

# Fitness Meets Science – It all Started with Zander

*Fitness meets Science –*

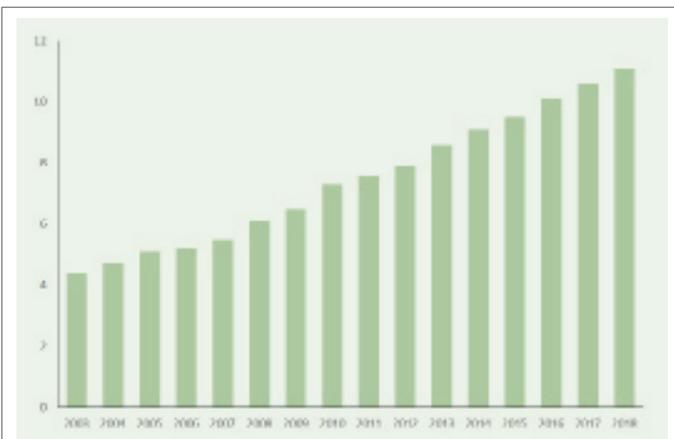
*Von der Zanderei bis zur Fitnesswissenschaft*

**It is rather unlikely that Jonas Gustaf Vilhelm Zander (1835- 1920) could have imagined back then which influence he had on the evolution of the fitness industry. Zander was a Swedish physician and developed the first apparatus to support his method „the medico-mechanical therapy“ in the 1950s (5), which laid the foundation for today’s machine-based training methods in strength training and therapy.**

Therefore, one might conclude, that today’s fitness industry had its origin in medical therapy. In 1877, Zander began the industrial production of his apparatuses, and he set up the so-called Zander Institutes. Patients with various diseases came in to undergo treatment. At the height of his popularity at the beginning of the 20th century, there were 79 Zander Institutes across Germany, in which roughly 100,000 people followed “Zanderism”.

Unfortunately, this development changed radically with the outbreak of the First World War. It was not until 50 years later that the American, Joe Gold, opened the first large scale fitness studio chain (Gold’s Gym) in the USA (1). Famous athletes and actors like Arnold Schwarzenegger and Jane Fonda became leading role-models which helped the fitness trend become more popular. On the flip side, it also attracted a clientele of aesthetics driven bodybuilders and „gym bunnies“ giving the fitness scene a somewhat dubious reputation and stigma.

Only in the late 1990s, the fitness scene developed to the health-oriented and holistic fitness industry as we know it today (3).



**Figure 1**

Development of membership numbers in fitness studios in Germany (in millions) (2).

Today there are more than 200,000 fitness clubs worldwide and growing steadily. The number of fitness and health clubs in Germany alone expanded to nearly 10,000 (4), which makes Germany the leader of the European market. In the last 15 years, the number of fitness studio members has nearly tripled (figure 1). In Germany, more than 11 million people train in a gym, making the fitness industry by far the biggest service provider for exercise nationwide (4) (Figure 2).

## The Ubiquitous Challenge of the Fitness Industry

To date, the fitness industry still faces a significant challenge: the ubiquity of dubious service providers. There are hardly any regulations or statutory requirements that define or control who is allowed to offer fitness services. In principle, anyone can open a fitness studio or work as a trainer without any proof of qualification. Only the Prevention Law §20 cites requirements that must be fulfilled if a trainer wants to get his services reimbursed by health insurances.

Therefore, it is about time that the government takes action and drafts specific requirements for the fitness industry. The so-called 2nd health care market cannot and must not remain uncontrolled as the health of the population is at stake. First meetings with the federal government were held and showed promise for further dialogue.

Another challenge for the fitness industry, until recently, is the deficient number of evidence-proven training methods. Claims of which training methods bring the best results for desired adaptations, for example, muscle growth or fat loss were mainly based on personal experiences or hearsay.

However, sports science is aware of this issue, and there has been an increasing number of studies that investigate the effectiveness of various training methods over the past years.

For this reason, the first Fitness Science Congress was initiated in 2018 with a line-up of leading sports physicians and sports scientists. As a result of this very successful event and the exchange of „fitness knowledge“, the second Fitness Science Congress was held on 28/29 February 2020 in Düsseldorf, Germany. The abstracts will be published in the German Journal of Sports Medicine. ➤

## EDITORIAL

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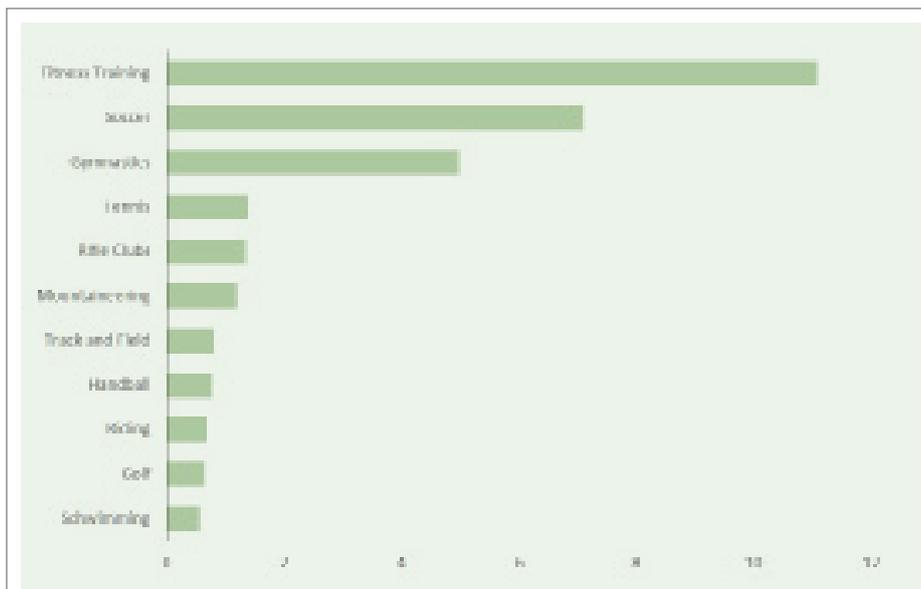


Figure 2

Comparison of training forms with the most members (in millions) (2).

In Germany, the term fitness science has not been described in detail as yet. A first definition of the term is as follows:

„Fitness science is an interdisciplinary science which is understood as a subcategory of sports science. It incorporates several different areas with the focus on fitness, exercise, nutrition, athletics and health. Fitness science consists of various subdisciplines of sports science like kinesiology, sports therapy and performance sports science or exercise science.“

The long-term goal of this initiative is to raise the level of expertise in the fitness industry and to collaborate more successfully with health insurances and physicians. A strong scientific foundation and regulated qualifications for trainers and therapists are the critical ingredients for fruitful cooperation of all stakeholders, which will undoubtedly lead to an increase in the population's overall health.

It is needless to explain in this journal, what positive effects fitness training, precisely strength and endurance training, have in the fight against various diseases.

Shortly before his death, the well-known sports scientist, Bengt Saltin, together with his colleague, Bente Pedersen, published a paper called „Exercise as medicine“ in which he described the importance and power of exercise in combating disease (6).

In this issue, you will find abstracts on fitness science as well as other fitness science-orientated articles.

I am calling on all colleagues who would like to support us in the undertaking of a better collaboration of fitness and medicine by sharing knowledge, experience and future studies with each other.

It is planned to establish a fitness science council to form a competence team of scientists and fitness experts for our industry soon. Please contact us if you would like to get involved, your support is greatly appreciated!  
Stay fit!

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