n=11 (gender NR) 7-12 yo, Australia	Fr: 1x/week I: reported T: 60 min D :5 weeks Instructor to child ratio: 1:1	EG1: Imagery training focusing on catching ball, throwing ball, striking softball, jumping, balancing a ball on a bat while walking, placing objects using form board EG2: Perceptual-motor activities, such as balance activities, ball games, pegboard games. CG: No study intervention.	Activity Participation: •MABC	For children with DCD, MI and traditional PMT resulted in improved motor proficiency, compared to no intervention.

Table S4: Randomized Controlled Trials on Task-Oriented Approaches to Intervention for Children with Developmental Coordination Disorder							
Au et al., 2014	RCT, Level I, Low ROB	DSM-IV Criteria A: MABC ≤ 15th or BOT-2 < 1.5 SD on two or more subtests Criteria B: NR Criteria C: Implied Criteria D: Confirmed	EG1: Task-oriented training, children with DCD, n=11 (4 F, 7 M) EG2: Core stability training, children with DCD, n=11 (3 F, 8) 6-12 yo, China	Both groups: Fr: 1x/week I: NR T: 60 min D: 8 weeks Daily HEP Setting: NR Instructor to child ratio: 1:NR	EG1: Training using functional positions that included standing (body stability), walking, running, jumping, hopping, skipping and galloping (body transport). EG2: Training used a physio ball in supine, prone, sitting and standing. Both groups: daily HEP.	Activity Participation: •BOT 2 SF •Parent survey Body Function: •SOT	For children with DCD, task-oriented training was no more effective than core stability training on motor proficiency and sensory organization of postural control. Results from the parent survey were similar in both groups, except that significantly more parents in the core stability group reported that the program had benefited their children during outdoor activities.
Hung et al., 2010	RCT, Level I, ROB Some Concerns	DSM-IV Criteria A: MABC ≤ 15th centile, BOT-2 ≤ 42 Criteria B: NR Criteria C: Implied Criteria D: Confirmed	EG1: Task-oriented (group-based motor skills training), children with DCD, n =12 (gender NR) EG2: Task-oriented (individual based motor skills training), children with DCD, n =11 (gender NR) 6-10 y, China	Fr: 1x/week I: NR T: 45 min D: 8 weeks Instructor to child ratio: EG1: 1:4-6 EG2: 1:1	Both groups: Variety of functional tasks and exercises that address common motor difficulties such as agility, balance, core stability, and movement coordination. EG1: group-based training EG2: 1:1 individual-based training	Activity Participation: •MABC •HEP logbook •Parent Satisfaction Questionnaire	For children with DCD, group-based motor skill training was no more effective than individual-based motor skill training on motor proficiency. Parent satisfaction and home exercise compliance were similar between groups.

Abbreviations: **BOT**, Bruininks-Oseretsky Test of Motor Performance; **BOT-2**, Bruininks-Oseretsky Test of Motor Performance, 2nd edition; **CG**, control group; **CO-OP**, Cognitive Orientation to daily Occupational Performance; **COPM**, Canadian Occupational Performance Measure; **D**, duration; **DCD**, Developmental Coordination Disorder; **DCDQ**, Developmental Coordination Disorder Questionnaire; **DCDQ-J**, Developmental Coordination Disorder Questionnaire- Japanese version; **DCD-t**, traits of Developmental Coordination Disorder; **DSM-IV**, Diagnostic Statistical Manual for Mental Disorders, version IV; **DSM-5,** Diagnostic Statistical Manual for Mental Disorders, version 5; **DYBT**, Dynamic Y Balance Test; **F**, females; **FMS** fundamental movement skills; **Fr**, frequency; **GAS**, Goal Attainment Scale; **EG**, exercise group; **HEP**, home exercise program; **HST**, Handwriting Speed Test; **I**, intensity; **M**, males; **MABC**, Movement Assessment Battery for Children; **MABC-2**, Movement Assessment Battery for Children, 2nd edition; **MI**, motor imagery; **n;** sample size; **NR**, not reported; **PE**, physical education; **PMT**, perceptual motor therapy; **RCT**, randomized controlled trial; **ROB**, risk of bias; **S-AMPS**, School Assessment of Motor and Process Skills; **SBST**, Stork Balance Stand Test; **SD**, standard deviation; **SF**, Short-Form; **SOT**, Sensory Organization Test; **T**, time; **TGMD-2,** Test of Gross Motor Development, 2nd edition; **y**, years old; **3D**, 3 dimensional.

Table S5: Randomized Controlled Trials on Evidence-Informed Physical Activities for Children with Developmental Coordination Disorder							
Active Video Gaming							
Author & Year	**Study Design / Level of Evidence / Overall ROB**	**Participant's Diagnostic Criteria**	**Experimental / Comparison / Age and Gender of Participants / Country**	**Intervention Parameters and Setting**	**Intervention**	**Outcome Measures**	**Clinical Implications**
Cavalcante et al, 2020	RCT Level I, ROB Some Concerns	DSM-5 Criteria A: MABC-2 <16th centile, Criteria B: DCDQ <46, Criteria C: Implied, Criteria D: Confirmed	EG1: Wii Training, n=16 (5 F, 11 M) EG2: Task specific Training, n=16 (3 F, 13 M) 7-10 yo, Brazil	Fr: 2x/week I: NR T: 60 min D: 8 weeks Setting: physical therapy lab Instructor to child ratio: 1:NR	EG1: Wii-based training focused on upper limb skills and balance/lower limb skills using 6 tasks (table tennis, frisbee, archery, tightrope, marble, bowling). EG2: TST-based training focused on similar tasks as Wii interventions (frisbee, balance beams, balance disc).	Activity Participation: •MABC-2	For children with DCD, AVG was no more effective than task specific training for improvement in motor skills.
Bonney et al., 2017	RCT, Level I, ROB Some Concerns	DSM-5 Criteria A: MABC-2 ≤ 16th centile Criteria B: self-reported Criteria C: Implied Criteria D: Confirmed	EG1: AVG (Wii FIT), n=21 (21 F, 0 M) EG2: Task-oriented Functional Training, n=22 (22 F, 0 M) 13-16 yo, South Africa	Fr: 1x/week I: NR T: 45 min D: 14 weeks Setting: school Instructor to child ratio: 2:6-8	EG1: Supervised using balance boards with the Wii Fit console while playing a maximum of 8 games per session. EG2: Participated in warm-up, motor skill intervention and game play.	Activity Participation: •MABC-2 •BOT-2 •CSAPPA Body Function: •Dynamometer for knee and ankle •20 m shuttle run	For adolescents with DCD, AVG was no more effective than task-oriented functional training on generalized self-efficacy, predilection for physical activity, functional performance (running, sprint tasks, stair climbing), motor proficiency (manual dexterity, balance), and isometric muscular strength.
Howie et al., 2016; Straker et al., 2016 (RCT reported in 2 publications)	RCT (cross-over), Level I, ROB Some Concerns	DSM-5 Criteria A: MABC-2 ≤ 16th centile Criteria B: DCDQ ≤ 15th centile or total score < 58 Criteria C: Implied Criteria D: Confirmed	EG: AVG, n=21 (11 F, 10 M) CG: no AVG, same group of n=21 (11 F, 10 M) 9-12 yo, Australia	Fr: 4-5x/week I: NR T: 20 min D: 16 weeks Setting: home Instructor to child ratio: 0-NR:1	EG: Unsupervised play with provided Xbox 360 and PlayStation 3. CG: No AVG	Activity Participation: •MABC-2 •DCDQ'07 •Self-Report on activity •Accelerometer •Self-Reported activity log Body Function: •3D motion analysis of single leg stance and finger to nose •Accelerometer	For children with DCD, AVG resulted in improved child's perceived physical skills, compared to no AVG. However, there were no between-group differences in motor proficiency, motor coordination, parent's perceptions of their child's physical skills, and time spent on physical activity. An unexpected finding was that children participating in the AVG intervention spent less time playing outside.

Table S5: Randomized Controlled Trials on Evidence-Informed Physical Activities for Children with Developmental Coordination Disorder							
Hammond et al., 2014	RCT (cross-over), Level II, High ROB	No report Criteria A: No specific measure Criteria B: DCDQ bottom quintile and/or DCD diagnosis Criteria C: Implied Criteria D: Confirmed	EG1: AVG (Wii-Fit), n=10 (gender NR) EG2: Jump Ahead Program, n=8 (gender NR) 7-10 yo, United Kingdom	EG1: Fr: 3x/week I: NR T: 10 min D: 4 weeks EG2: Fr: 1x/week I: NR T: 60 min D: 4 weeks Setting: school Instructor to child ratio: 1:NR	EG1: Supervised AVG focused on balance and coordination EG2: Practicing motor skills in a group	Activity Participation: •BOT 2 •CSQ •SDQ	For children with DCD, AVG resulted in improved motor proficiency, compared to practicing motor skills. However, there were no between-group differences in child's perception of motor abilities.
Taekwondo Training							
Ma et al, 2018	RCT, Level I, ROB Some Concerns	DSM-5 Criteria A: MABC-2 <5th centile, BOT-GM≤ 42 Criteria B: DCDQ <46 or 55 based on age Criteria C: Implied Criteria D: Confirmed	EG1: TKD, n=51 (gender NR) EG2: Jogging, n=94 (gender NR) 6-9 yo, China	Both groups: Fr: 7x/week I: NR T: 60 min D: 12 weeks Daily HEP for 60 min Setting: TKD studio, home Instructor to child ratio: 3:NR	EG1: TKD 1x/week in studio, 6x/week as HEP EG2: Jogged at home 7x/week	Activity Participation: •MABC-2 Body Function: • Skeletal development * EHC * mCTSIB	For children with DCD, TKD training was no more effective than jogging on motor skills, skeletal development, balance, and eye-hand coordination.
Fong et al., 2013; Fong et al., 2012 (RCT reported in 2 publications)	RCT, Level I, ROB Some Concerns	DSM-IV Criteria A: Clinical dx. of DCD Criteria B: Did not specify Criteria C: Implied Criteria D: Confirmed	EG: TKD, children with DCD, n =21 (4 girls, 17 boys) CG1: No study intervention, children with DCD, n=23 (5 F, 18 M) CG2: No study intervention, children with TD, n=18 (4 F, 14 M) 6-12 yo, China	Fr: 1x/week I: Reported in article T: 60 min D: 12 weeks Daily HEP for 60 min. Setting: university, home Instructor to child ratio: 2:NR	EG: TKD 1x/week at university, 6x/week as HEP CG1&2: No study intervention.	Body Function: •UST •MCT •SOT •UST •Isokinetic quadriceps and hamstrings	For children with DCD, TKD resulted in improved single-leg balance control, ability to use vestibular feedback for balance, and isokinetic peak torque of the knee flexors and extensors at 180º/sec, compared to no intervention. However, there were no between-group differences in isokinetic peak torque of the knee flexors and extensors at 60 and 240º/sec, ability to use visual or somatosensory feedback for balance, or reactive balance control.

Table S5: Randomized Controlled Trials on Evidence-Informed Physical Activities for Children with Developmental Coordination Disorder							
Other Activities							
Aquatic Physical Therapy **Hillier et al., 2010**	RCT, Level I, ROB Some Concerns	DSM-IV Criteria A: MABC < 15th centile Criteria B: Did not specify Criteria C: Implied Criteria D: Confirmed	EG: Aquatic physical therapy, n=6 (1 F, 4 M) CG: No study intervention, n=6 (1 F, 4 M) 5-8 yo, Australia	Fr: 1x/week I: NR T: 30 min D: 6 weeks Setting: children's hospital Instructor to child ratio: 1:1	EG: Aquatic physical therapy consisted of training balance strategies and coordinated movements, incorporating task-specific training, including ball skills, standing balance, and walking/running. CG: No study intervention.	Activity Participation: •MABC •PSPCSA •Parent questionnaire	For children with DCD, aquatic physical therapy is no more effective than no intervention on motor proficiency, participation levels, and perceived competence.
Equine Therapy **Hession et al, 2019**	RCT, Level II, High ROB	DSM-5 Criteria A: NR Criteria B: NR Criteria C: Implied, Criteria D: Confirmed	EG1: Horse-riding n=38 (9 F, 29 M) EG2: Audio-visual n= 23 (7 F, 16 M) CG: No study intervention n= 22 (4 F, 18 M) 6-14 yo, Ireland	Fr: 1x/week I: NR T: 30 min D: 8 weeks Setting: school, museum, horse ranch Instructor to child ratio: 1:NR	EG1: Games and exercises designed to promote balance and engagement while horse riding. EG2: Projected pre-recorded visual screening of equine motion with audio of the rhythmical beat based sounds or horses. CG: No study intervention.	Activity Participation: *FAP	For children with DCD, horse riding resulted in improved gait parameters, compared to an audio-visual intervention or no intervention.
Futsal (similar to 5-a-side soccer) **Ghorbanzadeh et al, 2024**	RCT, Level II, High ROB	DSM-5 Criteria A: NR Criteria B: NR Criteria C: Implied Criteria D: Confirmed	EG1: Teaching Games for Understanding (TGFU) n=20 (20 M) EG2: Sports education (SE) n= 20 (20 M) EG3: Combined TGFU and SE n= 20 (20 M) CG: Control, linear pedagogy n= 20 (20 M) 7 yo, Turkey	Fr: 2x/week I: NR T: 90 min D: 8 weeks Setting: outside the school environment Instructor to child ratio: 1:NR but group	Teaching futsal (similar to 5-a-side soccer) using one of 4 approaches: EG1: TGFU approach that uses a real game with simpler rules EG2: SE approach that aims to create competent and enthusiastic students EG3: Combined TGFU and SE approach CG: Traditional skill-based approach	Activity Participation: •BOT 2	For boys with DCD, a combined TGFU and SE approach to teaching futsal resulted in improved motor proficiency, compared to TGFU only, SE only, or a linear pedagogy approach.

Supplemental Digital Content for: Sargent B, Mueller M, Iverson E, Frazier M, Kaplan SL. Physical therapy management of children with developmental coordination disorder: A 2026 evidence-based clinical practice guideline from the American Physical Therapy Association Academy of Pediatric Physical Therapy.

Table S5: Randomized Controlled Trials on Evidence-Informed Physical Activities for Children with Developmental Coordination Disorder							
Table Tennis **Tseng et al, 2023**	RCT Level II, High ROB	DSM-5 Criteria A: MABC-2 <16th centile Criteria B: parent or teacher report of motor difficulties Criteria C: Implied Criteria D: Confirmed	EG: Table Tennis, n=10 (7 F, 3 M) CG: Non-training Control, n=10 (7 F, 3 M) 9-10 yo, Taiwan	Fr: 3x/week I: NR T: 40 min D: 12 weeks Setting: school Instructor to child ratio: 1:5	EG: Table tennis focused on haptic function and upper limb motor skills such as ball balancing, hitting the ball against a wall, shadow strokes, and serving. CG: No study intervention.	Activity Participation: *MABC-2	For children with pDCD, table tennis training resulted in improved aiming and catching skills, compared to no intervention. However, there were no differences in manual dexterity or balance.
Tai Chi and Muscle Power Training **Fong et al, 2022**	RCT Level II, High ROB	DSM-5 Criteria A: MABC-2 <67 Criteria B: DCDQ<55 Criteria C: Implied Criteria D: Confirmed	EG1: TC & MPT, n=30 EG2: TC only, n=30 EG3: MPT only, n=30 CG: Control, no intervention, n=31 9-12 yo, China	Fr: 1x/week I: NR T: 90 min D: 12 weeks Setting: physical activity room at a university Instructor to child ratio: 2:NR	EG1: TC & MPT received the TC protocol created to improve body balance, weight shifting ability, stability, and leg muscle strength in addition to MPT focused on isolated muscle strengthening exercises. EG2: TC only. EG3: MPT only. CG: No study intervention, continue usual care.	Activity Participation: *MABC-2 Body Function: *Number of Falls *DLOS or LOS *Peak force knee extensors *Peak force knee flexors *Time to peak force of knee flexors or extensors	For children with DCD, TC and MPT training resulted in reduced falls compared to TC-MPT. However, there were no differences in balance, motor skills, or peak force or time to peak force of the knee flexors or extensors.
Trampoline Training Sulaiman et al, 2022	RCT, Level II, High ROB	DSM-5 Criteria A: NR Criteria B: DCDQ <57 Criteria C: Implied Criteria D: NR	EG: Trampoline, n=13 (7 F, 6 M) CG: Standard PT n=13 (8 F, 5 M) 5-12 yo, Pakistan	Fr: 3x/week I: NR T: 75 min D: 8 weeks Setting: physical therapy clinic Instructor to child ratio: 2:NR	EG: Trampoline jumping exercises and standard PT. CG: Standard PT.	Activity Participation: *PQL *DCDQ Body Function: *PBS	For children with DCD, trampoline training with standard PT resulted in improved motor performance, compared to standard PT alone. However, there was no difference in balance or quality of life

Abbreviations: **AVG**, active video gaming; **BOT-2**, Bruininks-Oseretsky Test of Motor Performance, 2nd edition; **BOT-GM,** Bruininks-Oseretsky Test of Motor Performance-gross motor composite; **CG**, control group; **CSAPPA**, Children's Self-Perceptions of Adequacy in and Predilection for Physical Activity Scale; **CSQ**, Coordination Skills Questionnaire; **D**, duration; **DCD**, Developmental Coordination Disorder; **DCDQ**, Developmental Coordination Disorder Questionnaire; **DCDQ'07**, revised Developmental Coordination Disorder Questionnaire 2007;**DSM-IV**, Diagnostic Statistical Manual for Mental Disorders, 4th edition; **DSM-5**, Diagnostic Statistical Manual for Mental Disorders, 5th edition; **EG**, exercise group; **EHC**, eye-hand coordination; **F**, female; **Fr**, frequency; **FAP**, Functional Ambulation Performance; **DLOS**, dynamic limits of stability; **dx**, diagnosis; **HEP**, home exercise program; **I**, intensity; **LOS**, limits of stability; **M**, Male; **mCTSIB**, modified Clinical Test of Sensory Integration of Balance; **MABC**, Movement Assessment Battery for Children; **MABC-2**, Movement Assessment Battery for Children, 2nd edition; **MCT**, Motor Control Test; **MPT**, muscle power training;; **n;** sample size; **NR**, not reported; **PBS**, Paediatric Balance Scale; **pDCD**, probable Developmental Coordination Disorder; **PQL**, Paediatric Quality of Life; **PSPCSA**, Pictorial Scale of Perceived Competence and Social Acceptance; **PT**, physical therapy; **RCT**, randomized control trial; **ROB**, risk of bias; **SDQ**, Strengths and Difficulties Questionnaire; **SE**, sports education; **SOT**, Sensory Organization Test; **T**, time; **TC**, Tai Chi; **TD**, typically developing; **TGFU**, teaching games for understanding; **TKD**, taekwondo; **TST,** task specific training; **UST**, unilateral stance test; **yo**, years old; **3D**, 3 dimensional;

Table S6: Full Search Strategy by Database

Database Name: PubMed **Database Vendor**: U.S. National Library of Medicine **Database Coverage**: 1946-Present **Date Searched**: October 27, 2023 **Results**: 329 **Date last searched**: July 1, 2024 **Results:** 43 **Date last searched:** Jan. 20, 2025 **Results:** 37	("Motor Skills Disorders"[Mesh] OR "Motor Skills Disorder"[tw] OR "Developmental Coordination Disorder*"[tw] OR "DCD"[tw] OR "Apraxia"[tw] OR "Clumsiness"[tw] OR "Clumsy child syndrome"[tw] OR "Coordination disorder"[tw] OR "Discoordination"[tw] OR "Dyspraxia"[tw] OR "Hypotonia"[tw] OR "Low tone"[tw] OR "Motor disorder"[tw] OR "Psychomotor Disorders"[Mesh] OR "Psychomotor disorder*"[tw] OR "sensorimotor disorder*"[tw] OR "Ataxia"[Mesh] OR "Ataxia*"[tw] OR "Coordination Impairment*"[tw] OR "Dyssynergia"[tw] OR "Ataxy"[tw] OR "Motor Ataxia*" OR "Dyscoordination" OR "Lack of Coordination" OR "Incoordination*") AND ("Child"[Mesh] OR "child"[tw] OR "Child, Preschool"[Mesh] OR "Adolescent"[Mesh] OR "adolescent"[tw]) AND ("Physical Therap*"[tw] OR "Physical Therapy Modalit*"[tw] OR "Physical Therapy Modalities"[Mesh] OR "Physical Therapy Technique*"[tw] OR "Occupational Therapy"[Mesh] OR "Occupational Therap*"[tw] OR "Occupational Therapies"[tw] OR "OT"[tw] OR "Balance"[tw] OR "Coordination intervention"[tw] OR "Endurance"[tw] OR "Fitness intervention"[tw] OR "Group Physiotherap*"[tw] OR "Muscle strength"[tw] OR "Neurological Physiotherapy"[tw] OR "Neurophysiotherapy"[tw] OR "Psychomotor performance"[tw] OR "Recreation Therapy"[Mesh] OR "Recreation* Therapy"[tw] OR "Recreation intervention"[tw] OR "Sensory integration therapy"[tw] OR "Sports"[tw] OR "Strength training"[tw]) NOT ("Cerebral Palsy"[Mesh] OR "cerebral palsy"[tw] OR "Down Syndrome"[Mesh] OR "down syndrome"[tw] OR "Autistic Disorder"[Mesh] OR "autistic disorder"[tw] OR "autism"[tw]) AND (("2018/01/01"[Date - Publication] : "2023/10/31"[Date - Publication]))
Database Name: Web of Science **Database Vendor**: Clarivate Analytics **Database Coverage**: 1947-Present **Date Searched**: October 27, 2023 **Results:** 717 **Date last searched:** July 1, 2024 **Results:** 104 **Date last searched:** Jan. 20, 2025 **Results:** 61	TS = (developmental coordination disorder OR motor skills disorder OR Coordination disorder) AND TS = ("Physical Therap*" OR "Physical Therapy Modalit*" OR Physical Therapy Technique* OR Occupational Therap* OR OT OR Balance OR Coordination intervention OR Endurance OR Fitness intervention OR Group Physiotherap* OR Muscle strength OR Neurological Physiotherapy OR Neurophysiotherapy OR Psychomotor performance OR Recreation Therapy OR Recreation* Therapy OR Recreation intervention OR Sensory integration therapy OR Sports OR Strength training) NOT TS = ("Cerebral Palsy" OR "Down Syndrome" OR "Autistic Disorder" OR "autism") AND TS = (preschool or pre school OR child* OR adolescen*) AND (DOP=(2018-01-1/2023-10-31))
Database Name: PsycINFO **Vendor:** ProQuest* **Database Coverage:** 1806 to October Week 5 2023 **Date Searched**: October 27, 2023 **Results:**89 **Date last searched:** July 1, 2024 **Results:** 11 **Date last searched:** Jan. 20, 2025 **Results:** 57	(("developmental coordination disorder" or (DCD and development*) or "Clumsy child syndrome" or (clums$5 or dyspraxia or "low tone" or hypotonia or (coordination adj disorder*) or (co-ordination adj disorder*) or (motor adj skills adj disorder*) or (Motor adj disorder*) or discoordination or dyscoordination or (psychomotor adj disorder*) or apraxia or (sensorimotor adj disorder*))) and (child* or adolescent* or infant* or toddler*)).mp. or dyspraxia/ [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] AND ("Physical therapy" or (PT and physical) or exercise or "resistance training" or "strength training" or "occupational therapy" or (OT and Occupational) or "sensory integration therapy" or (SIT and sensory) or endurance or (neurodevelopment* adj training) or (development* adj training) or "motor learning" or "motor control" or "group intervention" or balance or "coordination intervention" or fitness or ((sports or "motor skills" or recreation) adj1 intervention*)).mp. or physical therapy/ or occupational therapy/ or movement therapy/ or dance therapy/ or exp exercise/ or recreation therapy/ or physical endurance/ or physical fitness/ or physical strength/ or equilibrium/ or exp sports/ [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] AND yr="2018 -Current" *Note: Original search run on ProQuest; update search run on APA platform due to database moving to APA platform.
Database Name: PEDro: The Physiotherapy Evidence Database **Database Vendor:** Centre for Evidence-Based Physiotherapy at the University of Sydney, AU. **Date Searched:** October 27, 2023 **Results**: 16 **Date last searched:** July 1, 2024 **Results:** 0 **Date last searched:** Jan. 20, 2025 **Results:** 0	Abstract & Title: "developmental coordination disorder" AND Subdiscipline: paediatrics AND 2018 -2023

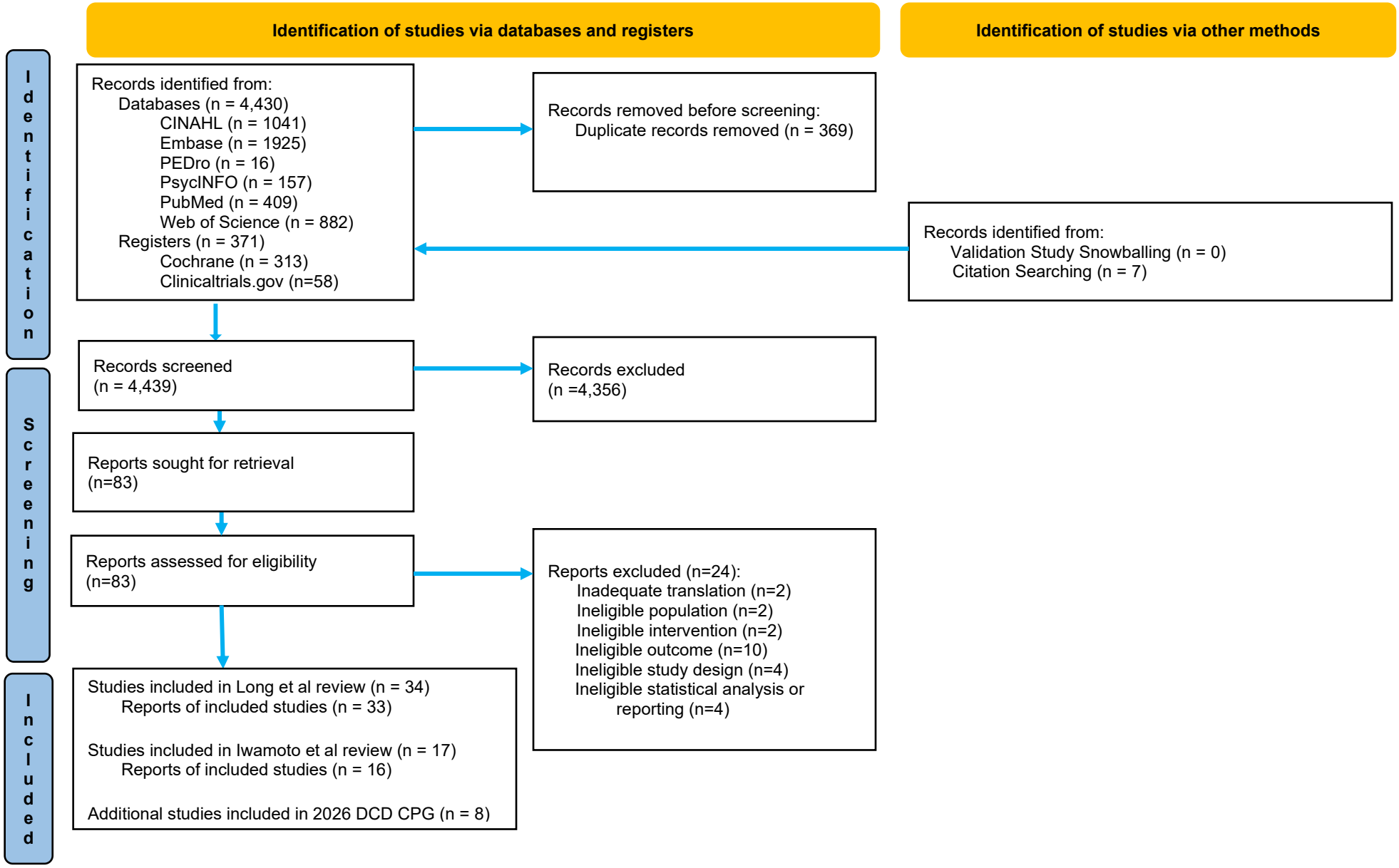
Database Name: Embase **Vendor:** Elsevier **Database Coverage:** 1947-Present **Date Searched:** October 27, 2023 **Results:** 1357 **Date last searched:** July 1, 2024 **Results**: 393 **Date last searched:** Jan. 20, 2025 **Results:** 175	'developmental coordination disorder':ab,ti OR (dcd:ab,ti AND development*:ab,ti) OR 'clumsy child syndrome':ab,ti OR clums*:ab,ti OR dyspraxia:ab,ti OR 'low tone':ab,ti OR hypotonia:ab,ti OR (coordination NEAR/1 disorder*):ab,ti OR ('co ordination' NEAR/1 disorder*):ab,ti OR (motor NEAR/1 skill*):ab,ti OR (motor NEAR/1 disorder*):ab,ti OR discoordination:ab,ti OR dyscoordination:ab,ti OR (psychomotor NEXT/1 disorder*):ab,ti OR apraxia:ab,ti OR (sensorimotor NEXT/1 disorder*):ab,ti OR 'developmental coordination disorder'/exp OR 'developmental coordination disorder' OR 'gait apraxia'/exp OR 'gait apraxia' AND 'physical therapy':ab,ti OR (pt:ab,ti AND physical:ab,ti) OR exercise:ab,ti OR 'resistance training':ab,ti OR 'strength training':ab,ti OR 'occupational therapy':ab,ti OR (ot:ab,ti AND occupational:ab,ti) OR 'sensory integration therapy':ab,ti OR (sit:ab,ti AND sensory:ab,ti) OR endurance:ab,ti OR (neurodevelopment* NEXT/1 training):ab,ti OR (development* NEXT/1 training):ab,ti OR 'motor learning':ab,ti OR 'motor control':ab,ti OR 'group intervention':ab,ti OR balance:ab,ti OR 'coordination intervention':ab,ti OR fitness:ab,ti OR ((sports OR 'motor skills' OR recreation) NEAR/1 intervention*):ab,ti OR 'physiotherapy'/exp OR 'kinesiotherapy'/exp OR 'occupational therapy'/exp OR 'endurance'/exp OR 'psychomotor performance'/exp OR 'muscle strength'/exp OR 'fitness'/de OR 'body equilibrium'/de OR 'sport'/exp AND ([adolescent]/lim OR [child]/lim OR [infant]/lim OR [newborn]/lim OR [preschool]/lim OR [school]/lim) NOT ([adult]/lim OR [young adult]/lim) AND [embase]/lim AND [2018-2023]/py AND ('article'/it OR 'article in press'/it OR 'review'/it) AND [embase]/lim NOT ([medline]/lim NOT ([medline]/lim AND [embase]/lim))

Database Name: CINAHL Complete **Vendor:** EBSCO **Database Coverage**: 1937-Present **Date Searched**: October 27, 2023 **Results:** 949 **Date last searched:** July 1, 2024 **Results:** 76 **Date last searched:** Jan. 20, 2025 **Results: 16**	'developmental coordination disorder' OR (DCD AND development*) OR 'Clumsy child syndrome' OR clums* OR dyspraxia OR 'low tone' OR hypotonia OR (coordination N1 disorder*) OR (co-ordination N1 disorder*) OR (motor N1 skill*) OR (Motor N1 disorder*) or discoordination OR dyscoordination OR (psychomotor W1 disorder*) OR apraxia OR (sensorimotor W1 disorder*)) OR (MH "Motor Skills Disorders") OR (MH "Gait Apraxia") OR (MH "Psychomotor Disorders") AND "Physical therapy" OR exercise OR "resistance training" OR "strength training" OR "occupational therapy" OR "sensory integration therapy" OR (SIT AND sensory) OR endurance Or (neurodevelopment* N1 training) OR (development* N1 training) OR "motor learning" OR "motor control" OR "group intervention" OR balance or "coordination intervention" OR fitness OR ((sports OR "motor skills" OR recreation) N1 (intervention*)) OR (MH "Physical Therapy+") OR (MH "Occupational Therapy+") OR (MH "Recreational Therapy") OR (MH "Physical Endurance") OR (MH "Psychomotor Performance") OR (MH "Muscle Strength") OR (MH "Physical Fitness") Or (MH "Balance, Postural") AND 'developmental coordination disorder' OR (DCD AND development*) OR 'Clumsy child syndrome' NOT (MH "Autistic Disorder" OR MH "Cerebral Palsy") OR (MH "Down Syndrome") Limiters - Published Date: 20180101-20231231 Limiters: Age Groups: Child, Preschool: 2-5 years, Child: 6-12 years, Adolescent: 13-18 years

Database Name: Cochrane Library (Reviews and Protocols) and Trials **Vendor:** Wiley Database Coverage: **Date Searched**: October 27, 2023 **Results:** 273 **Date last searched:** July 1, 2024 **Results**: 37 **Date last searched:** Jan. 20, 2025 **Results:** 3	("developmental coordination disorder" or (DCD and development*) or "Clumsy child syndrome" or (clums* or dyspraxia or "low tone" or hypotonia or (coordination near/1 disorder*) or (co-ordination near/1 disorder*) or (motor near/1 skills near/1 disorder*) or (Motor near/1 disorder*) or discoordination or dyscoordination or (psychomotor near/1 disorder*) or apraxia or (sensorimotor near/1 disorder*)) and (child* or adolescent* or infant* or toddler*)):ab,ti,kw AND ("Physical therapy" or (PT and physical) or exercise or "resistance training" or "strength training" or "occupational therapy" or (OT and Occupational) or "sensory integration therapy" or (SIT and sensory) or endurance or (neurodevelopment* near/1 training) or (development* near/1 training) or "motor learning" or "motor control" or "group intervention" or balance or "coordination intervention" or fitness or ((sports or "motor skills" or recreation) near/1 (intervention*))):ab,ti,kw NOT MeSH descriptor: [Cerebral Palsy] explode all trees AND MeSH descriptor: [Down Syndrome] explode all trees AND MeSH descriptor: [Autistic Disorder] explode all trees AND "developmental coordination disorder" or (dcd and developmental) or "clumsy child" AND Publication Year from 2018 to 2023

Database Name: Clinicaltrials.gov **Database Vendor:** National Library of Medicine **Database Coverage:** 2000 to present **Date Searched**: October 27, 2023 **Results:** 48 **Date last searched:** July 1, 2024 **Results:** 6 **Date last searched** Jan. 20, 2025 **Results:** 4	Developmental Coordination Disorder Limits: Child (birth -17) and 5 years (2018-2023)

Figure S2: PRISMA FLOW CHART



Supplemental Digital Content for: Sargent B, Mueller M, Iverson E, Frazier M, Kaplan SL. Physical therapy management of children with developmental coordination disorder: A 2026 evidence-based clinical practice guideline from the American Physical Therapy Association Academy of Pediatric Physical Therapy.

Table S7: International Classification of Functioning, Disability and Health (ICF) and International Statistical Classification of Diseases and Related Health Problems (ICD) 10 Codes associated with Developmental Coordination Disorder

ICF Codes		DCD Presentation
Impairments of Body Functions and Structures		
b1470	Psychomotor control	Difficulty regulating speed of motor behavior
b156	Perceptual functions: specific mental functions of recognizing and interpreting sensory stimuli	Difficulty coordinating various stimuli inputs to modify motor task
b1646	Problem solving mental functions of identifying, analysis, and integrating incongruent or conflicting information into a solution	Difficulty with modifying motor responses to situational experiences
b2100	Visual acuity functions	Difficulty in discriminating shape, size, color and other ocular stimuli.
b4550	General physical endurance	General fatigue, lower tolerance to activity
b620	Proprioceptive function	Difficulty with spatial organization
b7108	Mobility of joint functions, other specified	Joint laxity
b7300	Power of isolated muscles and muscle groups	Weakness
b7350	Tone of isolated muscles and muscle groups	Hypotonia
b7401	Endurance of muscle groups	Diminished endurance
b755	Involuntary movement reaction functions	Involuntary contractions of large muscles or the whole body induced by body position and balance
b7600	Control of simple voluntary movements	Poor coordination; difficulty with multi-sequence tasks
b7700	Gait pattern functions	Muscle co-contraction and joint stabilization
b7800	Sensations related to muscles and movement functions	Predominant use of vision to guide motor actions
b789	Movement functions, other specified and unspecified	Failure to transfer and generalize motor tasks to new activities or contexts; reduced efficacy of the feedback & feedforward motor control mechanism
Activity Limitations		
d175	Solving problems	Difficulty selecting the most efficient or effective movements in order to complete a task
d220	Undertaking multiple tasks	Difficulty with multi-sequence tasks
d415	Maintaining a body position	Inability to stand or sit still in a chair without frequent fidgeting
d429	Changing and maintaining body position, other specified and unspecified	Delayed and reduced quality of fine and gross motor skills (hopping, jumping, ball skills, and writing)
d4341	Kicking	Poor form, aim, distance, height of kick
d440	Fine hand use	Poor fine motor coordination, handwriting challenges
d450	Walking	Awkward, slow uncoordinated gait pattern
d453	Running	Awkward, slow, loud, uncoordinated running pattern
d4454	Throwing	Immature form, aim, distance of throw
d4455	Catching	Immature catching pattern with limited coordination with eyes to follow direction of ball
d469	Walking and Moving, other specified and unspecified	Variability in movement quality (speed, timing, force, distance)
Participation Restrictions		
d230	Carrying out daily routine	Difficulty independently participating in daily requirements, may require frequent redirection to task
d7600	Parent-child relationships	Parent knowledge and understanding of diagnosis and impact on participation
d7601	Child-parent relationships	Child's difficulty with being able to follow through with parent instructions, routines and general participation with family activities

d720	Complex interpersonal interactions	Age matched interactions can be diminished due to ability to participate in age-appropriate activities
d835	School life and related activities	Delayed educational success leading to being held back in school; difficulty participating in recess and other extracurricular activities
d859	Work and employment, other specified and unspecified	Diminished ability to participate in employment requirements
d920	Recreation and leisure	Difficulty participating in age-appropriate activities, particularly group tasks

ICD 10 codes. These codes are offered as a reference and are not intended to be directional for billing purposes.	
For children diagnosed with DCD or probable DCD:	
F82	Specific developmental disorder of motor function **Exclusions:** F82 code cannot be used in combination with R26.- (abnormalities of gait and mobility) and R27.- (lack of coordination). F82 code cannot be used with F70-F79 (lack of coordination secondary to intellectual disabilities)
For children with lack of coordination or at risk for DCD:	
R26.2:	Difficulty in walking, not elsewhere classified
R26.8:	Other abnormalities of gait and mobility
R26.81:	Unsteadiness of feet
R26.89:	Other abnormalities of gait and mobility
R26.9:	Unspecified abnormalities of gait and mobility
R27:	Other lack of coordination
R27.9:	Unspecified lack of coordination

Supplemental Digital Content for: Sargent B, Mueller M, Iverson E, Frazier M, Kaplan SL. Physical therapy management of children with developmental coordination disorder: A 2026 evidence-based clinical practice guideline from the American Physical Therapy Association Academy of Pediatric Physical Therapy.

DEVELOPMENT OF THE GUIDELINE

This CPG is the product of many people's work and support. At each phase of the update, the GDG has benefitted from the work and advice of clinicians, methodologists, and the families with whom we work. The following outlines the phases of this update and formally acknowledges the contributors in each phase.

Phase 1. Organization and manuscript development, organization of literature search (GDG)

Megan Frazier, PT, DPT, PCS; pediatric physical therapist, educator, researcher; Department of Physical Therapy, Springfield College, Springfield, MA.
Erin Iverson, PT, DPT, PCS; pediatric physical therapist, CO-OP instructor; Department of Occupational and Physical Therapy, Cincinnati Children's Hospital Medical Center, Cincinnati, OH.
Sandra L. Kaplan, PT, DPT, PhD, FAPTA; pediatric physical therapist, educator, researcher; Department of Rehabilitation and Movement Sciences, Rutgers University, Newark, NJ.
Melinda Mueller, PT, DPT, PCS; pediatric physical therapist; Cherry Creek Public Schools, Greenwood Village, CO.
Barbara Sargent, PT, PhD, PCS; pediatric physical therapist, educator, researcher; Division of Biokinesiology and Physical Therapy, Herman Ostrow School of Dentistry, University of Southern California, Los Angeles, CA.

Phase 2. Selection, appraisal, and extraction of included studies

Note: to manage conflicts of interest, no one appraised or extracted studies that they authored

Meera V. Bucklin, PT, DPT
Stefanie Elias, PT, DPT
Megan Frazier, PT, DPT, PCS
Erin Iverson, PT, DPT, PCS
Ligia Cristina Jaramillo, PT, DPT, C/NDT
Carly Lochala, PT, DPT, NCS
Aviva Gans Rosenberg, PT, MSPT
Barbara Sargent, PT, PhD, PCS
Laura Sarisky, PT, DPT, PCS
Aimee St.Martin, PT, DPT

Phase 3. Action statement generation and literature summarization (GDG)

Megan Frazier, PT, DPT, PCS
Erin Iverson, PT, DPT, PCS
Sandra L. Kaplan, PT, DPT, PhD, FAPTA
Melinda Mueller, PT, DPT, PCS
Barbara Sargent, PT, PhD, PCS

Phase 4. First round review by content experts / advisory panel

Amy Barr, PT, DPT; physical therapist; Cherry Creek Public Schools, Greenwood Village, CO.
Catie Christensen, PT, DPT, PCS; pediatric physical therapist; Nationwide Children's Hospital, Columbus, OH.
Elizabeth M. Cyr, PT, DPT, DHSc; physical therapist, educator; Department of Physical Therapy, University of New England, Portland, ME.
Melissa Eiseman, DMSc, PA-C; physician assistant, educator; School of Health Professions, Rutgers University, Newark, NJ.
Robyn Gorman, MD; pediatrician; TriHealth Queen City Physicians - Madeira Pediatrics, Cincinnati, OH.
Beth Kurtz, MPT; parent of teen diagnosed with DCD, NJ
Johan Kurtz; teen diagnosed with DCD, NJ
Fatou Lack, DPT; new graduate of physical therapy; Department of Rehabilitation and Movement Sciences, Rutgers University, Newark, NJ.
Brianna Lally, PT, DPT; physical therapist; Inner Dynamics, Toms River, NJ.
Julia Luehrman; special education teacher, Cherry Creek Public Schools, Greenwood Village, CO.
Michael Nusspickel; DPT; new graduate of physical therapy; Department of Rehabilitation and Movement Sciences, Rutgers University, Newark, NJ.
L. Simón Price; kindergarten teacher; Cherry Creek Public Schools, Greenwood Village, CO.
Patti Sharp, OTD, MS, OTR/L, BCP; pediatric occupational therapist; Cincinnati Children's Hospital, Cincinnati, OH.
Rebecca Swartz; parent of child diagnosed with developmental coordination disorder; MA.
Priscila Tamplain, PhD; researcher; Department of Kinesiology, University of Texas Arlington, Arlington, TX.
Caroline E. Welch, OTD, MS, OTR/L; pediatric occupational therapist, educator; Department of Rehabilitation and Movement Sciences, Rutgers University, Newark, NJ.

Phase 5. External review of the revised CPG by the public & AGREE II ratings

Agree II Reviewers

Ashley Conklin, PT, DPT, PCS, DHSc; physical therapist and educator; Assistant Professor, Department of Rehabilitation and Movement Sciences, Rutgers University, Newark, NJ.
Melanie D. O'Connell, PT, PhD, PCS; pediatric physical therapist, educator, researcher; Department of Physical Therapy, Long Island University, Brooklyn, NY; New Jersey Institute for Disabilities – The Children's Center, Edison, NJ.
Kalala Pines, PT, DPT; pediatric physical therapist; Division of Pediatric Rehabilitation, Children's Hospital Los Angeles, Los Angeles, CA.
Lisa Selby-Silverstein, PT, PhD; physical therapist; Professor Emeritus, Neumann University, Aston, PA.

Phase 6. Submission for publication to Pediatric Physical Therapy

Linda Fetters, PT, PhD, FAPTA
Megan Frazier, PT, DPT, PCS
Jill C. Heathcock, MPT, PhD
Erin Iverson, PT, DPT, PCS
Sandra L. Kaplan, PT, DPT, PhD, FAPTA
Melinda Mueller, PT, DPT, PCS
Barbara Sargent, PT, PhD, PCS

Phase 7. Dissemination of guideline

APTA Academy of Pediatric Physical Therapy website
PEDro, ECRI, G-I-N Library Submission
Presentation at the American Physical Therapy Association Combined Sections Meeting (2026)

Phase 8. Plan for monitoring guideline uptake

The GDG recommends a survey of pediatric PTs in 2027 to assess implementation of the 2026 DCD CPG guideline.

Acknowledgements

Paula Hess, MLIS, AHIP, Clinical Librarian, completed the literature search for the two systematic reviews that informed the 2026 DCD CPG and re-ran the search to update the research literature for the 2026 DCD CPG.