

Investigating Bioidentical Hormone Exposure

When a laboratory report shows highly elevated, supraphysiologic saliva hormone test results, the next step is to investigate and determine the source(s) of exposure to the bioidentical hormone(s).

Consider asking these questions to determine the source of the exposure:

- Were bioidentical hormones avoided the day before and the day of saliva collection, as recommended in the collection instructions?
- Was a topical product containing bioidentical hormones touched the day before or the day of saliva collection, leading to exposure?
- Are hormone creams applied while wearing gloves to prevent contamination of surfaces in the environment?
 - If so, are gloves disposed of cautiously, without touching the residue on the gloves or surfaces in the environment with the contaminated gloves?
 - If not, what surfaces could have been touched with contaminated hands after applying BHRT?
 - Was a hand towel, faucet, doorknob, drawer, light switch, lamp, pillow, bedding, or something else touched?
 - If the answer is yes, the environment is likely contaminated with bioidentical hormones, which can lead to unintentional exposure and direct contamination of the saliva sample. When product residue remains on the skin, fingers, face, or lips, it is more likely to contaminate the vial.
- Are family members in the home knowingly using bioidentical hormones, such as testosterone, hydrocortisone cream, progesterone, or estrogens?
 - If so, did the patient avoid skin-to-skin contact with anyone using bioidentical hormones the day before and the day of saliva collection?
 - Did the patient follow precautions to avoid inadvertent exposure to residual bioidentical hormones in the home environment?
- Is the patient or someone in their household using personal care products, such as cosmetics, lip balm, lip stick, mascara, hair care, creams, lotions, moisturizers, serums, or anti-aging blends? Is someone visiting the home and using personal care products? Did someone in the home begin using a new personal care product? Note that **personal care products may contain undisclosed bioidentical hormones**, leading to environmental contamination and personal exposure.
 - Were all personal care products avoided the day before and the day of saliva collection, as recommended in the collection instructions?
 - Did the patient avoid skin-to-skin contact with family members using personal care products the day before and the day of saliva collection?
 - Did the patient follow precautions to avoid inadvertent exposure to personal care products in the home environment?

- Are essential oil products used in the home? (These products may contain bioidentical hormones.)
- Were any over-the-counter medications, such as nasal sprays, lip balms, ear drops, eye drops, anti-rash creams, sensitive skin creams, or hemorrhoid creams used the day before or the day of saliva collection? (These products may contain steroid hormones.)
- Where was the saliva collected, and is that environment contaminated with bioidentical hormones?
- Did the exposure occur outside the home? At the gym or work?
- Could anyone else in the home, including pets or children, be exposed to bioidentical hormones?
 - If so, a non-invasive saliva hormone panel can be ordered for all family members to screen for unintentional exposure to bioidentical hormones.



Repeat Saliva Hormone Testing

When a saliva hormone level is elevated, consider more carefully avoiding exposure to all exogenous bioidentical hormones, and then repeat the test.

Suggestions to avoid unintentional exposure to bioidentical hormones before saliva hormone testing:

- **Three to four weeks (or longer) before saliva collection – if the source of exposure is unknown:**
 - Avoid use of personal care products that may contain bioidentical hormones, including cosmetics, lip balm, lip stick, mascara, hair care products, creams, lotions, moisturizers, balms, serums, and anti-aging blends. Similarly, avoid or minimize exposure to personal care products used by others in the household.
- **Three to five days before saliva collection:**
 - Avoid taking sublingual hormones under the tongue. Instead, sublingual hormones may be taken orally, in the same dose as usual, but swallowed with water instead of being dissolved under the tongue. To clarify, for at least three days before saliva collection, take the sublingual hormone as an oral medication (rather than sublingual), and then avoid taking the bioidentical hormones the day before and the day of collection.

- **Two days before saliva collection:**
 - Wipe down surfaces in the environment to remove bioidentical hormones.
 - Launder all bed linens and hand towels.
- **The day before and the day of saliva collection:**
 - Avoid exposure to all steroid hormones, including over-the-counter products (nasal sprays, eye drops, ear drops, and creams).
 - Discontinue the use of personal care products, including anti-aging products, lip balms, cosmetics, and sunscreens (if not already avoiding).
 - Avoid the use of essential oils (if not already avoiding).
 - Continue to avoid exposure to other household members who use bioidentical hormones or personal care products.
 - Unless directed otherwise by the prescribing physician, avoid the use of all prescribed bioidentical steroid hormones, including progesterone, estradiol, testosterone, DHEA, etc.
 - For safety reasons, we advise healthcare providers to follow proper tapering protocols for discontinuing prednisone and other steroid medications if discontinuation is medically appropriate.
 - Birth control pills, thyroid hormones, and melatonin may be continued as prescribed and will not lead to skewed test results.

Once direct saliva sample contamination and unintentional exposures are eliminated, saliva hormone results will accurately reflect the tissue concentration from circulating free hormone levels and any residual hormone accumulation due to previous topical exposure(s).

Note that estrogens and testosterone may accumulate and remain stored in tissues for several weeks, and progesterone may accumulate and remain stored in tissues for several weeks to several months after discontinuation of hormone creams and other hormone-containing personal care products.

If a saliva hormone level is elevated, but not at a supraphysiologic level, further assessment may be indicated to rule in/out excessive endogenous production of the hormone. Consider repeat saliva testing after one month's time, following careful avoidance of personal care products that may contain bioidentical hormones.

If saliva hormone results remain elevated, or at any time as clinically indicated, consider testing the total hormone level in serum, since the total hormone level in the serum will also be elevated with excessive endogenous production. A normal or low serum level will confirm that a high saliva hormone level is likely caused by unintentional exposure to exogenous hormones or low blood protein production. Low blood protein levels may result from liver dysfunction, malnutrition, or chronic disease.

For more information, healthcare providers may consider [scheduling a consultation](#) with a physician on the Medical Support team.