



thePLUM *line*

BY MICHAEL SHARP, MD

adrenal fatigue

The studies on Adverse Childhood Events (ACES studies) have uncovered the deeply damaging effects of early life trauma on our health decades later. The strength of the epidemiological evidence is staggering. We know things now that should drive public policy, public health, education, law enforcement, social service, and legal initiatives to the front of the line if we care about our future.

And it should drive the medical community to begin to grasp its responsibilities in early identification, intervention, prevention and treatment of childhood trauma.

One of the more frustrating aspects of working in this area for me is the widespread misunderstanding of the importance of testing saliva for cortisol levels. Let me explain—and in order to do this, it may be helpful to make a distinction between the way medicine is practiced by most physicians and the way it is practiced by a new kind called Functional Medicine. You may have heard of it.

As many of you know, I was a faculty member at the School of Medicine in Chapel Hill for many years. I learned, taught, and practiced medicine I call *Diagnose-and-Treat*. In this way of working with patients, the primary aim is to make a diagnosis that comes from the standard nomenclature—called ICD-10, for International Classifications of Diseases, version 10.

The next step is to treat according to the standards of care. Sometimes the standards of care are vague and ill-defined—the legal definition has to do with the way that things are done in your community by other physicians with similar training. Often the standard of care has little or no scientific merit (there are actual studies on this).

Sometimes the standard of care has been worked out by a group of specialists based on some good evidence—and what that usually means is a study with some kind of laboratory measure of response. It is rarely based on patients' subjective observations, although in my experience this is virtually always the best measure of a response. One good teacher told me 40 years ago, "We don't treat the numbers, we treat the patient." And the standard of care is virtually never arrived at with patient input.

The newer kind of medicine, often called functional medicine (because it has to do with the functioning of the patient, rather than the functioning of the physician), is also called Understand-and-Repair. We use our patient's history, physical examination,

and laboratory testing to try to uncover a breakdown in the normal metabolism. We now know so much about our biochemistry and how diet, nutrition, and supplements can support bodily processes that are not doing well. It is sometimes a little overwhelming to me how much we know and are learning every day. And it is always a delight to see sick people get better—really better—when we nourish them back to health.

The amygdala and adrenal gland are at the center of the breakdown of healthy bodily processes brought about by long-term stress, including the detrimental health effects of ACES. There are only two known diseases of the adrenal gland. One is called Addison's disease, when the adrenal gland has broken down completely. The other is when the adrenal gland has gone rogue—can't stop working and pouring out cortisol in excess. This is called Cushing's Disease.

The normal adrenal gland wakes up every morning and releases a surge of cortisol. I think of this as the master circuit breaker. Every cell is bathed in cortisol and this is the signal to "go." We enter the day awake and active. Over the course of the day, the cortisol level declines steadily until time for sleep. At this point, the cortisol level is low and we can rest and repair.

In individuals with chronic stress, the evening cortisol level does not come down. It remains high, and chronically stressed folks do not rest and repair, even when sleeping. Over years this pattern is followed by a steady decrease in the overall level of cortisol production so that the morning cortisol levels begin to lose their peak. As the stress reaction persists the overall cortisol production continues to decline.

By standard of care definitions the adrenal gland is not in a state of Addison's or Cushing's Disease and is therefore normal. Not deserving the attention of a standard of care physician.

By the standards of a functional medicine practitioner, this is a red flag of the most important kind and calls for interventions, support, nurture at every level—diet, physical activity, supplemental nutrition, sleep support, stress management, trauma resolutions, tuning the nervous system to joy (yes, this is possible). And the epidemiological evidence of the detrimental effects of cortisol "curves" like the one I mention here is so strong it should concern any physician who practices what they might call "evidence based medicine."

To your health. 🌱🌱

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