

# Saliva vs Serum

## Saliva vs. Serum:

Why is saliva testing truly superior to serum for accurately monitoring transdermal (topically applied) hormones?

Saliva testing is proving to be the most reliable medium for measuring hormone levels. Hormone levels in saliva accurately represent the amount of hormone delivered to receptors in the body, unlike serum which represents hormone levels that may or may not be delivered to receptors of the body. Clinically, it is far more relevant to test the amount of hormones delivered to the tissue receptors as this is a reflection of the active hormone levels of the body.

The majority of hormones in the blood exist in one of two forms: free (5%) or protein bound (95%). While 95% of the hormones in the body are protein bound, it is only the 5% free hormones that are biologically active. Saliva measures the free bioavailable hormone levels in the body, while serum measures only the protein bound non-bioavailable hormone levels. Therefore, serum is a much less accurate measurement than that of saliva when assessing functional hormone levels.

## Saliva Measures the “Unbound” Biologically Active or Free Hormone Levels in the Body:

When blood is filtered through the salivary glands, the bound hormone components are too large to pass through the cell membranes of the salivary glands. Only the unbound hormones pass through and into the saliva. What is measured in the saliva is considered the “free”, or bioavailable hormone, that which will be delivered to the receptors in the tissues of the body.

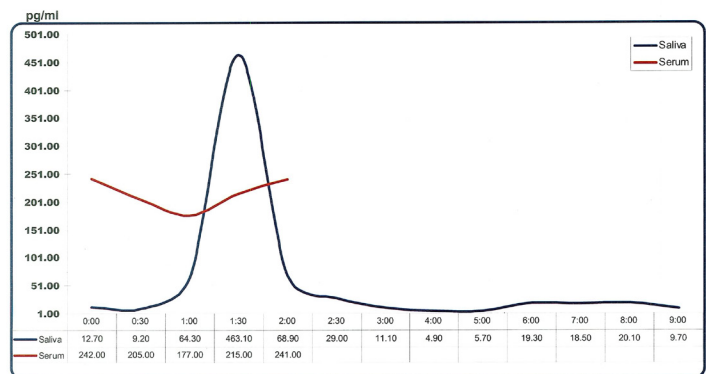
## Serum Measures the “Protein Bound” Biologically Inactive Hormone Levels in the Body:

In order for steroid hormones to be detected in serum, they must be bound to circulating proteins. In this bound state, they are unable to fit into receptors in the body, and therefore will not be delivered to tissues. They are considered inactive, or non-bioavailable.

## Only Saliva Testing Measures Topically Dosed Hormones:

The discrepancy between free and protein bound hormones becomes especially important when monitoring topical, or transdermal, hormone therapy. Studies show that this method of delivery results in increased tissue hormone levels (thus measurable in saliva), but no parallel increase in serum levels. Therefore, serum testing cannot be used to monitor topical hormone therapy.

Estradiol  
35 - yr Old Female / 1mg Topical



*Topical Supplementation can be monitored best in saliva*

Health Disclaimer: All information given about health conditions, treatments, products and dosages are not intended to be a substitute for professional medical advice, diagnosis or treatment. This is provided only as a suggested guideline.

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