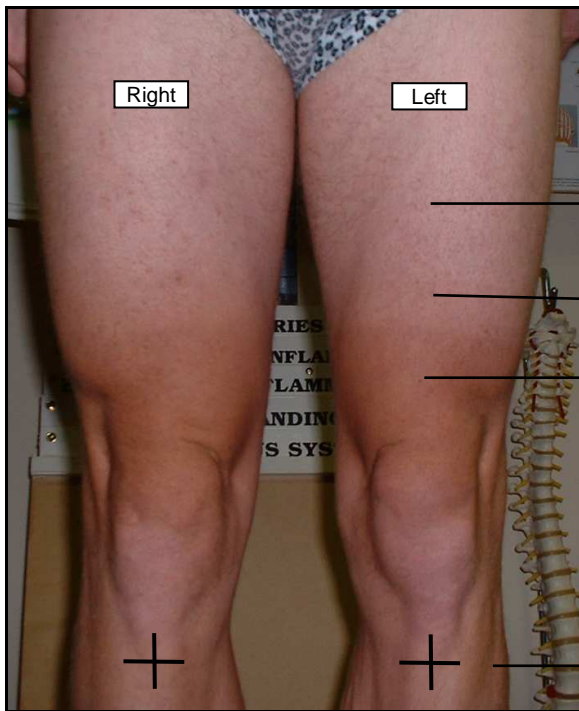




CASE STUDY - *For more details contact Nick Dinsdale as above.*

Name of Patient:	Male
Age:	29 years old
Sport:	Competitive cycle racing – road racing, time trial & hill climb.
Level of Activity:	Between 200 / 250 mile per week.
Condition:	Intermittent (L) patella-femoral pain (existed over 2 years) with severe quadriceps muscle imbalance. The right leg (thigh) has become dominant whilst the left leg has been protected.

Patella-femoral pain with muscle imbalance and dominant right leg



History:

The patient contacted me in November 2004 with patella-femoral pain (left knee). The problem gradually started some two years earlier in 2002 following on from an earlier knee problem. The patient had continued to ride and race, quite successfully, with a number of wins.

Weekly mileage remained between 200-250 miles. As can be seen from the photo a considerable imbalance exists between the two sets of quadriceps muscles.

As a result of protecting the injured (left) knee, the dominant (right) leg gradually became stronger through having to take more work – this meant the differential gradually increased with high training loads.

The consequence being, even though the rider continued to perform well, the imbalance will cause a biomechanical disruption to smooth pedal cadence – thus resulting in a reduction in efficiency and potential loss of opportunity.

Examination:

- Muscle imbalance – girth measurements were taken.
- Significant subtalar pronation – approx 6-7 degrees.
- Tightness in lateral aspect of left thigh (ITB), confirmed by positive Ober test.
- Knee ROM found to be normal.
- Knee ligaments tested, found normal (9negative)

Agreed Treatment Plan:

Short-term: (treat patella-femoral pain)

- Treat subtalar pronation with orthotics.
- Specific muscle strengthening for Vastus Medialis.
- Specific stretching exercises for tight ITB.

Long-term: (treat muscle imbalance)

- Produce Rehab Plan.
- Specific muscle strengthening – progressive build.
- Measure & monitor progress.

12.11.04	Position	Right	Left	Differential
	160 cm	41 cm	39cm	2 cm
	220 cm	48 cm	45 cm	3 cm
	280 cm	52 cm	50 cm	2 cm

04.02.05	Position	Right	Left	Differential
	160 cm	41 cm	40 cm	1 cm
	220 cm	48 cm	46 cm	2 cm
	280 cm	52 cm	50 cm	2 cm

20.12.04	Position	Right	Left	Differential
	160 cm	41 cm	40cm	1 cm
	220 cm	47.5 cm	45 cm	2.5 cm
	280 cm	51.5 cm	50 cm	1.5 cm

Position	Right	Left	Differential
160 cm			
220 cm			
280 cm			