Chondromalacia patellae is a term applied to the syndrome of pain and grinding (crepitus) arising from underneath the knee cap (patellofemoral articulation). Typically, this is a disease of the adolescent and young adult. Etiological factors include trauma, patellar dislocation, misalignment syndrome, primary cartilage vulnerability and occupation. Many consider it a normal part of patellofemoral joint aging. The most prevalent criteria for the diagnosis of this degenerative disease is pain under the knee cap and medial aspect of the knee (anteromedial), along with crepitus, buckling, locking, stiffness, swelling and tenderness. Pain is usually aggravated by sitting in a confined space with the knee flexed (movie sign), and walking up stairs. A distinctive sign of Chondromalacia patellae is pain underneath the patella by applying compressive forces to the knee in a slightly flexed position (retropatellar sign).

Pathological features: Chondromalacia literally means “cartilage softening”. The pathogenesis is characteristic and parallels that seen in degenerative joint disease. Initial swelling and softening of the cartilage produces a “blister” type of cartilage lesion. Subsequently, fissuring and fibrillation occurs, predominately involving the medial aspect of the patella. Malalignment of the patella can be assessed as a possible contributing factor to Chondromalacia. Loss of joint space seen in radiology denotes more advanced changes of degenerative joint disease.

Treatment: Patellofemoral arthralgia is routinely treated conservatively. The presence of loose bodies within the joint is an exception. Standard treatment essentially consists of nonpainful isometric exercises and patellar bracing. With the advancement of therapeutic measures over time, other options have since surfaced providing pain relief to patients. Class 3 Laser in particular has benefited many patients with degenerative diseases through the reduction of pain by decreasing swelling and inflammation within the affected degenerative joint and surrounding tissues. Class 3 Laser also triggers the regeneration of tissues by stimulating an enzyme within the mitochondria (cytochrome C oxidase), thus enhancing cellular mitosis (cellular division). Given that there are no known side effects to class 3 laser applications, and with its increased popularity with major professional organisations, class 3 laser therapy continues to gain recognition within the modern rehabilitative field.

Consequently, in order to succeed with conservative treatment of degenerative joint diseases, the condition will benefit from early intervention to increase the possibility of tissue regeneration. In the absence of major degenerative changes within a joint, class 3 laser therapy offers a conservative and effective option towards rehabilitation of chronic degenerative illnesses.

Pierre Levesque DC
Dr. Levesque is co-clinical director of a comprehensive spine clinic “the Robichaud-Levesque clinic” situated at 5 Flanders court in Moncton.