

Oxygen consumption and carbon dioxide production in oxidation of metabolic fuels

	energy yield kJ /g	O <sub>2</sub> consumed L /g	CO <sub>2</sub> produced L /g	RQ	kJ /L O <sub>2</sub>
carbohydrate	16	0.829	0.829	1.0	20
protein	17	0.966	0.782	0.809	20
fat	37	2.016	1.427	0.707	20

$$\text{percentage of energy derived from carbohydrate} = \frac{(RQ - 0.707)}{(1 - 0.707)} \times 100$$

**Experiment 4**

speed	L O <sub>2</sub>	kJ /30min	PAR	L CO <sub>2</sub>	RQ	% energy from carb	% energy from fat	g fat metabolised
at rest	9.1		1.0	6.6				
1 kph	14.4			10.4				
3.5 kph	26.6			19.5				
5 kph	33.0			26.0				
6.5 kph	47.2			38.7				

**Experiment 5**

	L O <sub>2</sub>	L CO <sub>2</sub>	RQ	% energy from carb	% energy from fat
fasting	26.6	18.9			
after breakfast	26.6	26.0			