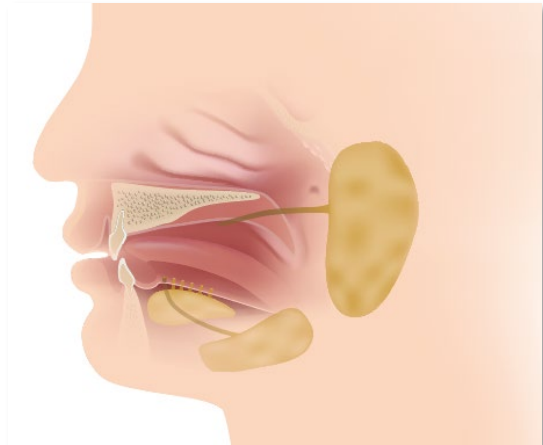


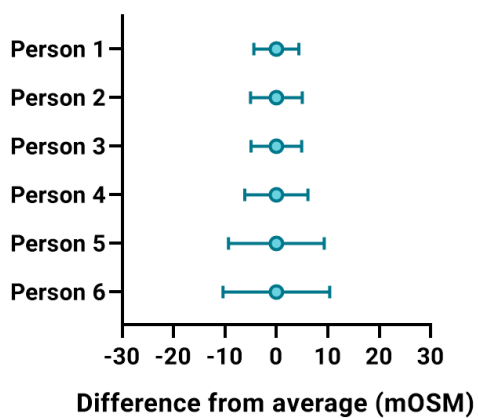
# Understanding Saliva Variability

## Why is Saliva Variable?

Saliva is a mix of fluids from three types of glands located throughout the mouth. As a result of this complexity, variation in the composition of saliva is to be expected. When measuring Salivary Osmolarity (SOSM) with the MX3 Hydration Testing System, it is important to use a consistent saliva sampling method to minimize variation (see the **MX3 Hydration Testing System Manual** for tips).



## Normal SOSM Variability



## What is Normal SOSM Variability?

Even with consistent sampling, each athlete will have variability in their SOSM. Therefore, we have added a baseline feature to our system that considers an athlete's natural salivary variability to establish their fully hydrated range. In general, consecutive SOSM measurements will usually be within 10-20 mOsm of the average when an athlete is well hydrated; however, some athletes will naturally have more variable saliva. Typically, SOSM changes due to active dehydration will greatly exceed this natural variation.

## Can SOSM Variability Be Reduced?

One reason for the variability between samples is the small amount of saliva collected by each Hydration Test Strip. By collecting saliva in a small container, such as the MX3 Sample Tray, a larger sample containing a more mixed fluid from all the salivary glands can be obtained. In addition, if you are having trouble collecting consistent samples from an athlete, or have trouble collecting enough sample from the tongue due to saliva viscosity or mouth dryness, have the athlete spit into the MX3 Sample Tray and take a measurement from this collected sample.

