

Article	Code	Type	Test	Mode	Test time	Drink type during test	Drink during test per h		*TT time difference	Comment
							Fluid	CHO		
Burke 2000 [10]	A	Carboloading	TT	Cycle	148 min	Both trials same 7 % GLUP	1.1 L	72 g	NS improved 1.1 %	3 d: 9 vs. 6 g CHO/kg BM/24 h
Burke 2002 [11]	B	Carboloading	S+TT	Cycle	120 +25 min	Both trials same 6 % CHO, CHO not specified	0.7 L	44 g	NS 0.0 %	5 d: 9 vs. 3 g CHO/kg BM/24 h +1d: 10 g CHO/kg BM
Beelen 2009 [12]	C	Mouth rinse	TT	Cycle	68 min	6.4 % MAL	0.0 L	0 g	NS declined 0.9 %	Mouth rinse each 12.5 % of TT
Jeukendrup 2008 [13]	E	CHO vs. W	TT	Cycle	26 min	6 % SAC & GLU (3:2)	1.2 L	70 g	NS declined 0.6 %	Total volume ingested: 0.6 L
El-Sayed 1997 [14]	E	CHO vs. W	TT	Cycle	60 min	8 % GLU	0.3 L	25 g	Improved 1.2 % (distance)	
Desbrow 2004 [15]	F	CHO vs. W	TT	Cycle	63 min	6 % CHO not specified	1.0 L	61 g	NS improved 0.2 %	
van Essen 2006 [16]	G	CHO vs. W	TT	Cycle	135 min	6 % SAC	1.0 L	60 g	Improved 4.4 %	
Angus 2000 [17]	G	CHO vs. W	TT	Cycle	166 min	6 % CHO not specified	1.0 L	60 g	Improved 7 %	
Langenfeld 1994 [18]	G	CHO vs. W	TT	Cycle	241 min	7 % MAL & FRU (5:2)	0.5 L	37 g	Improved 4.8 %	
Rollo 2010 [19]	H	CHO vs. W	TT	Run	60 min	6.4 % CHO not specified	0.4 L	28 g	NS declined 0.7 %	Additional 0.6 L & 38 g CHO 30 min pre-TT
El-Sayed 1995 [20]	I	CHO vs. W	S+TT	Cycle	60 +10 min	7.5 % GLU	0.7 L	54 g	Improved 8.6 % (distance)	
Campbell 2008 [21]	J	CHO vs. W	S+TT	Cycle	a) 80+17 min b) 80+17 min c) 80+17 min	All 5.9 %: a) SAC+GLU+FRU Drink b) MAL+FRU Gel c) SAC+GLU sports beans	0.7 L	43 g	a) Improved 2.8 % b) Improved 2.8 % c) Improved 2.8 %	
Flynn 1989 [22]	J	CHO vs. W	S+TT	Cycle	105 +15 min	7.7 % GLUP & FRU	0.7 L	58 g	NS improved 2.8 % (power)	
Mitchell 1989 [9]	J	CHO vs. W	S+TT	Cycle	105 + 15 min	a) 6 % GLUP & SAC (2:1) b) 12 % GLUP & FRU (2.4:1) c) 18 % GLUP & FRU (4.1:1)	0.6 L	a) 37 g b) 74 g c) 111 g	a) NS improved 6.0 % (power) b) Improved 13 % (power) c) NS improved 8.0 % (power)	
Ganio 2010 [23]	K	CHO vs. W	S+TT	Cycle	120 +15 min	6 % CHO not specified	0.9 L	53 g	NS improved 9.8 % (total work)	
Hulston 2009 [24]	K	CHO vs. W	S+TT	Cycle	120 + 59 min	6 % GLU & FRU (2:1)	0.8 L	45 g	Improved 10 %	
Clarke 2011 [25]	L	CHO vs. W	S+TT	Soccer	90 +3 min	6.6 % CHO not specified	0.9 L	59 g	a) pre-cooled: Improved 7.8 % (speed) b) not cooled: NS 0.0 %	Exercise in the heat (30.5 °C), pre-cooled/ not cooled.

TT:time trial; S+TT: submaximal exercise plus TT; CHO: carbohydrates; W: water; GLU: glucose; GLUP: glucose polymer; FRU: fructose; SAC: saccharose; MAL: maltodextrin; NS: not significantly; BM: body mass. Rows coloured blue represent studies with S+TT tests.

*TT time compared to placebo.If time was not the measurement of the TT, then the measurement is specified (e.g. distance, power, speed)