



# The Effects of Yoga On Typically Developing Children and Teenagers: A Systematic Review



Debra P. Miller PT, DPT, MS, Michael D. Ross PT, DHSc, OCS

Jaclyn A. Henry, SPT, Susannah Taylor Johns, SPT, Daniel A. Peredo, SPT, Jennifer L. Rudiman, SPT, PTA

University of Scranton

## Introduction

**Purpose:** The purpose of this systematic review is to provide a comprehensive analysis of the cognitive, physiological, and psychosocial benefits of yoga on typically developing children and teenagers.

**Yoga:** A holistic system of mind-body practices for mental and physical health that incorporates multiple techniques including: physical postures (asanas), breathing exercises (pranayamas), deep relaxation, mindfulness and awareness, and moral and ethical observances.

## Methods

**Inclusion criteria:** Randomized controlled trials (RCTs) examining the effects of yoga on typically developing children, scored 6 or higher on the Physiotherapy Evidence Database (PEDro) scale, and within an age range of 7-19 years old

**Exclusion criteria:** Studies with individuals under 7 and over 19 years old, with a pathological condition, or in an athletic population, and/or any study without a non-yoga based control group

## PRISMA

**Databases:** CINAHL, SpringerLink, PubMed, PEDro

1,778 records identified through database searching

15 articles met inclusion criteria  
14 additional through hand searching

23 articles after duplications removed remained to be scored

9 articles included in final review

Study	PEDro Score	Sackett Level
Chaya et al.	7	1b
Mandanmohan et al.	6	1b
Telles et al. (1997)	6	1b
Hagins et al.	8	1b
Jellesma & Cornelis	6	1b
Khalsa et al.	6	1b
Noggle et al.	7	1b
White	6	1b
Telles et al. (2013)	8	1b

## Results

Twenty-three articles were found through database and hand searching, after duplicates were removed. Two reviewers independently scored the quality of the 23 articles, with conflicting scores settled by a third reviewer. Nine studies scored at greater than or equal to 6 on the PEDro scale, and were included in this review. The mean PEDro score of accepted articles was 6.67 (range from 6 to 8). The total number of subjects included in the 9 reviewed studies was 768 children and teenagers. After randomization, 403 participants were in yoga groups and 365 were in non-yoga control groups, which included physical education classes, art or music classes, or no intervention. Of the 9 reviewed articles, 1 assessed cognitive outcomes, 2 assessed physiological outcomes, 5 assessed psychosocial outcomes, and 1 assessed all three domains. For cognitive function, yoga was as effective as physical activity. For physiological function, yoga practice showed significant increases in balance, upper extremity speed of movement, respiratory pressures, and pulmonary function. Yoga is as effective as exercise in decreasing resting heart rate and increasing trunk strength and endurance. For psychosocial function, significant increases were seen in negative affect, anger control and coping in the yoga group.

## Conclusions

Yoga appears to improve both physiological and psychosocial outcomes in children ages 7-19, when compared to non-yoga control groups. Yoga is as effective as physical exercise for cognitive function.

## Clinical Relevance

- The results of this systematic review suggest that yoga is more beneficial than physical exercise in improving physiological and psychosocial functioning.
- PT's should consider recommending and promoting yoga as part of a wellness program for children and teenagers.
- No negative effects of yoga were recorded in any studies reviewed, which suggests that it is a safe and effective intervention for overall wellness in children and teenagers.

## References

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