

Table A.1.e. Adverse effects and physical activity, children and adolescents

Questions: What is the association between **physical activity** and health-related outcomes? Is there a dose response association (volume, duration, frequency, intensity)?

Does the association vary by type or domain of PA?

Population: Children aged 5-under 18 years of age

Exposure: Greater volume, duration, frequency, or intensity of physical activity

Comparison: No physical activity or lesser volume, duration, frequency, or intensity of physical activity

Outcome: Adverse effects

***Importance:** CRITICAL

Black font is from original GRADE Evidence Profiles from Australian 24-Hour Movement Guidelines for Children (5-12 years) and Young People (12-17 years).(26) **Red font denotes additions based on WHO update using review of existing systematic reviews.**

No. of studies/ Study design No. of participants	Quality Assessment					Summary of findings	Certainty	US PAGAC evidence (27)
	Risk of bias	Inconsistency	Indirectness	Imprecision	Other			
The range of mean ages was 10 to 15 years. Data were collected longitudinally which up to 19 months of follow-up. Measures included spinal pain occurrences. Outcomes were measured subjectively (self-report) or objectively (clinical examination and audit of linked medical records).								
2 Longitudinal n=2,101 No eligible reviews identified.	Serious risk of bias	Serious inconsistency	No serious indirectness	No serious imprecision	None	<p>Total PA 1/2 studies reported unfavourable association with diagnosed or traumatic spinal pain (Franz et al. 2017). 1/2 studies reported null associations with self-reported number of spinal pain sites and frequency of spinal pain (Aartun et al. 2016).</p> <p>LPA 1 study reported unfavourable association between % time in LPA with self-reported spinal pain (Franz et al. 2017)</p> <p>MPA 1 study reported null associations between % time in MPA with self-reported or diagnosed spinal pain (Franz et al. 2017).</p> <p>MVPA 1 study reported null associations between total MVPA or meeting at least 1 hour/d of MVPA with self-reported number of spinal pain sites and frequency of spinal pain (Aartun et al. 2016).</p> <p>VPA 1/2 studies reported unfavourable associations between % time in VPA with diagnosed or traumatic spinal pain (Franz et al. 2017); 1/2 studies reported null associations between total VPA with self-reported number of spinal pain sites and frequency of spinal pain (Aartun et al. 2016).</p>	VERY LOW ^b	Outcome not included

Abbreviations: LPA = light intensity physical activity; MPA = moderate physical activity; MVPA = moderate-and-vigorous physical activity; PA = physical activity; VPA = vigorous physical activity.

^aAs determined by WHO

^a Includes 2 longitudinal studies (Aartun et al. 2016; Franz et al. 2017).

^b The quality of evidence from longitudinal studies was not upgraded from "low" to "moderate" due to serious risk of bias and was downgraded from "low" to "very low" due to inconsistency across studies.