



# Relationship between Physiological and Perceived Thermal Stress when Wearing Stab Resistant Armor

Yuchen Wei\*

Department of Science and Technology, University of Beijing, China

## INTRODUCTION

Physiology, the study of how living organisms function and maintain life, is a captivating scientific discipline that delves into the intricate mechanisms that govern life processes. It seeks to understand the dynamic interactions within the human body and other living organisms, enabling them to adapt to their environment and ensure their survival. From the coordination of bodily functions to the regulation of complex biochemical pathways, physiology is the key to unravelling the secrets of life. In this article, we will explore the significance of physiology, its historical development, its essential concepts, and its vital role in modern medicine and scientific advancements. The roots of physiology can be traced back to ancient civilizations, where early physicians and philosophers attempted to explain the workings of the human body. Greek scholars, such as Aristotle and Galen, contributed significantly to the understanding of physiology through their observations and writings. In the Renaissance period, the scientific method brought about a renewed interest in physiology. Pioneers like William Harvey, known for his work on the circulation of blood, laid the foundation for experimental physiology. As the scientific method advanced, so did our understanding of life processes. The 19th century marked a golden era for physiology, with notable contributions from scientists like Claude Bernard, who introduced the concept of the internal environment and homeostasis, and Ivan Pavlov, who explored the principles of classical conditioning [1-3]. The discovery of electricity's role in nerve function by Luigi Galvani and the subsequent advancement in neurophysiology furthered our understanding of the nervous system.

## DESCRIPTION

Understanding the body's structure and spatial relationships is crucial for accurate diagnosis, treatment, and surgery. Traditionally, medical students learned anatomy through dissection

in anatomy labs. However, in recent years, there has been a shift toward using digital resources and simulations. While the essence of hands-on dissection remains irreplaceable, digital tools offer unique benefits, such as self-paced learning, interactive visualization, and easy accessibility. Surgeons rely on precise anatomical knowledge to perform procedures safely and effectively. Whether it's open surgery or minimally invasive techniques like laparoscopy or endoscopy, understanding the body's structures and their variations is critical. Radiologists and imaging specialists interpret medical images, and a deep understanding of anatomy is essential to accurately identify abnormalities and diagnose diseases. Pharmacologists study how drugs interact with the body, and this understanding hinges on knowing the anatomical sites of action and physiological processes. In rehabilitative settings, therapists utilize anatomical knowledge to design personalized treatment plans and aid patients in regaining mobility and function. Every human body is unique, and anatomical variations are common [4,5]. In pathology, the study of structural abnormalities and disease processes helps diagnose and manage medical conditions. The study of anatomy raises ethical questions, especially concerning the sourcing of cadavers for dissection and research.

## CONCLUSION

Respect for the deceased and their wishes, as well as informed consent from donors or their families, is of utmost importance. In recent years, there has been a growing emphasis on alternative methods of anatomy education that minimize the use of cadavers, such as virtual dissection tables and high-quality anatomical models. Physiology remains a cornerstone of scientific exploration, unlocking the mysteries of life's processes and guiding medical practice and research. From the ancient philosophers to modern researchers, our understanding of physiology has come a long way. Its role in medicine, genetics, bioinformatics, and regenerative medicine makes it a dynamic

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**Corresponding author** Yuchen Wei, Department of Science and Technology, University of Beijing, China, E-mail: yuchen\_wei@bit.edu.cn

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and vital field for scientific advancements.

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## CONFLICT OF INTEREST

The author's declared that they have no conflict of interest.

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