

Progesterone in Males

Objectives

At the end of this presentation, attendees should have a better understanding of, and gain insights into:

- The importance of progesterone in men.
- Interpreting progesterone on the DUTCH test.

Importance of Progesterone in Males

- There is little research on progesterone's (Pg) effect in males.
- Progesterone likely affects:
 - The central nervous system (CNS)
 - Behavior
 - Mood
 - Sleep
 - Fertility
 - The immune, cardiovascular and respiratory systems
 - Kidney function



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Importance of Progesterone in Males

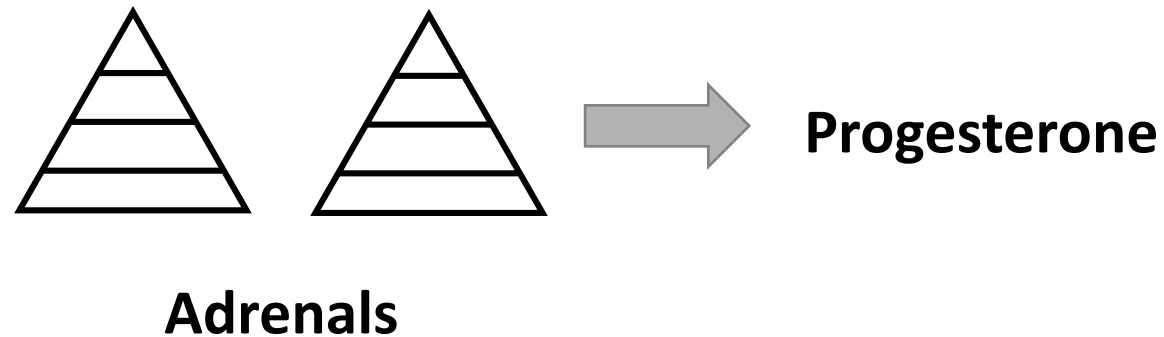
- **Low Pg** may affect male fertility, as Pg influences Sertoli cell spermiogenesis and activation, as well as Leydig cell testosterone biosynthesis. We see that low progesterone mimics symptoms of low testosterone in males.
- **Elevated Pg** in males may be associated with elevated cortisol, increased inflammation, and liver disease.



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Where progesterone is produced in males

- In males, progesterone is primarily made in the adrenal glands. Testicular Leydig cells also synthesize progesterone.



The DUTCH Test measures two Pg metabolites in the urine:

- **5a-pregnenediol**
- **5b-pregnenediol**

5-alpha pregnenediol modulates gamma-aminobutyric acid (GABA) receptors in the central nervous system (CNS) and can lead to improvements in mood and sleep.

5-beta pregnenediol is the major Pg metabolite, but unlike 5a-pregnenediol, it does **not** modulate GABA receptors.

Interpreting Progesterone on the DUTCH Test

- It can be helpful to compare the a-pregnenediol and b-pregnenediol levels (relative to their respective reference ranges) to evaluate if there is an **alpha** or **beta** preference, as the alpha Pg metabolites can modulate GABA receptors and help with sleep and mood. **Alpha** progesterone metabolites may be associated with lower states of anxiety, depression and Alzheimer's disease.

Category	Test	Result	Units	Normal Range
Progesterone Metabolites (Urine)				
	b-Pregnenediol	Within range	ng/mg	75 - 400
	a-Pregnenediol	High end of range	ng/mg	20 - 130

- Urinary progesterone (Pg) metabolite levels have been shown to strongly correlate with serum Pg levels when Pg is **not** supplemented.

Key Points

- There is little research on progesterone's (Pg) effect in males, however progesterone likely plays a role in behavior, mood, sleep, fertility, and immune, cardiovascular, respiratory, CNS and kidney function.
- The alpha progesterone metabolites modulate gamma-aminobutyric acid (GABA) receptors in the central nervous system (CNS) and can lead to improvements in mood and sleep.
- Therefore, on a male DUTCH test report, it can be helpful to compare the a-pregnenediol and b-pregnenediol levels (relative to their respective reference ranges) to evaluate if there is an *alpha* or *beta* preference.

References

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Thank You!

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For questions, contact:

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