

12th International Conference on Orthopedics & Rheumatology

September 05-06, 2022 at Vancouver, Canada



Orthopedics of the knees as a model for the temporomandibular joint

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Abstract (600 words)

Although the knee and temporomandibular joint (TMJ) have similar rates of cartilage damage, the knee orthopaedics area has more financing and more effective end-stage therapy options. Tissue-engineered products for knee cartilage repair have been developed as a consequence of translational research, however this is not the case with TMJ cartilages. In this section, we look at the anatomy and pathophysiology of the joints, evaluate existing therapies and solutions for cartilage problems, and look at strategies to further the TMJ field. We investigate differences in osteoarthritis occurrence, such as a 6-fold higher article count and 2,000-fold greater total joint replacement frequency in the knee compared to the TMJ..

Basic and translational research will drive the development and deployment of therapeutic solutions for the TMJ, using knee orthopedics as a model. Millions of patients suffering from TMJ issues might benefit from revolutionary, life-changing therapies if more financing possibilities, training programmers, Assays required to show safety for allogeneic approaches compared to autologous approaches may be considered. Due to the dearth of precedent for both the knee and TMJ, the FDA might consider providing early communication and advice through existing designations and programs, such as breakthrough and fast track designations and priority review and accelerated approval programs and federal advice are made available. Chronic pain must be understood in the context of social, biological, psychological, and physical factors in order to develop treatment plans and prevention strategies.

The nature of translational research is inherently arduous, with many choke points frequently leading to a vicious cycle (Figure 3). However, there are just as many possibilities to break this cycle. As the NIDCR moves forward with funding various projects, they should consider funding TMJ cartilage-specific grants to encourage

This is a narrative synthesis of the epidemiology of chronic pain, focusing on risk factors and demographic associations.

The knee and temporomandibular joint (TMJ) are two of the most frequently utilized joints in the body. Both are arthroal hinge joints with a fibrocartilaginous meniscus/disc sandwiched between two articulating surfaces. The knee is best defined as two joints: the tibiofemoral joint and the patellofemoral joint, which function together to allow the lower legs to flex, extend, and rotate. The knee is the body's biggest joint and is required for walking, running, and jumping. 3 The TMJ is one of the most complicated joints in the body, performing critical processes such as eating, speaking, and breathing through rotation and translation. 4 Both joints are essential for executing numerous daily activities in which substantial, repetitive stresses are applied.

Although the knee and TMJ have similar features there are some biomechanical and biochemical variations between the two joints. The knee can endure relatively substantial stresses while executing basic motions; mild jogging can exert more than four times the body's weight (e.g., 3,080–3,600 N) on the knee. When biting, the TMJ encounters pressures comparable to the body's weight (e.g., 770–900 N). 5,7 Although compression and shear loads are important in both joints,8 tensile loading is more important in the TMJ than in the knee.

Importance of Research: (200 Words)

Focused research in the field. Although current Support at the R-series level is insufficient. With knee orthopedics as a template, the TMJ field can make great strides toward ameliorating the symptoms that millions of TMD patients experience on a day-to-day basis, drastically improving their quality of life.

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Biography (200 Words)

Department of Biomedical Engineering, University of California, USA.. Professor of Orthopaedic Surgery. Fellow of the American Academy of Orthopedic Surgeons (AAOS) His areas of research interest include development of new antibiotics, antimicrobial coatings for orthopaedic trauma implants, advanced techniques for infection identification

About Institution: (200 Words)

The Johns Hopkins Bloomberg School of Public Health (JHSPH) is the public health graduate school of Johns Hopkins University in Baltimore, Maryland. As the first independent, degree-granting institution for research in epidemiology and training in public health, and the largest public health training facility in the United States. It school is ranked first in public health in the U.S. News and World Report rankings and has held that ranking since 1994.

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