

## Testing Hormones – Why saliva is best.

### What is a hormone?

Hormones are chemical messengers. That is, they act like express couriers taking a message from an organ (where they are made) to a cell. In the cell, they may either increase or decrease the cell's activity. The organs that specifically make hormones are collectively called glands and together the glands in our body make up the Endocrine System. Any gland (or organ) belonging to this group is called an Endocrine gland.

Examples of endocrine glands include: the pancreas, testes, ovaries, pituitary, thyroid and adrenal glands.

Examples of hormones include: glucagon, insulin, thyroxine, progesterone, oestrogen, human growth hormone.

Despite their under-ranked importance, they are literally like glue – holding the whole body together.

Imbalances lead to infertility, depression, menopause, anxiety, skin problems, low libido, energy swings, fat gain – real quality of life issues to name a few.

Your liver produces a protein called Sex Hormone Binding Globulin (SHBG) and last for 7 days in your body. This hormone rises sharply after birth and gradually declines until puberty. At puberty it decreases more rapidly in males than it does in females. In pregnant women it increases 6-10 times higher than in non-pregnant females from week 0 – week 30 (Kelly et al, 1997). You will get an increase in SHBG if you have hyperthyroidism, oestrogen, pregnancy and exercise.

About 90-99% of Steroid (sex) hormones are bound to SHBG, Albumin or Cortisol Binding Globulin. This means that they won't be available for the target cells. The other 1-10% of sex hormones are unbound (ie free) and these hormones diffuse into their target cells and saliva.

### Saliva testing of Hormones

Saliva testing of hormones is the most accurate way to determine someone's hormone status. Saliva is a natural ultrafiltrate of the blood. Steroids that are not bound by the carrier proteins mentioned before, can pass easily from the blood into the saliva. This means the free sex hormones diffuse into saliva, which gives us an accurate assessment of your FREE (and unbound, therefore active) hormone levels.

Saliva hormones remain stable for at least 5 days at room temperature and don't need a preservative.

The advantages of using Saliva over blood testing of hormones are:

- Saliva reflects the active (unbound and free) hormone levels (unlike blood and urine which measures total levels).
- Collection time is better controlled which is critical as your 24 hour clock has influence on different hormone at different times
- It is non-invasive (ie you don't end up with a needle in your arm), is safe, stress free, painless and can be done from home
- The hormones in saliva are general stable at room temperature for up to 3 weeks
- Transport of saliva is fine by regular post
- Less expensive than blood testing.

The results take approximately 10-14 days from when you send the kit by post to come back to you. You can request that they are emailed to you, or to me, or to your practitioner.



Ref: Kelly J A, Vankrieden L (online 3/6/08) Sex Hormone Binding Globulin and the Assessment of Androgen Status.

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