

An Open Letter to The Honorable Pete Hegseth

Secretary of Defense, United States Department of Defense

Subject: Building a Military Hormonal Health Initiative: Looking at Hypogonadism with Both Eyes Open

Dear Secretary Hegseth,

I commend your leadership in recognizing that hormonal health is an essential component of military readiness. Your announcement to begin routine testosterone screening among our nation's service members represents an opportunity to fundamentally change how military medicine approaches physical resilience, cognitive performance, emotional stability, recovery from injury, and long-term health.

For decades, military medicine has focused appropriately on strength, endurance, and combat readiness while often overlooking one of the body's most influential physiological systems, the neuroendocrine network. If implemented thoughtfully, your initiative has the potential to become one of the most important preventive health programs ever introduced within the Department of Defense.

However, I respectfully submit that measuring testosterone alone is only the beginning.

Seeing Hypogonadism Through Both Eyes

Throughout my clinical career treating thousands of professional athletes, military personnel, veterans, and patients suffering from traumatic brain injury, I have come to view hypogonadism through what I call **The Two Eyes of Hypogonadism**.

The first eye evaluates the testes, the organ responsible for producing testosterone.

The second eye evaluates the brain, specifically the hypothalamus and pituitary, which regulates testosterone production through gonadotropin-releasing hormone (GnRH), luteinizing hormone (LH), and follicle-stimulating hormone (FSH).

These two systems cannot be separated.

A low testosterone level is not a diagnosis. It is a biological signal indicating that something within this finely coordinated system has changed.

The central clinical question should never be:

"Is the testosterone low?"

Instead, we should ask:

"Why is the testosterone low?"

The Military Represents a Unique Biological Population

The men and women who serve our country are exposed to physiological stressors rarely encountered within the civilian population.

These include:

- Repetitive subconcussive and concussive trauma
- Blast-wave exposure (over-pressure)
- Chronic neuroinflammation
- Sleep deprivation
- Circadian disruption

- Extreme operational stress
- Environmental toxins
- Chronic pain
- Medication exposure (NSAIDs)
- Nutritional deficiencies
- Intense physical training
- Psychological stress

Every one of these factors has the potential to disrupt the hypothalamic-pituitary-gonadal axis.

Many service members who appear to have "low testosterone" may actually be suffering from neuroendocrine dysfunction originating within the brain rather than the testes themselves.

Without evaluating both systems, we risk treating laboratory numbers while overlooking the underlying injury.

Looking Beyond Testosterone

A comprehensive evaluation should not stop with a single testosterone measurement.

When clinically indicated, additional assessment should include:

- 28-point biomarker panel
- Sleep disorders
- Medication review
- History of repetitive head trauma
- Inflammatory biomarkers
- Metabolic health

Only after understanding the biology behind the laboratory result can appropriate treatment decisions be made.

The Missing Piece: Neuroinflammation

One area largely absent from the current public discussion is neuroinflammation.

Inflammatory cytokines affect every level of hormonal regulation.

They can suppress hypothalamic GnRH release, impair pituitary secretion of LH and FSH, reduce Leydig-cell responsiveness, interfere with steroidogenic enzymes, alter receptor sensitivity, and diminish tissue responsiveness to circulating hormones.

In many military personnel, inflammation may represent the biological driver of endocrine dysfunction rather than testosterone deficiency itself.

Simply replacing testosterone without addressing chronic inflammation risks treating the consequence rather than the cause.

The Fallacy of Clinical Reference Ranges

If I may respectfully offer one additional consideration, I believe it may ultimately become one of the most important aspects of your initiative.

Modern medicine has become heavily dependent upon laboratory reference ranges. While these ranges are valuable for identifying obvious pathology, they are frequently misunderstood. A laboratory reference range simply describes where approximately 95% of a sampled population falls statistically. It does **not** define optimal physiological function, peak performance, or resilience under the extraordinary demands placed upon military personnel.

Our civilian reference ranges are derived from populations that include individuals with obesity, chronic inflammation, metabolic disease, medication use, sedentary lifestyles, sleep disorders, and age-related decline. These values should not automatically become the benchmark for elite military readiness.

A Special Operations soldier, fighter pilot, Navy SEAL, Marine infantryman, or combat medic should not be expected to perform at the same physiological threshold established from the average civilian population. Likewise, a service member whose testosterone has declined substantially from his or her own lifelong biological baseline may still fall within the laboratory's "normal" range while experiencing measurable deterioration in cognition, recovery, mood, muscle function, bone metabolism, and operational performance.

The future of military medicine should move beyond asking whether an individual falls inside or outside a statistical reference interval. Instead, we should strive to understand where each service member functions optimally within his or her own physiology. Population reference ranges define statistical normality; they do not necessarily define biological excellence.

Replacement Should Never Become the Default

One of the concerns expressed by many physicians is that widespread screening could unintentionally lead to unnecessary testosterone prescribing.

That concern can be avoided.

An ideal military endocrine program should proceed systematically:

1. Screen.
2. Confirm abnormal findings.
3. Evaluate symptoms.
4. Determine whether dysfunction is primary or central.
5. Identify reversible causes.
6. Address inflammation, sleep, nutrition, metabolic health, and medication effects.
7. Discuss fertility preservation.
8. Initiate therapy only when clinically appropriate.
9. Monitor carefully over time.

This transforms testosterone screening from a medication initiative into a comprehensive biological restoration program.

The Opportunity Before the Department of Defense

The Department of Defense possesses a unique opportunity unavailable anywhere else in medicine.

With standardized longitudinal data, the military could become the world's leader in understanding how neurotrauma, inflammation, endocrine function, sleep, operational stress, recovery, resilience, and long-term health interact throughout a military career.

Such knowledge would not only improve force readiness but could fundamentally reshape civilian medicine's understanding of traumatic brain injury, neuroendocrinology, aging, psychiatric illness, and human performance.

A Personal Perspective

For more than three decades, my work has focused on the relationship between neurotrauma, inflammation, and endocrine dysfunction. Beginning with professional athletes and later extending to thousands of military personnel and veterans, I have repeatedly observed that many individuals diagnosed with depression, PTSD, anxiety, chronic fatigue, cognitive impairment, and persistent post-concussive symptoms were also living with previously unrecognized neuroendocrine abnormalities.

Treating hormones in isolation was never the answer.

Treating the underlying biology was.

That experience has convinced me that hormonal health should never be viewed through a single laboratory value or a single hormone. It is the integrated function of the brain, endocrine organs, immune system, and metabolism that ultimately determines resilience and recovery.

Closing Thoughts

Mr. Secretary, your initiative has the potential to become far more than a testosterone-screening program.

It could become the beginning of a new era in military medicine, one that recognizes the intimate relationship between brain health, endocrine physiology, inflammation, and combat readiness.

I respectfully encourage the Department of Defense to evaluate hypogonadism with both eyes open.

The first eye examines the testes.

The second eye examines the brain.

Only by understanding both can we identify the true causes of hormonal dysfunction, restore physiological balance, preserve fertility, improve readiness, and enhance the lifelong health of those who have volunteered to defend our nation.

Our goal should never be to create a "high-testosterone military."

Our goal should be to create the healthiest, most resilient, biologically optimized fighting force in the world.

Respectfully,

Mark L. Gordon, M.D.

Founder & Medical Director

Millennium Health Centers, Inc.

Magnolia, Texas

Author, *Traumatic Brain Injury: A Clinical Approach*

Founder, TBIHelpNow.org