

Report for Cycling Graded Exercise Test results.

Test protocol:

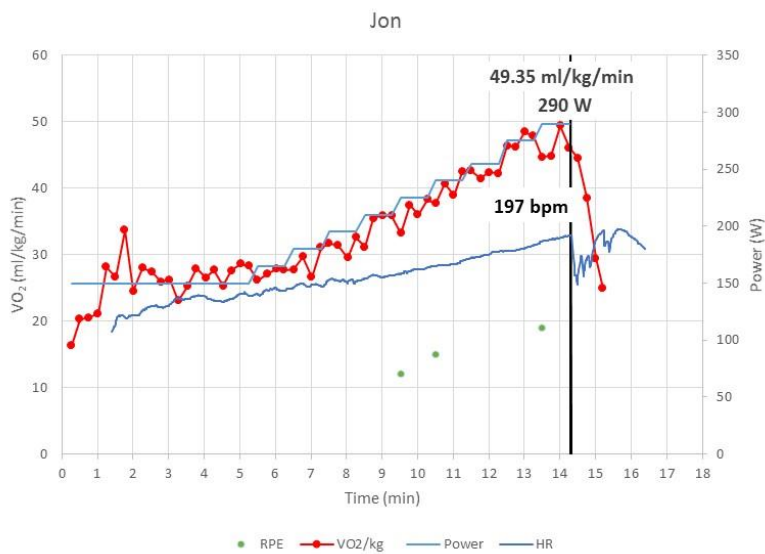
- Warm up @150 W
- Start of test at 150 W
- Increase power by 15 W every minute

Record:

- Metabolic data
- HR
- Power

Results

Parameter	Jon	Chris
<i>VO_{2max}</i>	49.35 ml·kg ⁻¹ ·min ⁻¹	60.72 ml·kg ⁻¹ ·min ⁻¹
<i>HR_{max}</i>	197 bpm	198 bpm
<i>Max power</i>	290 W	350 W
<i>Anaerobic Threshold Power</i>	210 W	255 W
<i>Anaerobic Threshold HR</i>	155 bpm	169 bpm



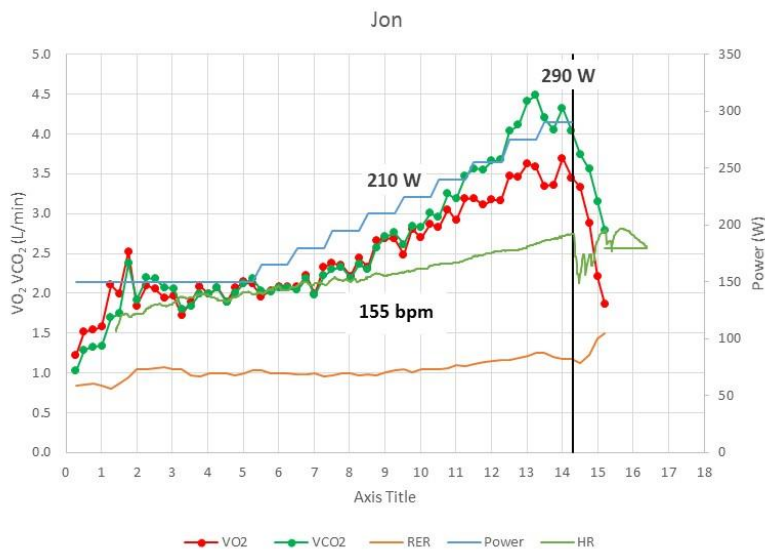
Description:

This plot illustrates VO_2 vs. time and Power vs. time.

Power increased incrementally by 15 W every minute.

VO_2 increased linearly over time.

- $VO_{2max} = 49.35 \text{ ml/kg/min}$
- Peak Power: 290 W



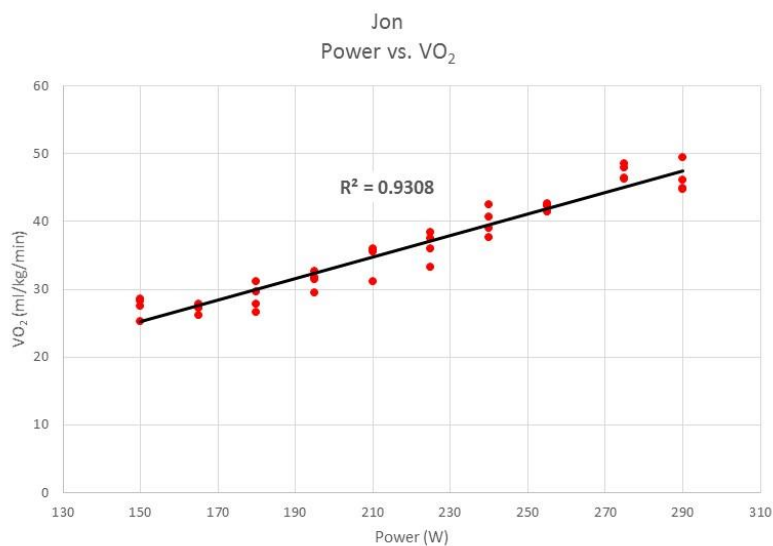
Description:

This plot illustrates VO_2 and VCO_2 as well as RER over time.

Respiratory Equivalent Ratio (RER) is the ratio of VCO_2 and VO_2 .

RER gives a sense of which substrate is being used. A value closer to 1 indicates more carbohydrate, a value closer to 0.8 indicates more fat.

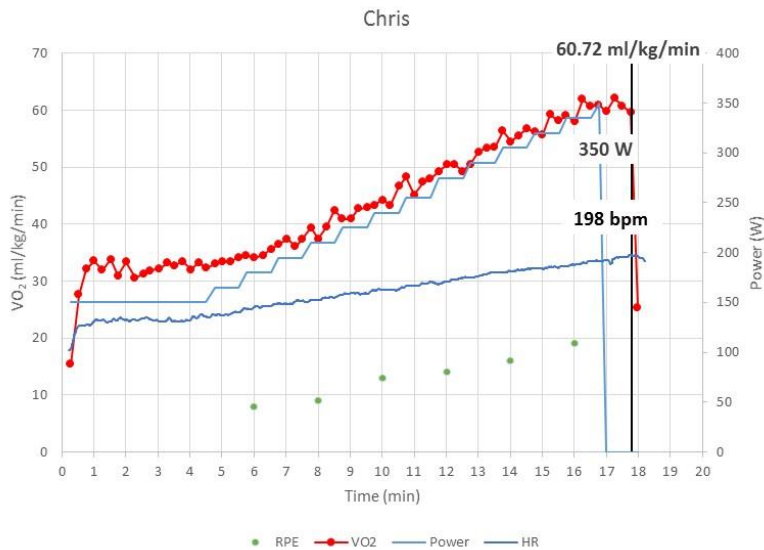
A RER over 1.0 indicates large anaerobic contribution to producing power.



Description:

This plot illustrates Power vs. VO_2 .

There is a strong linear relationship between these two parameters ($R^2 = 0.9308$). That indicates that power can be used as a predictor of VO_2 .



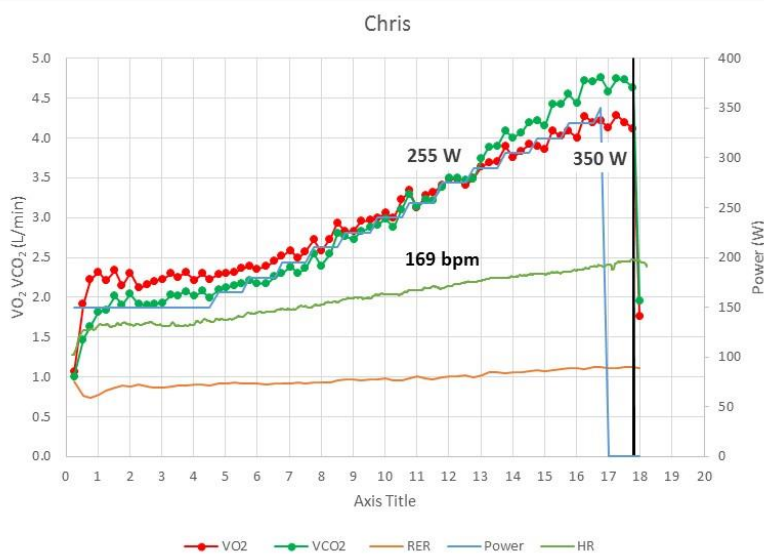
Description:

This plot illustrates VO₂ vs. time and Power vs. time.

Power increased incrementally by 15 W every minute.

VO₂ increased linearly over time.

- VO_{2max} = 60.72 ml/kg/min
- Peak Power: 350 W



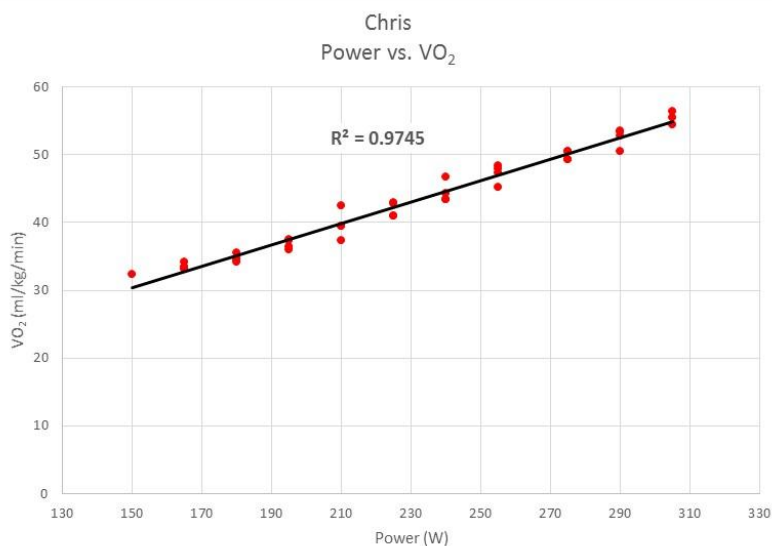
Description:

This plot illustrates VO₂ and VCO₂ as well as RER over time.

Respiratory Equivalent Ratio (RER) is the ratio of VCO₂ and VO₂.

RER gives a sense of which substrate is being used. A value closer to 1 indicates more carbohydrate, a value closer to 0.8 indicates more fat.

A RER over 1.0 indicates large anaerobic contribution to producing power.



Description:

This plot illustrates Power vs. VO₂.

There is a strong linear relationship between these two parameters (R² = 0.9308). That indicates that power can be used as a predictor of VO₂.

Jon- VO2 vs. HR

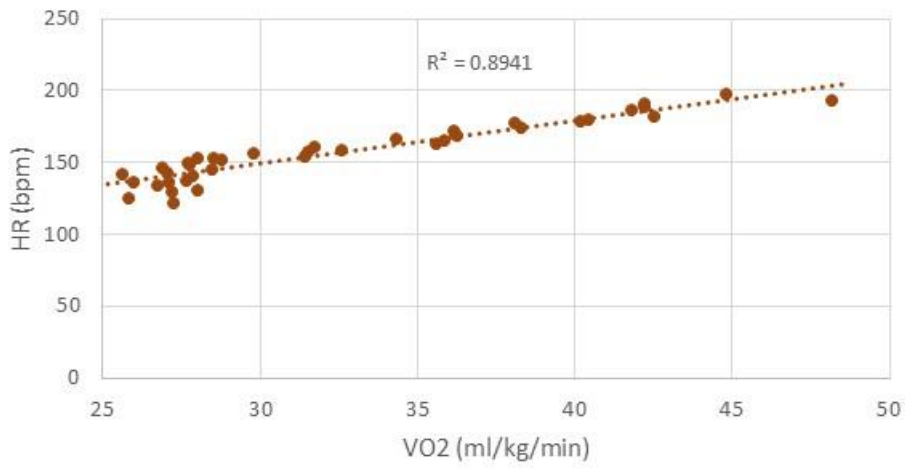


Illustration of relationship between HR and VO2.

Chris - VO2 vs. HR

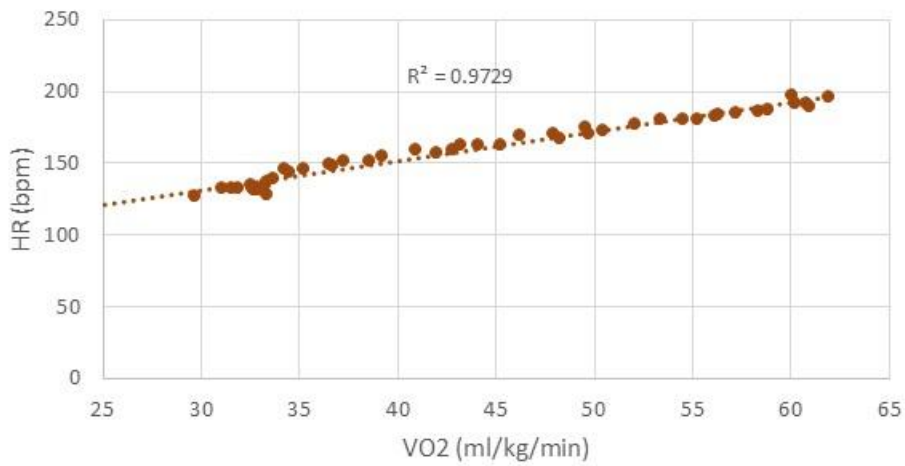


Illustration of relationship between HR and VO2.