

Adrenal and HPA axis:

Adrenal Fatigue And The
Pregnanolone Steal: The
Imposter Labels

Adrenal Fatigue Is Not The Appropriate Term

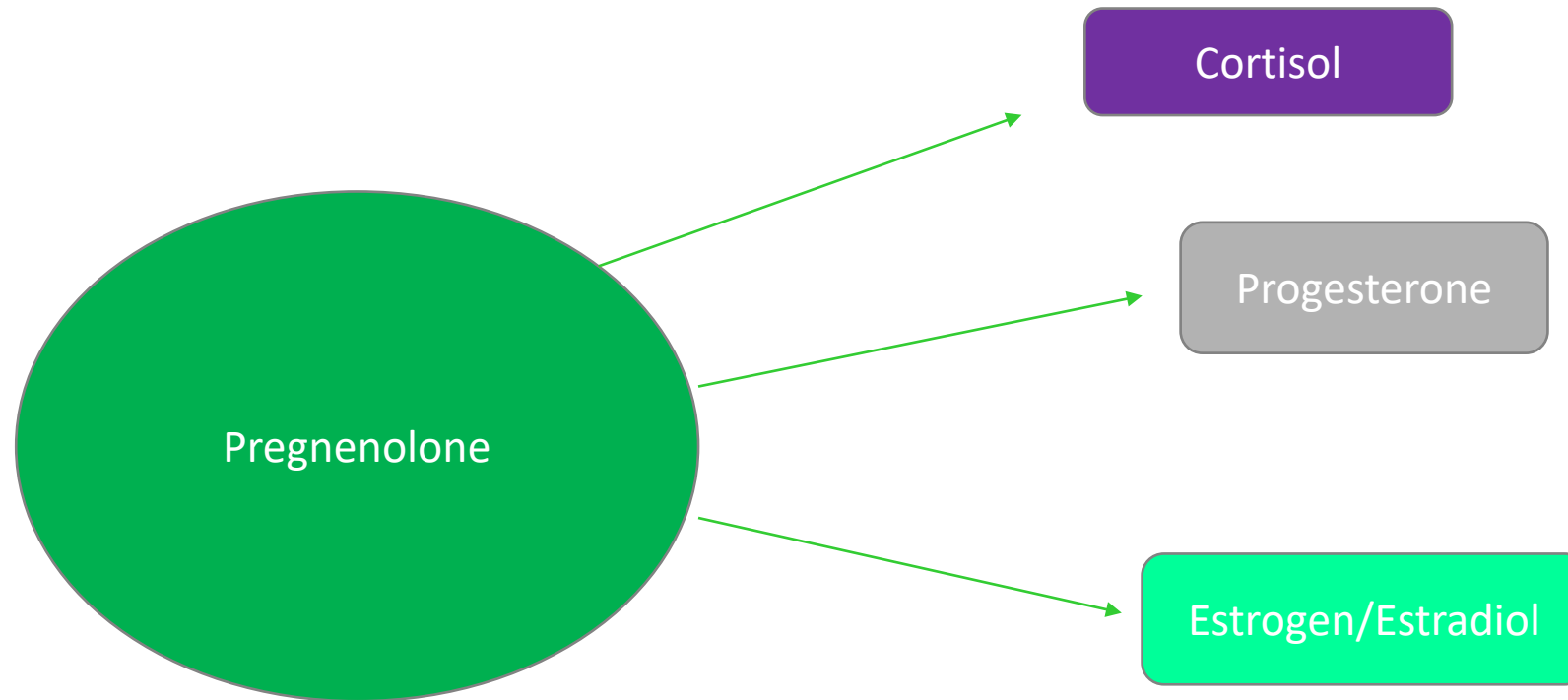
- The symptoms of adrenal fatigue are very real!
- But the label is incorrect – it is an old school thought process for adrenal function
 - Implies the adrenal glands are not able to respond
- More appropriately, it is categorized as HPA (axis) dysfunction or HPA (axis) imbalance
 - This points more specifically and accurately to poor functioning of the **brain to adrenal** communication
 - Support appropriate language to clarify the need for how to evaluate the issue and best treatment modalities (Hypothalamic and/or Pituitary vs adrenal gland support)

Adrenal Fatigue And Cortisol Production

- Cholesterol is the backbone for hormone production
- Different cells have different responsibilities and so have different enzymes to do their job
- Zona Fasciculata makes cortisol. Cells in this region contain specific enzymes to transform cholesterol into cortisol.
 - (ie the ovaries have a specific job to make progesterone but they use a particular cell with specific enzymes to make progesterone once that particular cell pulls cholesterol in)

Adrenal Function And The Pregnanolone Steal

- Pregnanolone steal is not real



Cholesterol And Pregnanolone

- Because these different cells create different pathways to make the hormones they need, the adrenal glands cannot take all of the cholesterol to make cortisol – the cell types are not built to interchange how they use their given cholesterol.
- Therefore, the pregnanolone steal is not a “true process”
- We can see stress affect how well our body signals hormones due to these factors:
 - If the body is more stressed, the signaling from the brain to the adrenal glands is increased creating a higher demand for cortisol production

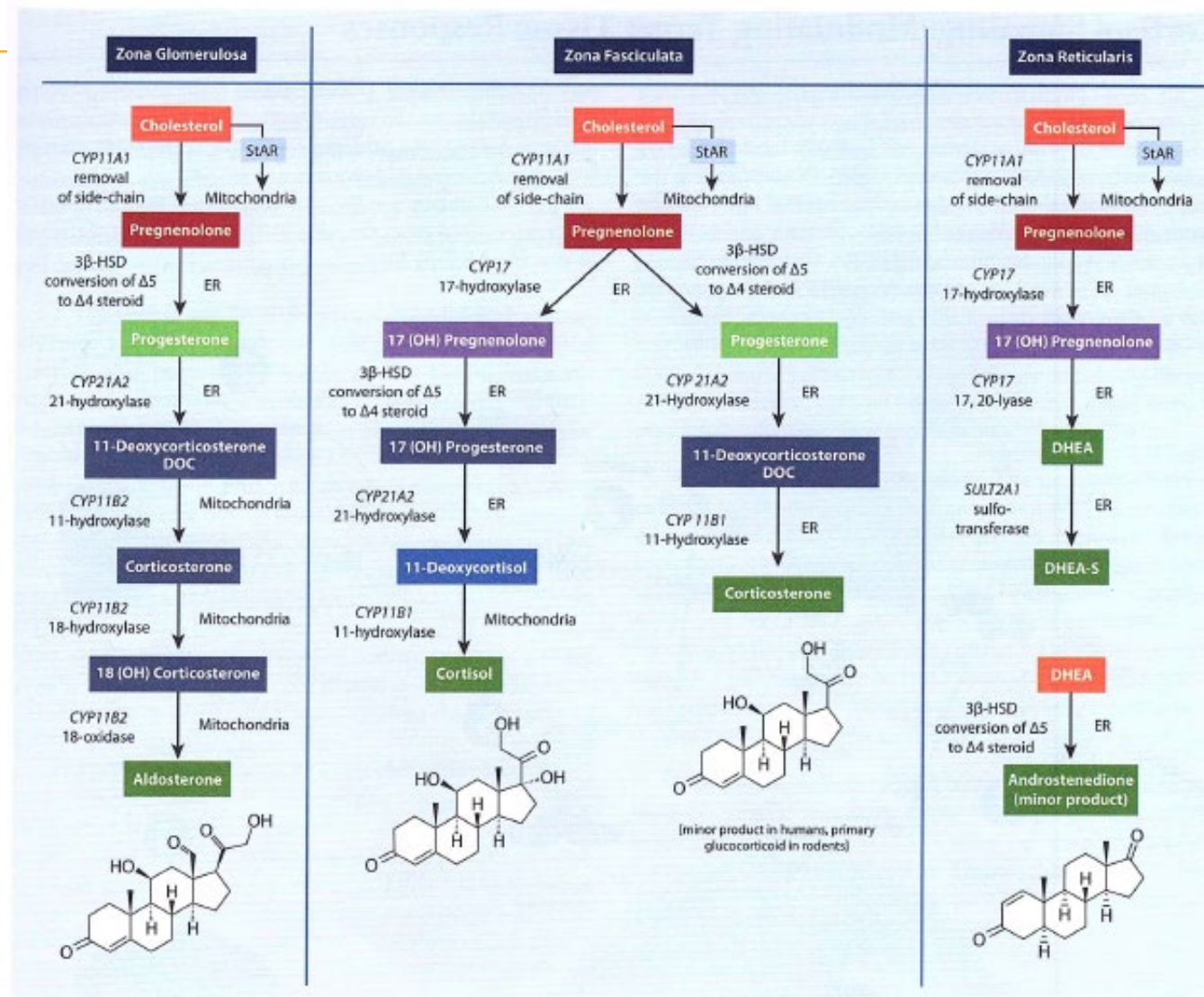


Figure 5: Adrenal Cortex Steroidogenesis.

Adrenal Fatigue And The Pregnanolone Steal

- The pregnanolone steal is an understandable assumption, but it is not a true representation of how the body signals for a stress response or recruits precursors to manufacture hormone
- Our stress response from the brain increases signaling to the adrenal glands to allow for an appropriate stress response

Adrenal Fatigue And The Pregnanolone Steal

Summary:

- Our Adrenal glands do not fatigue – *rather* the signaling gets messed up when there is over or under signaling from the brain.
- The symptoms are still VERY REAL, but the adrenal glands do not fatigue. They continue to produce cortisol at the rate the brain signals to do so.
- The brain may not be able to signal appropriately when there are other factors such as inflammation, poor sleep, blood sugar dysregulation, etc.

Adrenal fatigue = HPA Axis dysfunction

Thank You!

If you are interested in learning more about hormones, each week we hold one-hour long mentorship sessions! Once you are a registered DUTCH provider, you can book these through our online scheduling link. Please call to get registered today.

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