

Sweat Rate Calculation

Sample Sweat Rate Calculation*

A	B	C		D	E	F	G	H	I	J
Name	Date	Body Weight		Change in BW (C-D)	Drink Volume	Urine Volume †	Sweat Loss (E+F-G)	Exercise Time	Sweat Rate (H/I)	
		Before Exercise	After Exercise							
		kg (lb/2.2)	kg (lb/2.2)	g (kg x 1000)	mL (oz x 30)	mL (oz x 30)	mL (oz x 30)	min h	mL/min mL/h	
		kg (lb/2.2)	kg (lb/2.2)	g (kg x 1000)	mL (oz x 30)	mL (oz x 30)	mL (oz x 30)	min h	mL/min mL/h	
		kg (lb/2.2)	kg (lb/2.2)	g (kg x 1000)	mL (oz x 30)	mL (oz x 30)	mL (oz x 30)	min h	mL/min mL/h	
		kg (lb/2.2)	kg (lb/2.2)	g (kg x 1000)	mL (oz x 30)	mL (oz x 30)	mL (oz x 30)	min h	mL/min mL/h	
Kelly K. ‡	9/15	61.7 kg (lb/2.2)	60.3 kg (lb/2.2)	1400 g (kg x 1000)	420 mL (oz x 30)	90 mL (oz x 30)	1730 mL (oz x 30)	90 min 1.5 h	19 mL/min 1153 mL/h	

* Reprinted with permission from Murray R. Determining sweat rate. *Sports Sci Exch.* 1996; 9 (Suppl 63).

† Weight of urine should be subtracted if urine was excreted prior to post-exercise body weight.

‡ In the example, Kelly K. should drink about 1 L (32 oz.) of fluid during each hour of activity to remain well hydrated.

Formula for Calculating Sweat Rate

Calculate each athlete's sweat rate (sweating rate = pre-exercise body weight - post-exercise body weight + fluid intake - urine volume/exercise time in hours) for a representative range of environmental conditions, practices, and competitions.

The simplest way to get athletes to focus on their hydration needs is to teach them to compare preexercise and postexercise body weights. If the athletes lost weight, they need to drink more at the next practice. This gives the athletes immediate feedback about their drinking habits.

A simple way to assess fluid means would be to weigh the athletes before and directly after activity, and then modify rehydration based on findings. If weight loss, hydrate more. If weight gain, hydrate less.

http://www.ipmba.org/printables/Heat_Illness.pdf