Effects of Increased Muscle Strength and Muscle Mass on Endurance-Cycling Performance

Mujika I, Rønnestad BR, Martin DT (2016)

Determinants of endurance performance

- VO2max
- Muscle hypertrophy
- Cycling economy
- Power output

- Power = Strength x cadence
- Never stop pedaling
- no strength, no power

Lower body muscle mass

- More muscles, more power
- MMP / LBLM

Eccentric cycling

Eccentric training

- Shows some promise, but not studied in top cyclists
- Ergometers for this is complicated

Single leg cycling

- Generates more than 50% energy
- Overloads some muscles in the hip
- Counterweights or heavy flywheels help

Effect on performance

- Short studies don't find effect of strength training.
- Large proportion of strength training fails to find effect
- Training needs to be balance, focus should be on endurance training

" Our general advice is that cyclists spend their time on endurance training instead of strength training"