

Low Back Pain During Childhood and Adolescence

Recent years of research have uncovered important information about the epidemiology, diagnosis, treatment and prognosis of children and adolescents with back pain. This fact sheet presents the state of the knowledge and provides evidence that refutes some common misconceptions. We recognize though that there is still much we do not yet know.

Epidemiology and consultation rates

1. Low back pain affects 3-4 of every 10 children/adolescents at any point in time. A third to half of these will have pain that persists beyond 3 months, occurs on a regular basis, or impacts important day-to-day activities like school and physical activity participation (1-5).
2. Spinal pain during youth may co-exist with both upper and lower extremity pain (6).
3. The standardised annual primary care consultation prevalence per 10,000 registered persons (aged 3 to 17 years) for back pain is 101 (95% CI 86 to 115), and similar between boys and girls. Back and spinal-related pain account for 1% of adolescent and child-related consultations in general practice per year (7, 8). Prevalence and consultation rates clearly increase with age (7, 8).

Risk factors

4. Evidence suggests that being female, greater height, female sex, smoking, low or excessive activity levels, parental spinal pain and poor mental health may be associated with increased risk of back pain in children/adolescents (3, 5, 9-12).
5. Although school-bag weight, school-furniture, muscle strength, flexibility, sitting posture and screen time are often proposed to contribute to LBP in children and adolescents, systematic reviews find no consistent association between these factors and child/adolescent LBP (13, 14).

Diagnosis

6. As in adults, clinical diagnosis is based on symptoms, such that imaging is unwarranted in general (15). Although supporting data is scarce, between 95-98% of adolescent LBP-cases can most likely be categorised as non-specific i.e. without a distinct, identifiable pathoanatomical origin (4, 16).
7. Despite back pain during childhood / adolescence itself being considered indicative of serious pathology, the fact it affects 40% of this population demonstrates this is not useful for screening (4).
8. Though early clinical signs of axial spondyloarthritis may present during adolescence, this condition may not be detectable via imaging until adulthood. Further, pars defects and/or bone marrow oedema may be associated with LBP, but are also quite prevalent in adolescents without LBP. As such, routine imaging for adolescent LBP is not recommended, and is rarely diagnostic in isolation (17, 18).

Treatment

9. Recommendations for the clinical management of adult LBP (i.e. active patient-involvement, shared decision-making, general advice on sleep and physical activity, consideration of psychosocial factors) are most likely applicable for the adolescent population, but remain understudied (19).
10. Despite more than 3500 trials testing different management strategies for adults with back pain (WHO Clinical Trials Registry), less than 12 trials specifically included children or adolescents, leaving an important gap in our knowledge of effective treatment strategies (5).

Prognosis

11. Systematic reviews suggest that between 10-15% of youth with LBP may develop persistent symptoms (lasting >3 months) (1-5). However, there is a lack of prospective studies to help us understand the long-term prognosis for both care-seeking and non-care-seeking children/adolescents with LBP (5).
12. Prognostic factors for long-term pain (>3 months) appear similar to those in adults with LBP. These include psychological factors (anxiety, depressive symptoms and emotional distress), socioeconomic status (parental household income) and lifestyle factors (sleep and physical activity) and general health (19-21). Due to a lack of research in children and adolescents, there may be additional prognostic factors specific to this population.

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