Adrenal Fatigue is all in your head (sort of)

Adapted from an article by Michael Newman, Precision Analytical, Inc.

This is an important topic as our collective understanding continues to evolve. Since the term "Adrenal Fatigue" was coined in the late 1990s it has become somewhat controversial. Allopathic medicine tends to think it doesn't exist. Functional Medicine is starting to understand low cortisol situations much more completely, and is largely moving away from using the term itself. Research has clarified that most situations that result in low levels of free cortisol are NOT caused by a tired adrenal gland. In actuality, the problem has to do with proper brain signaling necessary to regulate the stress response. In this sense, Adrenal Fatigue is likely to actually be "in your head."

Our Medical Director (Carrie Jones, ND MPH) recently talked about this issue with Mike Mutzel. If you'd like to listen in, view the video below.

CLICK HERE TO PLAY VIDEO

Here is how I would personally describe the Adrenal Fatigue Model and how it may need to be altered. The model assumes these three C's:

1. Common - A dysfunctional stress response and abnormal levels of cortisol

(outside of true Addison's or Cushing's) is relatively common – AGREED

2. Consequences - These common dysfunctions cause significant clinical consequences for many people – AGREED

3. Cause - The cause of this dysfunction is the assumption that the adrenal gland has been overtaxed for an extended period of time and no longer has the capacity to make adequate levels of cortisol - UNLIKELY (keep reading!)

We have since learned that #3 above is not often an accurate description of the HPA reality.
Long-term stress and various other life experiences can lead to an abnormal stress response, but it is usually a brain issue more so than an actual adrenal response issue.

Why is this important?

Take for example, the case of two different patients. Patient A and patient B have lower levels of cortisol and symptoms commonly seen with low cortisol (fatigue...etc). If you're "treating" patient A because of a damaged/dysfunctional adrenal gland, OR if you are treating patient B for an abnormal/dysfunctional stress response (within the brain), you're likely going to take fairly different approaches for these two patients.

It matters a great deal if our collective patients have dysfunction related to their adrenal gland or their CNS's ability to handle the stress response (or not). In addition, with DUTCH testing we may also uncover dysfunction in the metabolism/clearance of cortisol that could play a role as well. It may benefit these types of patients to support their adrenal gland with the herbs, vitamins and other nutrients the adrenal gland needs, but if the central point of dysfunction is in the brain, we need to approach the topic accordingly.

Whether we are dealing with the adrenal gland or the brain, we are dealing with cortisol. When we are dealing with cortisol, DUTCH becomes a very useful tool in providing the most comprehensive look possible. Saliva testing only shows you the free cortisol pattern throughout the day. 24hr Urine testing gives a better test for overall cortisol production and metabolism but is lacking the diurnal pattern. DUTCH gives you it all!

SOME DATA TO THINK ABOUT AS IT RELATES TO THE QUESTIONS SURROUNDING "ADRENAL FATIGUE"

4. When people are "diagnosed" with adrenal fatigue because their free cortisol is low, consider this - About half of people who have low free cortisol, have higher than average levels of cortisol metabolites (what we call "metabolized cortisol") which implies they make average (or more) levels of cortisol. Lower levels of free cortisol does not mean your cortisol production is necessarily low.

5. People who are obese, have more than twice as much cortisol production as healthy controls (as measured by the total output of cortisol metabolites). Studies on stress usually show levels of cortisol increasing (due to the stressor) by less than two-fold. Long-term stress will typically increase an individual's cortisol output less than obesity. Free cortisol is, however higher with stress but not typically with obesity. The reason long-term stress (and chronically elevated cortisol) has such a profound effect, is mostly due to free cortisol working at the receptor level. If long-term stress made the adrenal glands fatigue to the point where they are unable to make cortisol, it should be a fairly regular thing for obese people (who make extra cortisol 24/7) to have "adrenal failure." Remember, their free cortisol levels are not typically different than healthy controls, but the adrenal output of cortisol is more than twice as high!

For many the term "Adrenal Fatigue" is useful because it draws attention to a legitimate, common problem. Unfortunately, it is often not an accurate term for the reality that our patients are facing. Many providers have found successful treatments using the Adrenal Fatigue Model. There is not a need to necessarily abandon these therapies. We do need to be reviewing the mechanisms by which they are working and continue to fine tune how we are treating patients with HPA-Axis Dysfunction to optimize outcomes. One thing that is very apparent is that the HPA-Axis is complex with many layers. As an industry there is still much to learn, and we hope to continue to do that together. As we learn, using the most comprehensive data set we can offer for these patients is critical.