



Sweat Rate Calculator

Hydration is extremely important. Your body is approximately 60% water, and is present in every part and function of your body. Someone who is not fully hydrated is forcing his or her body to work at less than full capacity, especially during physical activity. Dehydration can occur at any time, but it is especially important and beneficial when exercising. Studies have shown that just a small amount of dehydration can have negative effects on athletic performance and may predispose them to an exertional heat illness.

Dehydration occurs when fluid loss (via sweat, urine and through respiration) is greater than fluid intake (via drinking and food)

One way to determine how much fluid you need to drink during a workout is by measuring your sweat rate. Sweat rate is the amount of fluids that you lose through sweat during a workout session. It's an easy calculation and can help you perform your best.

To accurately measure your sweat rate, follow this procedure:

- Do a warm-up to the point where you start sweating
- Urinate if necessary
- Weigh yourself on an accurate scale (nude is best)
- Work out for a specific amount of time (1 hour easiest, but 30 minutes can work if you simply multiply your end sweat rate by two, giving you your sweat rate per hour)
- Drink a measured amount of your beverage of choice during the workout
- Do not urinate during the workout
- Weigh yourself again wearing EXACTLY what you wore during the initial weighing
- Enter data into the table on back page



Sweat Rate Calculator:

This works best if converted into kilograms (kg) and milliliters (mL)

- A. Body Weight pre-exercise _____ [lb/2.2 = kg]
- B. Body Weight post-exercise _____ [lb/2.2 = kg]
- C. Change in Body Weight _____ grams [kg x 1000 = g]
(A-B)
- D. Volume of fluid consumed _____ mL [oz x 30 = mL]
- E. Sweat Loss _____ mL [oz x 30 = mL]
(C + D)
- F. Exercise time _____ [min or hr]
- G. Sweat Rate _____ [mL/min or mL/hr]
(E/F)

To convert Sweat Rate (G) back into ounces: $G/30 = \text{oz}$

The final number (G) is your sweat rate, or the amount of fluid that you lose through sweat during a specific amount of exercise (usually expressed per 1-hour). This should help you determine the amount of fluid you should be drinking during and after your workouts.

Key points to remember:

- Sweat rates generally increase after 10-14 days of heat exposure, so sweat rate should be re-calculated following heat acclimatization.
- Higher sweat rates are generally found in men and those that are highly fit.
- Temperature plays a role in sweat rate, so calculations should be done for different environments (winter vs. summer OR hot vs. cold spaces).
- When first beginning an exercise routine in heat, your body loses more sodium through sweating, so slightly increase the amount of sodium in your diet until you've become adapted (after 10-14 days).