

# Musculoskeletal Effects of Obesity on Children

Simon Charles Barnes\*

Department of Orthopedic Surgery, University of Arkansas for Medical Sciences, Arkansas, USA

## Commentary

**Received:** 04-Jul-2022, Manuscript No. orthopedics-22-71067; **Editor assigned:** 11-Jul-2022, Pre QC No. orthopedics-22-71067 (PQ); **Reviewed:** 25-Jul-2022, QC No. orthopedics-22-71067; **Revised:** 01-Aug-2022, Manuscript No. orthopedics-22-71067 (R); **Published:** 08-Aug-2022, DOI: 10.4172/orthopedics.5.S1.002

**\*For Correspondence:**

Dr. Simon Charles Barnes,  
Department of Orthopedic Surgery,  
University of Arkansas for Medical  
Sciences, Arkansas, USA

**E-mail:** [SimonBarnes@uams.edu](mailto:SimonBarnes@uams.edu)

## DESCRIPTION

The global obesity epidemic has profound consequences on the musculoskeletal system and related illnesses such as fibromyalgia, osteoarthritis, rheumatoid arthritis, and spondyloarthropathy. Obesity has significant effects on the societal economic burden since it increases the requirement for joint replacement surgery and lowers the health results from it. There have been advancements in our understanding of the potential processes through which obesity influences the prevalence, severity, and prognosis of musculoskeletal diseases, including osteoarthritis. The study of adipocytokines suggests a new possible metabolic connection for these disorders.

A major health risk continues to remain obesity. Its effects on how the child's musculoskeletal system develops are still not fully understood. According to recent research, obesity has an impact on children's locomotor systems both structurally and functionally.

Obesity frequently emerges as a significant and potentially modifiable risk factor in the initiation and progression of musculoskeletal diseases of the hip, knee, ankle, foot, and shoulder, despite the complex character of musculoskeletal disease. The majority of research to date has concentrated on how obesity affects bone and joint conditions such as the risk of fracture and osteoarthritis. However, new research suggests that obesity may also have a significant impact on soft-tissue structures including cartilage, tendon, and fascia. Although the exact mechanism is still unknown, it is almost universally acknowledged that the functional and structural restrictions brought on by obesity's increased loading of the locomotor system result in aberrant mechanics during locomotor tasks, which unnecessarily increases stress in connective-tissue structures and the risk for connective-tissue disorders for musculoskeletal injury.

Despite the prevalence of such mechanical ideas, there is surprisingly little data that directly connects musculoskeletal injury to altered biomechanics in fat people. Even the biomechanical effects of obesity on the

## Research & Reviews: Orthopedics

locomotor system are, for the most part, unclear. There is a need to ascertain the physical effects of continued repetitive loading of major locomotor system structures in the obese and how obesity may interact with other factors to potentially increase the risk of musculoskeletal disease given the global increase in obesity and the rapid rise in musculoskeletal disorders.

Adult obesity is related to physiological impairment, particularly in the joints and with long-term illnesses like diabetes, cardiovascular disease, and various malignancies. The range of disabilities associated with obesity has been observed to include degenerative osteoarthritis, cartilage loss, and musculoskeletal pain. These ailments greatly limit a person's capacity for activity, and persistent pain has been shown to have a detrimental effect on a person's quality of life. Given that being overweight or obese in adulthood has an impact on health and wellbeing, further research is needed to determine whether being overweight or obese as a child has any negative consequences on the musculoskeletal system.

It has been noted that children and adolescents frequently have chronic nonspecific musculoskeletal discomfort. Chronic musculoskeletal discomfort in children has been linked to higher levels of anxiety and depression as well as reduced levels of exercise. The lower limbs were shown to be the most common location of nonspecific musculoskeletal pain in children, according to recent research on the condition. According to some estimates, this condition affects 24% of kids between the ages of 6 and 10 years old.

A typical complaint in the pediatric clinic is musculoskeletal pain. There is a definite correlation between increased weight and musculoskeletal pain in adults. When obese children were compared to their non-overweight peers, recent research has shown an increased incidence of musculoskeletal discomfort related with obesity in children. Children who are overweight experience biomechanical alterations as a coping technique, which may cause the joints to become misaligned. This element, along with the excessive weight, may be to blame for the rising frequency of pain. 135 kids were examined for musculoskeletal discomfort, with at least 61% of them expressing pain in at least one joint.

A typical complaint in the pediatric clinic is musculoskeletal pain. Back pain, which affected 39% of youngsters, was the most prevalent ailment in their community, followed by foot pain, knee pain, and increased weight in adults, according to their research. Musculoskeletal pain was also assessed in their population; lower extremity pain and back pain were the two most prevalent findings. When their population was examined, researchers discovered that obese children had a higher prevalence of musculoskeletal pain than their age-matched non-obese peers, with knee pain being the most prevalent complaint in 21% of the population.