



Keywords: Immersion pulmonary edema; Female triathlon competitors; Hidden Risk; Water immersion; Respiratory distress; Prevention

Introduction

Triathlons, with their unique blend of swimming, cycling, and running, have become increasingly popular among athletes of all levels. For many women, participating in triathlons represents not only a personal challenge but also a celebration of strength and endurance. However, beneath the surface of these grueling competitions lurks a hidden risk that has been affecting female triathletes: Immersion Pulmonary Edema (IPED).

Triathlon, an exhilarating multisport event that encompasses swimming, cycling, and running, has gained immense popularity worldwide. Female athletes, in particular, have embraced triathlons as a testament to their physical prowess, resilience, and determination. However, beneath the surface of this dynamic sport lies a concealed

It's essential to prioritize safety over competition and ensure that participants are well-informed about the risks they face. Prioritizing safety, female triathletes can continue to excel in their sport while minimizing the hidden risks that lurk beneath the surface.

Discussion

IPE is a rare yet potentially life-threatening condition that has been observed in various water-related activities, such as scuba diving and swimming. The underlying mechanism involves a combination of factors, including water pressure changes, cold water exposure, and strenuous physical activity, which can lead to increased pressure in the pulmonary circulation and subsequent leakage of fluid into the lungs. IPE is a serious environmental illness, likely triggered in triathletes by cold water immersion and exertion and may be exacerbated by other factors including gender, age, wetsuit tightness, and hydration status. Many patients experience multiple episodes of IPE, making previous history a major predisposing factor. IPE occurs in otherwise healthy males and females immersed in fresh or salt water. IPE generally occurs in the colder water but has been described in warm water as well. Symptoms generally resolve quickly when patients are removed from water.

Addressing the hidden risk of IPE in female triathlon competitors necessitates a collective effort from athletes, coaches, and event organizers. It is essential to prioritize safety over competition, ensuring that participants are well-informed about the risks they face. Emphasizing the importance of recognizing and responding to IPE symptoms can potentially save lives and enhance the overall well-being of female triathletes [9].

For athletes, it is important to be aware of IPE risk factors and how to manage them. They must also be able to recognize the symptoms of IPE before becoming incapacitated. Currently, no treatment has been proven to prevent the onset of IPE. Anecdotally, Nifedipine has been used as a prophylactic with some success in SCUBA divers. The long-term implications of repeated IPE incidents is unknown. All three triathletes detailed in this report have continued to train and compete successfully, however further study is needed before this can be recommended. Because the possibility of reoccurrence is high, the risk of drowning still exists [10].

Conclusion

Female triathletes are breaking barriers and pushing the limits of physical endurance, but it's crucial to be aware of the hidden risks that can accompany such dedication. Immersion Pulmonary Edema may be an uncommon condition, but its potential consequences are severe. By understanding the risk factors, recognizing the symptoms, and

References

- Aydin I, Demirkir C, Colak S, Colakoglu G (2017) 8 W L O L J D W L R Q R I E D U additive in plywood manufacturing. *Eur J Wood Prod* 75:63-69.
- Rajeshkumar G, Seshadri SA, Devnani GL, Sanjay MR (2021) Environment I U L H Q G O \ U H Q H Z D E O H D Q G V X V W D L Q D E O H S R O \ O reinforced composites-A comprehensive review. *J Clean Prod* 310:127483.
- Lee SH, Lum WC, Boon JG (2022) Particleboard from agricultural biomass and recycled wood waste: A review. *J Mater Res Technol* 20:4630-4658.
- França WT, Barros MV, Salvador R (2021) Integrating life cycle assessment and life cycle cost: A review of environmental-economic studies. *Int J Life Cycle Assess* 26:244-274.
- Couret L, Irlle M, Belloncle C (2017) Extraction and characterization of cellulose Q D Q R F U \ V W D O V I U R P S R V W F R Q V X P H U Z R R G ç E H U E 2137.
- Haag AP, Maier RM, Combie J (2004) Bacterially derived biopolymers as wood adhesives. *Int J Adhes* 24:495-502.
- Soubam T, Gupta A, Sharma S (2022) Mechanical property study of plywood bonded with dimethylol dihydroxy ethylene urea crosslinked rice starch-natural rubber latex-based adhesive. *Mater Today Proc*.
- Hammiche D, Boukerrou A, Azzeddine B (2019) Characterization of polylactic acid green composites and its biodegradation in a bacterial environment. *Int J Polym Anal Charact* 24:236-244.
- 3 G J L N 0 - D Q L V J H Z V N D ' 5 R A R R e p h a t i v e N o o c e l l u l o s i c r a w materials in particleboard production: A review. *Ind Crops Prod* 174:114162.
- Brito FMS, Bortoletto JG, Paes JB, Belini UL, Tomazello FM (2020) Technological characterization of particleboards made with sugarcane bagasse and bamboo culm particles. *Constr Build Mater* 262:120501.

