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HOL+ · AN ESSAY BY DR. TAZ BHATIA, MD

College Prep: Your Teens Health

What We Are Getting Wrong When it Comes to Adolescent and Young Adult Health

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A doctor, a mother, a front-row seat.

With one child getting ready for college and another not far behind, there is a certain amount of anxiety I have when it comes to their health and wellness as they head into the world. Like every mom, I have those sleepless nights of worrying they won't carry forward what I have tried to inculcate in their health journeys.

Here is an uncomfortable truth: I have had a front row seat as a doctor and a mom watching each of my children navigate biological bankruptcy at different stages of childhood. From a son with severe gut issues and mitochondrial dysfunction in his first year of life, to a daughter struggling with focus, self-perception and body image in middle school, the energy deficits for each were real. They were unable to function to their fullest potential due to this cellular or energetic debt.

They had the fortune of me as a mom, and we were able to repair many of these systems to a point. But what about all the other kids, moms, parents who don't know the biological bankruptcy that this and the next few generations are in, which matters not only for their health in the moment, but is the foundation for their adult health well into their 60s and beyond?

Beyond being a worried mom, as a holistic and integrative physician privileged to work with teens and young twenty-somethings for over fifteen years, the threat to adolescent and young adult health is real.

Corporate burnout, in a high school body.

I have watched thousands of teenagers walk into my clinic looking, frankly, like they belong in a corporate burnout program rather than a high school classroom. They are exhausted, anxious, hormonally dysregulated, and running on caffeine, processed food, and four hours of sleep.

Their parents are worried but often don't know where to turn. Conventional medicine offers little beyond "try to reduce stress" and a referral to a therapist, or in some cases, a medication. Many teens today find themselves on growing medication cocktails, one for focus, one for sleep, one for anxiety, and so on.

Here is what we are missing: the years between 14 and 22, spanning the peak of high school demands, the college application gauntlet, and the transition to college life, are not just academically critical. They are biologically critical. The choices made and the stressors absorbed during this window have long-term consequences for hormonal health, metabolic function, brain development, and immune resilience.

As we reimagine medicine, a holistic model focused on high school and college preparation should be a mainstay.



UNDERSTANDING TEEN BIOLOGY

Asked to perform at the peak of a vulnerable window.

The adolescent brain is still actively developing, a process that continues well into the mid-20s. The prefrontal cortex, responsible for planning, impulse control, and emotional regulation, is the last region to fully mature. This is not a flaw. It is our human design.

But it means that high-achieving teens are being asked to perform at the highest levels of their lives during a window of significant neurological vulnerability. Layer onto this the hormonal turbulence of adolescence, surging estrogen, testosterone, cortisol, and insulin, and you begin to understand why so many teens struggle with mood instability, focus issues, irregular cycles, skin problems, and chronic fatigue.

These can morph into more involved mental health issues and eating disorders. They are not character flaws or parenting failures. They are physiological signals that deserve medical attention. Burnout in high school is not a motivation problem.

The Cortisol Loop in teens.

Chronic academic, social, and performance stress drives sustained cortisol elevation. Financial and social inequities, excessive screen and blue light usage, and a lack of sleep and movement worsen the loop.



In teenage girls, this presents as irregular or absent periods, anxiety, acne, and weight gain, or as OCD or eating disorders. In teenage boys, it shows up as mood instability, poor recovery, declining athletic performance, behavior issues, high-risk behaviors, and addictions.

For both, it produces the hallmark symptom parents describe most: a child who is working harder than ever and performing worse, or a child who has simply shut down.

SIGNS YOUR TEEN MAY BE IN THE LOOP

Difficulty falling or staying asleep, feeling unrefreshed despite adequate hours, energy crashes, anxiety, irritability, and emotional reactivity. These are not just "teen drama" but early warning signs that something is off, and our systems do not screen for it.



GUT HEALTH & BRAIN PERFORMANCE

Your teen's gut is running their brain.

The gut-brain axis is one of the most powerful systems in the body, and it is profoundly sensitive to stress, diet, and sleep disruption. In high-achieving teens, gut dysbiosis is extraordinarily common and almost universally under-diagnosed. It produces symptoms that look like anxiety, ADHD, depression, and fatigue, because in a real neurobiological sense, that is exactly what it is causing.

When we restore gut health in teenage patients, the changes in mood, focus, energy, and cognitive performance are often the most dramatic of any intervention we make.

WHAT IS DISRUPTING YOUR TEEN'S GUT

- Processed and ultra-processed foods
- Chronic stress, which directly alters microbiome composition
- Cumulative antibiotic use from childhood
- Irregular meal timing and skipped meals
- Excess sugar from sports drinks and energy drinks
- Poor sleep and blue-light exposure

Energy drinks deserve special mention. They are one of the most gut-disrupting substances available over the counter for teens.

Protein, then blood sugar, then nutrients.

Nutrition in this window is about supporting neurotransmitter production, hormonal balance, immune function, and cognitive performance. Protein is the most important macronutrient for teens, and it is consistently the most deficient in their actual diets.

Every neurotransmitter, serotonin, dopamine, norepinephrine, is synthesized from amino acid precursors. Every hormone requires adequate protein to build and maintain. I recommend a minimum of 1 gram of protein per pound of lean body mass per day for active teens.

Blood sugar stability is a legitimate cognitive performance strategy that most families overlook. The brain is exquisitely sensitive to blood sugar swings. A teen who skips breakfast, eats a bagel at lunch, and drinks a sports drink before their afternoon exam is riding a rollercoaster that directly impairs memory consolidation, processing speed, and emotional regulation. Protein, fiber, and fat at every meal is the fix.

Omega-3 (DHA)

Myelin formation & cognitive function

Magnesium

Stress regulation & sleep

Vitamin D

Mood, hormone & immune support

B Vitamins

Neurotransmitter & energy production

Zinc

Immune & cognitive function

Iron

Often deficient in teen girls, frequently missed



SLEEP, THE NON-NEGOTIABLE

The most important performance variable.

If I could give every family of a teen one piece of clinical advice, it would be this: protect sleep as if it is the most important performance variable in your child's life, because it is. During sleep the adolescent brain consolidates memory, clears neurotoxic waste via the glymphatic system, regulates cortisol and growth hormone, repairs cellular damage, and rebalances the immune system.

No supplement, no tutoring session, no study strategy can replicate what 8 to 9 hours of quality sleep provides. Yet the average American high schooler sleeps fewer than 7 hours per night. Many are getting 5 or 6.

I have also witnessed firsthand the impact of today's performance medications for ADHD, depression, and anxiety on sleep, leading to more mood disorders, cortisol dysregulation, hormone imbalances, and poor immune function.

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| 1 | Consistent times | Same sleep & wake times, even on weekends. |
| 2 | 60-minute screen buffer | Blue light suppresses melatonin production. |
| 3 | Cool and dark room | Set the environment up for deep sleep. |
| 4 | Caffeine cap | No caffeine after 2 pm. |

Junior fall through senior fall is a health risk.

I want to name something directly: the college application season is a genuine health risk for many teens. I have seen teenagers develop their first panic attacks, their first depressive episodes, their first autoimmune flares, and their first significant hormonal disruptions during this window.

The combination of existential stakes, sleep deprivation, social comparison, and parental anxiety creates a perfect physiological storm. This is not inevitable, but it requires intentional management. These factors worsen the cortisol loop, drive microinflammation, and deplete the body of nutrient stores and stress reserves that may have already been low.

We have seen in our hol+ clinics how the deficiencies in our teen and twenty-year-old patients later lead to infertility, PCOS, endometriosis, declining testosterone, and autoimmune disease. I want you, or your teen, to get ahead of this.

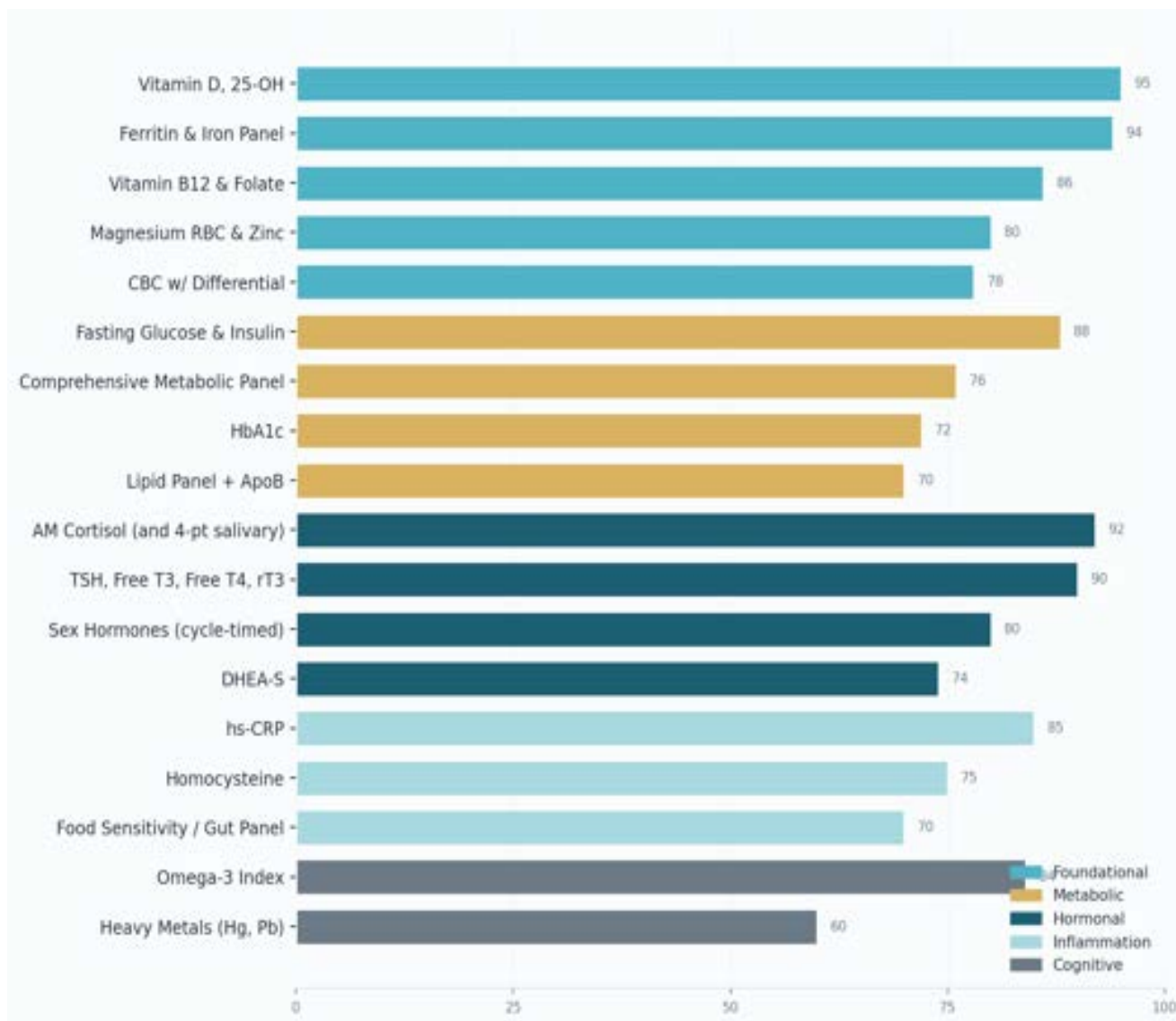
GET AHEAD OF IT

Run comprehensive labs the summer before junior year, senior year, and prior to each college and graduate school year. Establish a baseline for hormonal, metabolic, and nutritional status. Prioritize gut health by addressing dysbiosis and inflammation before stress peaks. Build in genuine recovery and address anxiety proactively and early.

A note for parents: your anxiety is contagious. One of the most powerful things you can do for your teen's health is actively manage your own stress and communicate that their worth is not contingent on outcomes.

The labs we actually run.

The annual sports physical is not a wellness panel. Below is the functional set I order for teens and twenty-somethings who want to truly establish a baseline and prevent biological bankruptcy, weighted by clinical priority and grouped by category. Always interpret with a clinician who knows your history.

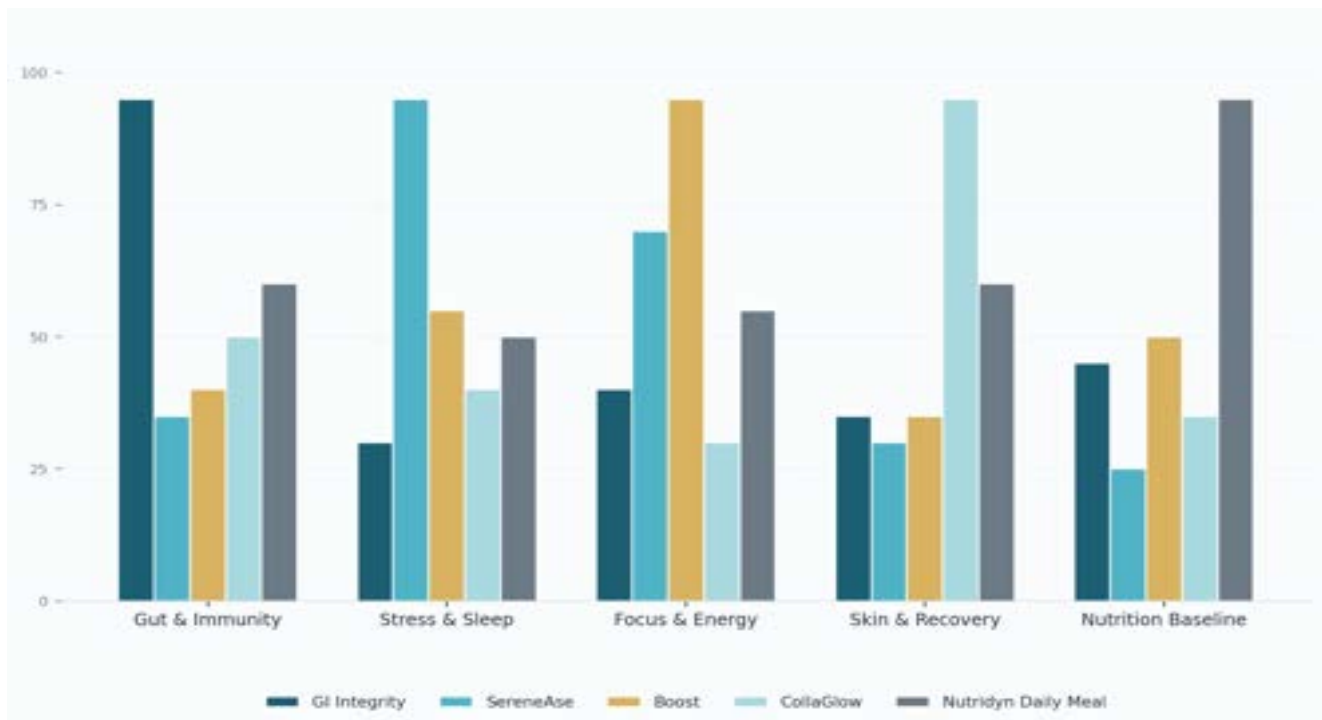




THE FOUNDATIONAL STACK

Five from the hol+ shelf.

A clean, age-appropriate stack designed to cover the gaps that high school and college years create. Start with one or two and build, do not stack everything at once.



What each one does.

GI Integrity

Gut lining and microbiome support. The foundation for immunity, mood, and skin clarity, especially under processed-food, antibiotic, and exam-week stress.

Serenease

A calm-the-nervous-system formula for performance stress, racing thoughts, and the low-grade anxiety that wrecks sleep onset during application and exam seasons.

Boost

Clean cognitive and energy support without the crash of caffeine stacks or energy drinks. Built for study blocks, long days, and athletic recovery.

CollaGlow

Collagen and skin nutrients for acne-prone skin, recovery, and the visible signs of stress that show up first on the face.

Nutridyn Daily Meal

A complete meal replacement for the mornings that fall apart, the bus-stop breakfasts, and the late-library dinners. Real nutrition, no compromise.

Proactive, not reactive.

At hol+, we offer comprehensive teen and young adult health panels that go far beyond the standard physical. We evaluate hormonal health, gut function, nutritional status, metabolic markers, and inflammatory load, then build personalized protocols that are sustainable.

We work with teens individually and with families as a unit, because the research is clear: teen health outcomes are deeply tied to family health patterns. The most powerful thing a parent can do is model and prioritize their own health alongside their child's.

Whether you are in your teens or twenties, the goal is to be proactive, prevent biological bankruptcy, and set up health habits for long-term success. The current medical model may be behind what is actually needed for the landscape of today, but through knowledge and personal advocacy, you can lay down a healthy foundation that will serve you into the later decades of your life.

I should know. Not just because I am a mom of teens, but because my own cellular debt at these ages led to a decade of health heartaches that, looking back, could have been prevented.

Get ahead of it. The foundation is now.

Learn more about the hol+ approach to teen and young adult health, and book a comprehensive panel for your teen, your twenty-something, or yourself.

BOOK A VISIT

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This guide is educational and is not a substitute for medical advice. Work with a qualified clinician before starting new supplements or labs.