SET TALK

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PREVENTION AND REHABILITATION OF KNEE INJURIES

Jimmy, a 19-year-old tennis player, was last in talent and accomplishment on his university tennis team. In most tournaments he was usually an alternate or was the doubles partner in the match for experience. He had heard that this bodywork might increase his speed and agility. On his intake form he shaded his left knee as an area that often was sore and sometimes swollen after a match. Upon evaluation it was obvious that there was limited range of motion of the left knee along with considerable weakness in the left quadriceps. Using kinesiology the soleus and peroneus longus were also considerably weakened. Structural evaluation revealed that the left knee was medially rotated and hyperextended, and the foot was laterally rotated and everted. With these structural distortions and weaknesses Jimmy was obviously at a disadvantage, and, more importantly, was on the verge of a significant injury to the knee when it was put under stress changing directions during tennis. The challenge here was not only to increase Jimmy's speed and agility, but to prevent the impending injury from occurring. Prevention of an injury due to the weakness and structural imbalance became the primary goal of his treatment, and any increase in speed and agility would be a bonus.

Carolyn was a 60-year-old senior amateur golfer. She had been in a car wreck and had badly damaged her right knee and shoulder. She had received physical therapy and chiropractic treatments over the last two years and was again playing golf. She still needed a knee brace while playing and was considering giving up golf altogether due to the knee pain after a tournament. She contacted me hoping to regain stability and strength in her knee so she could continue her amateur golf career. When she arrived for her first appointment she had just left a Senior Amateur State Championship tournament. She was not able to finish her last round because her knee was so swollen and painful. Also, she was not in the top ten and felt that she was no longer competitive in her age class. The medial side of her right knee was swollen, and the knee had a significant limitation in its range of motion. Muscle testing also revealed her hamstrings on the right were only about 40% normal strength. Structural evaluation revealed a hyperextended knee, a right posteriorly rotated ilium and a laterally rotated foot. The immediate challenge was to reduce the pain in the right knee, reduce the swelling, address the hyperextension, and strengthen the hamstrings. All this would help stabilize the knee and reduce the lateral rotation of the foot to relieve the strain on the medial knee. She also wanted to fully rehabilitate her knee so she could get her golf game back to where it had been before the accident.

Gene, an 18-year-old high school senior playing his last year of varsity football, had sprained his left knee while making a cut as a running back. He was told that he couldn't play football for a year and major knee surgery was not an option. He had high hopes for a college scholarship since several college scouts had talked to him during his junior year and were looking forward to seeing him play as a senior. Gene was depressed and wanted to be back on the playing field ASAP to continue his high school football career. When Gene came for his first session his left knee was swollen and the lower leg was out of alignment with his femur. The lower leg was shifted over to the right which showed that the ligaments on the lateral side were over stretched. In addition, the knee was medially rotated and the foot was laterally rotated to the knee. This knee was obviously in trouble. Further structural evaluation revealed an anteriorly rotated left ilium. Kinesiology testing revealed that the left quadriceps only had about 30% strength and were unable to stabilize the knee when he walked, ran, and moved quickly in lateral movements that were necessary for football.

All of these clients had knee problems that had structural misalignments and substantially weakened muscle groups that could no longer stabilize their knees. Jimmy hadn't had a knee injury yet, but his knee was sore and definitely weakened to the point that the possibility of suffering a serious injury was inevitable. Carolyn had a healed knee injury that was still weakened and in pain, and would not allow her to continue the amateur golf career she loved. In addition, she was not able to regain her form and was playing far below her potential. Gene had a new painful knee injury that had yet to heal, and full recovery was uncertain.

The common conditions involved in all of these clients were structural imbalances that resulted in stress and weakness in their knees, substantially weakened muscle groups that were not strong enough to stabilize their knees, and limited range of motion, all resulting in substantial loss of potential. The structural imbalances needed to be addressed in order to effectively rehabilitate these clients. All these knee imbalances were part of the basic core distortion that is found in most people, so it was essential to address this full body distortion to rehabilitate the knees. This core distortion pattern has an imbalance in the pelvis where one ilium is rotated anteriorly and the other one posteriorly. This

causes a tipping of the sacrum and a scoliosis in the spine. It also causes one leg to appear longer and the other to appear shorter which creates distortions in both legs. On the side of the anteriorly rotated ilium the leg is longer, the knee most often rotates medially and hyperextends, the foot rotates laterally, and the quadriceps are substantially weakened resulting in an inability to stabilize the lateral side of the knee that is stressed by the medial knee and lateral lower leg and foot. All of this results in additional limited range of motion and reduced strength resulting in loss of performance and potential. The posteriorly rotated ilium with the shorter leg results in a weakened medial knee, significantly weakened gluteals and hamstrings which are unable to stabilize the knee, and limited range of motion and flexibility. This structural imbalance is common in the vast majority of people and must be addressed in order to fully treat and rehabilitate these knee conditions.

Jimmy's therapy started with Cranial/Structural techniques to directly reduce the structural imbalance throughout the body and create support in the pelvis, followed by specific soft tissue protocols that addressed the key muscle groups that affected the imbalance in the iliums and knees. These included the quadriceps, adductors, hamstrings, gastrocnemius/soleiu/peroneus and iliacus. Obviously these muscle groups don't all attach directly to the knee, but they are all involved with supporting the knee and ilium. The same type of protocol was also applied with Carolyn and Gene.

What was accomplished in the first several sessions for all of these clients was a structural improvement that brought the iliums back into structural support of the sacrum and spine and reduced the anterior/posterior rotation of the iliums. This reduced the leg length discrepancy and the structural distortion found in the knees. It also increased the strength in the weakened quadriceps and hamstrings resulting in greater stability within the knees.

The results for these three clients: Jimmy's left knee was much stronger and had greater flexibility. It was no longer on the verge of injury, and was no longer sore after tennis matches and workouts. His tennis game showed a significant improvement with more speed to the ball and stronger ground strokes. He became a regular in the singles matches for the team, and earned a varsity letter and a place in the conference championship. Carolyn was quickly out of pain and back playing golf. Her leg supported her through the weight transitions of her golf stroke. She regained her form and top ranking in the senior amateur golf tournaments. She played some of the best golf of her career. Gene was able to fully rehabilitate his knee in nine weeks. He was able to play in enough football games to be offered a scholarship at a big college. This was a far cry from sitting on the bench during his senior year. He was also able to achieve his personal best in weight lifting leg-presses after six weeks, and his left knee and left leg were stronger than before. He regained his agility, and his speed continued to improve.

As you can see, addressing structural imbalances throughout the body created by the core distortion, rather than working just the area of injury and pain, results in full rehabilitation from knee injuries, and can be accomplished relatively quickly with long lasting results.