



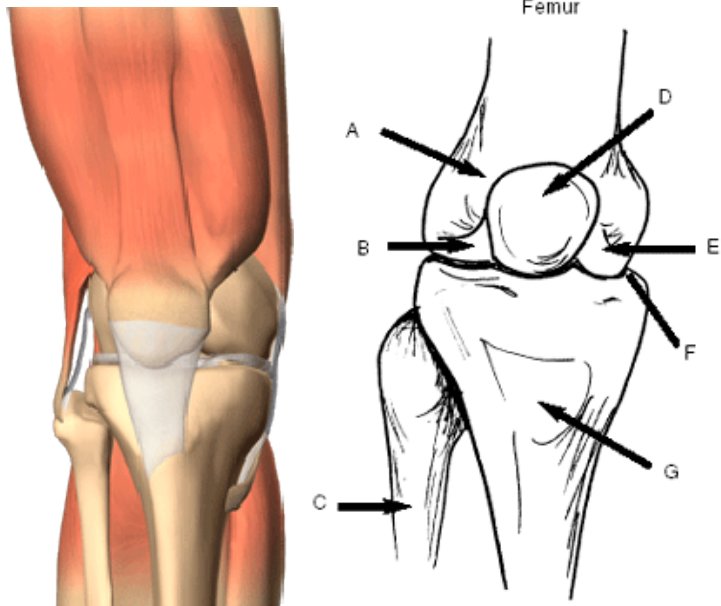
With the recent paradigm shift towards functional movement in the exercise/fitness industry, it is important that we don't forget the purpose and importance of isolation exercises. As a Physical Therapist, I find it all too often that individuals exhibit dysfunctional movement patterns, which lead to an "insidious" onset of pain with potential injury. Before I illustrate when isolation may be useful, I would like to address a recurrent problem/issue in our society. Whenever we are approached with two options, there is an overwhelming tendency for an individual to think, "which one is best". For example, free weights vs. machines, which one is best?

This question is asked time after time after time and unfortunately it is the wrong question.

The proper question is which modality is appropriate for a given situation. The problem with the former question is that it breeds a divisive psyche and a divisive psyche is an unbalanced psyche. Our society is out of balance and that is why we are failing as a people. With that being said, lets say you encounter a patient/client that exhibits transverse plane and axial breakdown (the medial foot arches aka medial longitudinal arch collapse, the knees fall in, and lumbar lordosis isn't preserved) while squatting, what do you do?

Do you say, “Hey, don’t do that” or as long as they don’t complain of pain, you say nothing? Hopefully, you do neither. An appropriate step to take is to find out each joint’s (and the associated muscles) influence on the dysfunctional pattern. To illustrate this point we will discuss a potential ankle and hip mostability issues that may occur when squatting. During a squat, a certain degree of dorsiflexion is needed to achieve a relative depth. If a person continues to descend into a squat as the motion of dorsiflexion ceases, then the foot will open into pronation or the heel will rise to allow for the descent. This will result in dysfunctional forces through the knee.

To address this “problem”, one may prescribe three dimensional calf stretches and decelerative exercises for the gastrosoleus complex (emphasis on the soleus) such as seated calf raises (emphasis on the eccentric phase). In reference to the hip region, a lot of people exhibit inhibited gluteals, which may result in femoral internal rotation and adduction (T-plane



breakdown) allowing the knee to fall in. In addition, inhibited gluteals may result in excessive stress in the lumbar region as the person falls into a posterior pelvic tilt and decreased lumbar lordosis. Keep in mind that there are many reasons why a person’s gluteals may be inhibited. One way to check for proper gluteal activation is to have the individual perform a single legged bridge. If he/she experiences hamstring cramping, then the gluteals are inhibited as the hamstrings (a secondary hip extensor) are trying to perform the job of the gluteals (a primary hip extensor) for which they are not equipped. This person may benefit from gluteal/hip flexor stretching and open kinetic chain exercises such as side-lying hip abduction and diagonal side-lying hip abduction followed by closed kinetic chain exercises like single legged stance (stance leg is the leg to be

addressed) with contra-lateral hip flexion and abduction. Once the individual has performed these isolated ankle and hip exercises, they should integrate them into a functional squat. Functional movement is always my end goal for a patient/client, but what is functional movement? To me, functional movement is when a body is performing an action in which its parts are moving in relative balanced harmony. When a particular body part, such as the ankle during a squat, doesn't do its part in maintaining this relative balanced harmony, another part of the body, the knee, is subjected to extra stress via compensation as the movement is now dysfunctional and the risk for injury increases. Unfortunately, the way we live promotes asymmetrical development. For example, a lot of us spend a fair amount of time sitting throughout the day. This leads to poor posture, tight soft tissue structures, weak muscles, etc. resulting in poor development and dysfunctional movement. To restore or to promote functional movement, one must first identify and address areas in the body that are not balanced, whether it be an issue of mobility, stability, flexibility, and/or weakness. This is where isolation can be useful. Keep in mind that the end goal is to integrate isolated movement into functional movement patterns.

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