

# Diving into Discomfort: Exploring Shoulder Pain and Trunk Muscles Endurance in Young Male and Female Swimmers

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## Abstract

Swimming is a sport that demands a high level of physical fitness, with the shoulders and trunk muscles playing pivotal roles in a swimmer's performance. However, the pursuit of excellence in swimming often comes with its share of discomfort, particularly in the form of shoulder pain and challenges to trunk muscle endurance. This article delves into the intricate relationship between swimming, shoulder pain and trunk muscles endurance, with a focus on young male and female swimmers. By examining the factors contributing to discomfort and potential preventive measures, this exploration aims to provide valuable insights for swimmers, coaches and sports medicine professionals.

**Keywords:** Swimming • Shoulder pain • Trunk muscles endurance • Young athletes

## Introduction

Swimming is a physically demanding sport that engages various muscle groups, with the shoulders and trunk muscles playing integral roles in propulsion and stability. While the benefits of swimming for cardiovascular health and overall fitness are well-established, the sport is not without its challenges. One prevalent issue faced by swimmers, particularly young athletes, is discomfort related to shoulder pain and a need for enhanced trunk muscles endurance. This article aims to explore the complex interplay between swimming, shoulder pain and trunk muscles endurance, shedding light on the factors contributing to these challenges and proposing potential strategies for prevention and improvement. By focusing on the specific demographic of young male and female swimmers, we aim to address the unique physiological considerations and potential gender differences in these discomfort issues [1]. Research suggests that there may be gender differences in the prevalence and manifestation of shoulder pain among swimmers. While both male and female swimmers can experience shoulder discomfort, the underlying factors and potential risk factors may vary. In general, female athletes may have a higher predisposition to certain shoulder injuries due to differences in anatomy and muscle mass distribution. Hormonal fluctuations can also play a role, affecting ligament laxity and injury susceptibility. Understanding these gender-specific considerations is crucial for tailoring injury prevention strategies to the unique needs of young male and female swimmers.

## Literature Review

Shoulder pain is a common complaint among swimmers and its prevalence is particularly notable in young athletes. The repetitive nature of swimming strokes, especially in competitive training, puts significant stress on the shoulders. The rotator cuff, comprised of four muscles and their tendons, is especially vulnerable to overuse and strain. Several factors contribute to shoulder pain in swimmers, including poor technique, muscle imbalances

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and inadequate warm-up and cool down routines. In young athletes, rapid growth and changes in body composition can further exacerbate these issues. Coaches and sports medicine professionals need to be attuned to the signs of shoulder pain, such as discomfort during and after training, limited range of motion and persistent soreness. Understanding the biomechanics of swimming strokes and the specific demands they place on the shoulders is crucial for both prevention and rehabilitation. Additionally, implementing targeted strength and flexibility exercises, along with proper training progression, can help young swimmers build resilience in their shoulder joints and mitigate the risk of pain and injury [2,3].

While the shoulders play a vital role in swimming, the importance of trunk muscles endurance should not be overlooked. The trunk muscles, including the abdominals, obliques and lower back muscles, contribute significantly to the swimmer's body position and stability in the water. Insufficient trunk muscles endurance can lead to a breakdown in swimming form, negatively impacting performance and increasing the risk of injuries. Young swimmers, who are still developing their musculature and coordination, may be particularly susceptible to challenges in this area. Training programs for young swimmers should incorporate exercises that specifically target trunk muscles endurance. Core stabilization exercises, rotational movements and exercises that mimic the demands of swimming can all contribute to improved trunk muscles endurance. Additionally, fostering a strong mind-muscle connection and promoting proper body alignment during training can enhance the effectiveness of these exercises [4].

## Discussion

Similarly, trunk muscles endurance may vary between genders, influenced by factors such as muscle fiber composition and hormonal fluctuations. Coaches and sports medicine professionals should be mindful of these differences when designing training programs, ensuring that they address the specific needs of both male and female athletes. Addressing shoulder pain and enhancing trunk muscles endurance in young swimmers requires a multifaceted approach that combines preventive measures and targeted training strategies. Coaches should prioritize teaching and reinforcing proper swimming techniques to minimize unnecessary stress on the shoulders. Video analysis and real-time feedback can be valuable tools in this regard. Implementing well-rounded training programs that include strength training, flexibility exercises and endurance training for both shoulders and trunk muscles is essential. Cross-training activities that complement swimming, such as yoga and Pilates, can also contribute to overall muscular balance [5].

Recognizing that each swimmer is unique, coaches should tailor training programs to individual needs and consider factors such as body composition,

growth stages and gender differences. Regular assessments can help identify areas of weakness or imbalance that require specific attention. Recovery Strategies: Adequate recovery is paramount in preventing overuse injuries. Incorporating rest days, proper nutrition and recovery modalities such as ice baths or massage can contribute to the overall well-being of young swimmers. Ensuring that swimmers, coaches and parents are educated about the importance of injury prevention and are aware of the signs of discomfort is crucial. Open communication channels facilitate early intervention and support for athletes experiencing shoulder pain or trunk muscles fatigue [6].

## Conclusion

In the dynamic world of competitive swimming, young athletes face unique challenges related to shoulder pain and trunk muscles endurance. This article has delved into the intricate relationship between these discomforts issues, emphasizing the need for a comprehensive and gender-aware approach to injury prevention and performance optimization. By understanding the biomechanics of swimming, recognizing gender-specific considerations and implementing targeted training strategies, coaches and sports medicine professionals can empower young swimmers to navigate their journey with resilience and minimize the risk of discomfort and injury. As the swimming community continues to evolve, prioritizing the well-being of athletes ensures a sustainable and fulfilling experience in the pool for the next generation of aquatic competitors. As the field of sports medicine and athletic training continues to advance, on-going research is crucial for a deeper understanding of the complexities surrounding shoulder pain and trunk muscles endurance in young swimmers. Future studies may explore the effectiveness of innovative training modalities, the impact of different swimming strokes on shoulder health and the long-term consequences of early discomfort on an athlete's career.

## Acknowledgement

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## Conflict of Interest

There are no conflicts of interest by author.

## References

1. Oosterwijk, Anouk M., Marianne K. Nieuwenhuis, Cees P. van der Schans and Leonora J. Mouton. "Shoulder and elbow range of motion for the performance of activities of daily living: A systematic review." *Physiother Theory Pract* 34 (2018): 505-528.
2. Chandran, Avinash, Sarah N. Morris, Bernadette A. D'Alonzo and Adrian J. Boltz, et al. "Epidemiology of injuries in national collegiate athletic association women's swimming and diving: 2014–2015 through 2018–2019." *J Athl Train* 56 (2021): 711-718.
3. Schlueter, Kaitlyn R., Joshua A. Pintar, Katherine J. Wayman and Lynda J. Hartel, et al. "Clinical evaluation techniques for injury risk assessment in elite swimmers: A systematic review." *Sports Health* 13 (2021): 57-64.
4. Li, Wei Han, Maryam Hadizadeh, Ashril Yusof and Mohamed Nashrudin Naharudin. "Analysis of research trends on elbow pain in overhead sports: A bibliometric study based on Web of Science Database and VOSviewer." In *Healthcare* 10 (2022): 2242.
5. Chi, Ju-Yang, Mark Halaki and Bronwen J. Ackermann. "Ergonomics in violin and piano playing: A systematic review." *Appl Ergon* 88 (2020): 103143.
6. Renstrom, Per, Arne Ljungqvist, Elisabeth Arendt and B. Beynnon, et al. "Non-contact ACL injuries in female athletes: An International Olympic Committee current concepts statement." *Br J Sports Med* 42 (2008): 394.

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