C.2.4 Motor developmental delay and unsteadiness (creatine kinase tests)

Component	Description
Review question	In children and infants under 10 years of age who present with motor developmental delay, is a creatine kinase (CK) test accurate in identifying whether muscular dystrophy is present as compared to no test (and as indicated by the reference standard, diagnosis at follow-up)?
Objectives	To evaluate the accuracy of creatine kinase test in aiding a non-specialist in identifying muscular dystrophy in children and infants under 10 who present with motor developmental delay
Study design	Cohort studies, case control if no other evidence identified
Population	All people who present to a non-specialist with motor developmental delay in the following stratifications: • children (<10 years old) • infants (<5 years old).
Setting	Non-specialist setting (for example, primary care)
Index test	Creatine kinase
Reference standard (could be more than one)	• Diagnosis of the muscular dystrophy at follow-up • Clinical examination
Statistical measures	Diagnostic accuracy of creatine kinase: • 2x2 tables • Specificity (low false negative)

	• Sensitivity (high) • Positive and negative predictive values • ROC curves and area under the curve.
Other exclusions	Neonates (infants aged 28 days and under)
Review Strategy	Subgroups where diagnostic tests may be more or less accurate – to investigate heterogeneity: • age • muscle injury. Where possible, results for different types of muscular dystrophies will be analysed separately. Appraisal of methodological quality: • The risk of bias each study will be assessed using the QUADAS-II checklist (per target condition). • The overall quality of the evidence will be assessed using an adapted version of GRADE. Synthesis of data: • diagnostic meta-analysis will be conducted where appropriate using hierarchical methods.