ABSTRACT

**Background:** The lumbopelvic region is utilized in almost all functional tasks and has been proposed to provide dynamic stability to distal extremities.

**Purpose:** To systematically evaluate the current literature that examined the effect of lumbopelvic control on overhead performance and shoulder injury in overhead athletes.

**Study Design:** Systematic Review

**Methods:** A comprehensive systematic electronic search was conducted using PubMed, CINAHL, ProQuest, Scopus, and SPORTDiscus. Articles were considered for inclusion if they included a measure of lumbopelvic control and assessed shoulder pain, disability, injury, or overhead performance outcome. Cohen's $d$ effect size was calculated when necessary statistical data were available to determine the impact of lumbopelvic control.

**Results:** The search revealed 3,312 total articles and 2,883 articles were screened after duplicates were removed. After titles and abstracts were screened, 45 full text articles were reviewed. Fifteen full-text articles ultimately met inclusion criteria. Effect sizes ranged from trivial (0.10) to large (0.86), indicating a varying degree of positive effects on performance and shoulder injuries. The majority of included articles concluded individuals with greater lumbopelvic control demonstrated improved performance and decreased occurrence of injury.

**Conclusion:** Results suggest that improved lumbopelvic control relates to improved athletic performance and decreased shoulder injury. Additional higher quality research is needed to further support these findings, establish a standard measure for lumbopelvic control, and determine preventative factors for injury, pain, and disability.

**Level of Evidence:** 2a

**Keywords:** Core stability, injury, lumbopelvic control, movement system, overhead athletes

---

CORRESPONDING AUTHOR

Mark Wilhelm, PT, DPT, PhD  
Assistant Professor, Doctor of Physical Therapy Program  
School of Behavioral and Health Sciences  
Walsh University  
North Canton, OH 44720  
Phone: (330) 244-4747  
E-mail: MarkPWilhelm@gmail.com

---

1 Walsh University, North Canton, OH, USA.

**Conflicts of Interest:** None of the authors have any conflicts of interest to declare.