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The Smooth Ride

Friction is a mechanical concept that comes into play in a variety of functional ways. High levels of friction are efficacious at the footwear/contact surface interface and assistive device/contact surface interface in walking, running, jumping, lifting, etc. At the other end of the spectrum, low friction is desirable mechanically in activities such as ice skating and biologically at the interposed joint surfaces. In the normal state, the coefficient of friction between joint surfaces is much lower than between fabricated objects. Articular cartilage is the key factor in providing the resultant 'smooth ride' for intra-articular motion. Abnormalities associated with articular cartilage pose a variety of clinical management problems and, thus, challenges for orthopaedic and sports physical therapy.

Mechanical and biological factors are inherently intertwined in physical function. External, internal, and gravitational forces imposed by regional/whole body exercise and orthotics on articular cartilage and surgical implants pose significant challenges, and the need to freshly consider both basic and applied aspects of articular cartilage is rhetorical. This issue is the first of a two-part series devoted to articular cartilage and the patellofemoral joint. I trust these issues will be a learning stimulus as each of you makes an ongoing effort to winnow the "chaff" from the wheat, that is, remove the unnecessary from the science/common-sense-based imperatives for the most effective prevention, assessment, and treatment procedures that have clinical impact on articular cartilage.

Special commendations go to Kevin Wilk, who has been the prime mover for these issues. As national director of research and clinical education for HealthSouth Rehabilitation and Sports Medicine and director of rehabilitation research for the American Sports Medicine Institute, Birmingham, AL, Kevin's professional contact sphere includes many front-running professionals. We also thank each author for his/her willingness to contribute and the editorial staff of Debbie Durham, Trina Frank, and Colleen Meng for molding these two issues to their final quality state.

Read with care and act on your forthcoming ideas. May your professional walk be as effortlessly smooth and productive as the fearfully and wonderfully made articular cartilage.



Gary L. Smidt, PhD, PT, FAPTA
Editor-in-Chief