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Mini Review

Importance of Foot Assessment in Physical Activity

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Abstract

The feet represent a very important part of the body because they facilitate locomotion and support the entire body. Their evaluation or assessment provides a preventive space through which any improvement decisions can be made in the event of complications. The objective of the study was to analyze the importance of foot evaluation in physical activity. The methodological process or search strategy employed was a bibliographic review supported by databases such as Scielo, Redalyc, Google Scholar, PubMed Central, and Elsevier, under specific selection criteria such as establishing a time period between 2016 and 2025, in addition to a set of keywords. The search showed that the feet represent a vital part of the body and that pathologies can occur in them that can threaten their physiological functioning; that there are various methods for achieving an effective foot evaluation; and that a timely evaluation can prevent injuries during physical activity. It was concluded by stating that the importance of foot assessment in physical activity lies in the fact that it can prevent potential injuries or, failing that, provide the opportunity to correct any identified foot abnormalities.

Keywords: Importance of Assessment; foot Assessment; physical Activity

Introduction

Foot assessment in the context of physical activity is vitally important as it prevents injuries and optimizes performance. The feet are the support base for the entire body, supporting heavy loads, especially during high-impact physical activities [1]. Hence the importance of performing biomechanical studies of the gait to identify the presence of morphofunctional pathologies caused by asymmetric pressure distribution, which can lead to acute pain and foot injuries, in addition to affecting the ankles, knees, and even the back [2]. Podiatric analysis facilitates the early detection of congenital malformations or those caused by improper footwear use or even physical activity in unfavorable conditions, offering the opportunity to undergo preventive or corrective treatment before it is too late [3].

Search Strategy and Selection Criteria

This study is based on a literature review, which identified documents published in Spanish between 2016 and 2025 in the Scielo, Redalyc, Google Scholar, PubMed Central, and Elsevier databases, using keywords such as «foot structure,» «foot assessment,» «foot assessment techniques,» «importance of foot assessment,» and «physical activity.»

Development

The feet represent a support structure for the body, located distally in the lower extremities and also facilitating locomotion. Anatomically, it is a mechanical structure divided into three fundamental parts called the forefoot, midfoot, and hindfoot

[4]. Regarding toe length, there are certain types of feet, such as the Egyptian, in which the thumb is the largest, with the others decreasing in length; the Greek, in which the middle toe is the largest; and finally, the Roman, in which all toes are almost the same size [5]. Depending on the plantar arch, various alterations can occur in the feet that make it difficult to participate in physical activity. These conditions include flat feet, characterized by the loss or collapse of the plantar arch; cavus feet, which present an enlarged plantar arch; and finally, valgus feet, which present an inward deviation of the foot [6]. The human foot, as a multi-articular structure composed of bones, joints, and soft tissues, has an important biomechanical function since it maintains the balance of the lower limb and, therefore, of the entire body [7]. If this structure is affected by any pathology, its function is inhibited, representing a threat to proper performance when performing physical activity. Hence the importance of performing an assessment.

Foot assessment or evaluation is a process of review and analysis performed on the structure, condition and biomechanics of the foot through which the existence or not of any pathology can be detected, so that, as a result, preventive measures, treatment or intervention, if necessary, can be taken to counteract the alteration [8]. There are multiple techniques for evaluating the feet, some very complex and others very easy to apply. From a medical point of view, X-rays, diagnostic ultrasound, magnetic resonance imaging, computed tomography, crunch test, Grifka test, toe displacement, metatarsal percussion, general observation, gait observation, palpation and plantar print are used [9,10]. It is important to perform an evaluation of the feet from an early age, so that any abnormality can be detected and corrected in time, before it worsens and causes damage to other parts of the body, that is, this assessment contributes to the maintenance of health and the prevention of immediate or future injuries, especially if physical activity is practiced [11]. Physical activity is defined as any movement performed by the body that involves skeletal muscle and causes energy expenditure [12].

These movements involve the participation of the feet and if they are not in optimal condition from the anatomical-biomechanical point of view, then it will affect the performance of the physical activity that is performed. For this reason, it is important that people who perform any type of recreational physical activity, for health, sports initiation, hobby or high sports performance be subjected to a foot evaluation process, especially if at any time they have experienced any discomfort while doing the physical activity, because if it is not given importance it can end up affecting the topographic structure of the body, starting with deformities and / or wear of knees, hips or the spine, becoming fatal for the person. Nowadays, the practice of physical activity is a necessity for all ages, especially in adults when it is recommended to do at least 150 minutes of physical exercise a week to prevent chronic non-communicable diseases such as type 2 diabetes, sarcopenia, obesity and cardiovascular problems; however, it is important to evaluate the feet so that a type of footwear or appropriate sports shoe can be recommended [13].

Conclusion

Foot evaluation or assessment during physical activity is of great importance since a person's health depends on it. From an early age through older adulthood, it is advisable to undergo a foot evaluation, as this allows for more fulfilling physical activity, knowing that there are no abnormalities in the feet. If any are detected, there are multiple ways to counteract the situation so that it does not become so complicated that other important parts of the body are affected, especially those involved in joint mobility and locomotion.

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Conflict of interest

There is no conflict of interest.

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