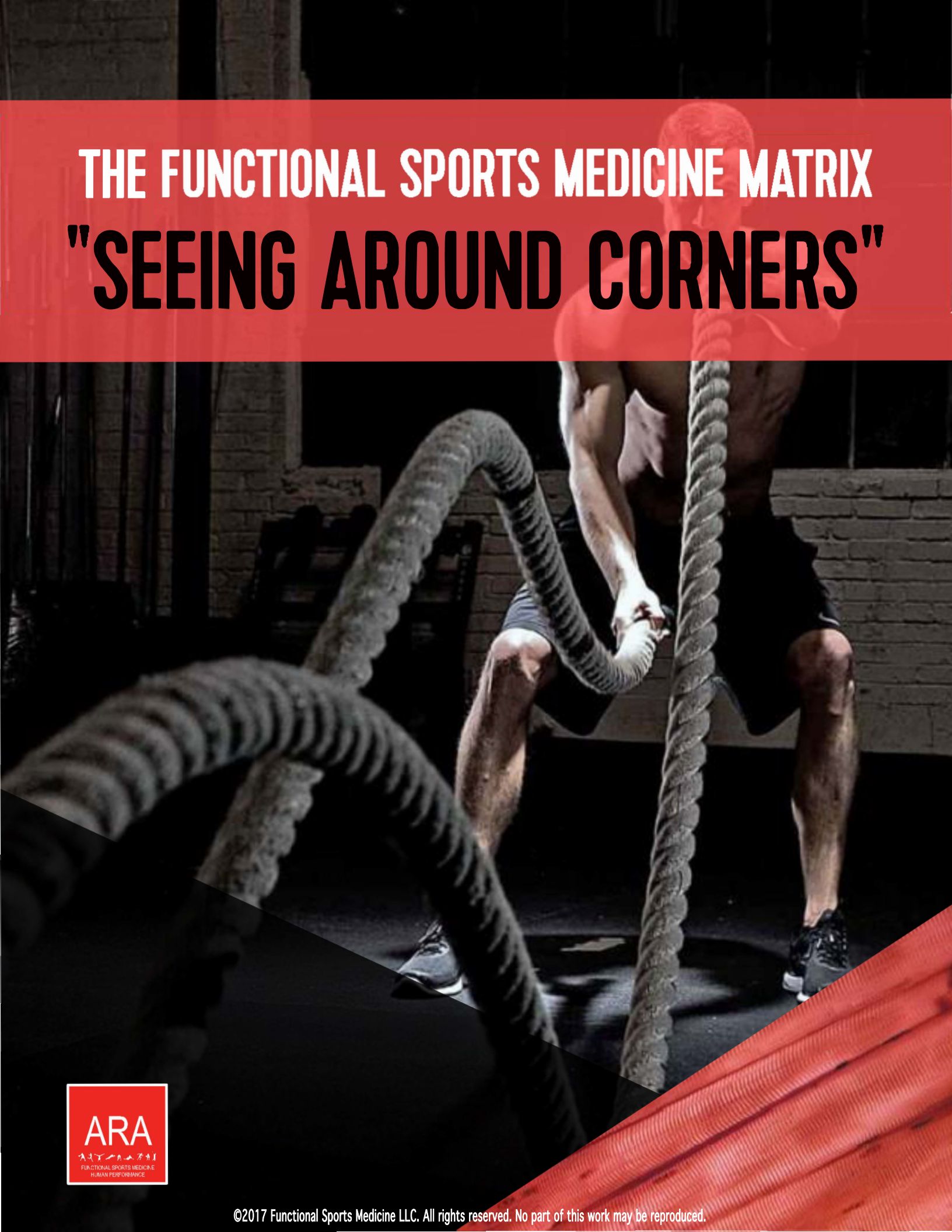
THE FUNCTIONAL SPORTS MEDICINE MATRIX

"SEEING AROUND CORNERS"



ARA
FUNCTIONAL SPORTS MEDICINE
HUMAN PERFORMANCE

Despite my formal training in multiple specialties, I couldn't explain my athletes' simple question:

"WHY DO I FEEL WORN OUT ALL THE TIME?"

Their traditional labs were within "normal" range. They were young. No comorbidities. Why then this unexplainable fatigue, or uncontrollable seasonal allergies, recurrent bouts of upper respiratory tract infections or their seemingly unexplainable loss of form? Was it just the results of the intangible psychological stress of competing?

MY INTUITION SUGGESTED OTHERWISE.

My obsessive pursuit to answer these questions took me down various rabbit holes, many of which lead me down seemingly isolated blind alleys. Fifteen years later, a picture emerged. The alleys formed a road map, a triangle.

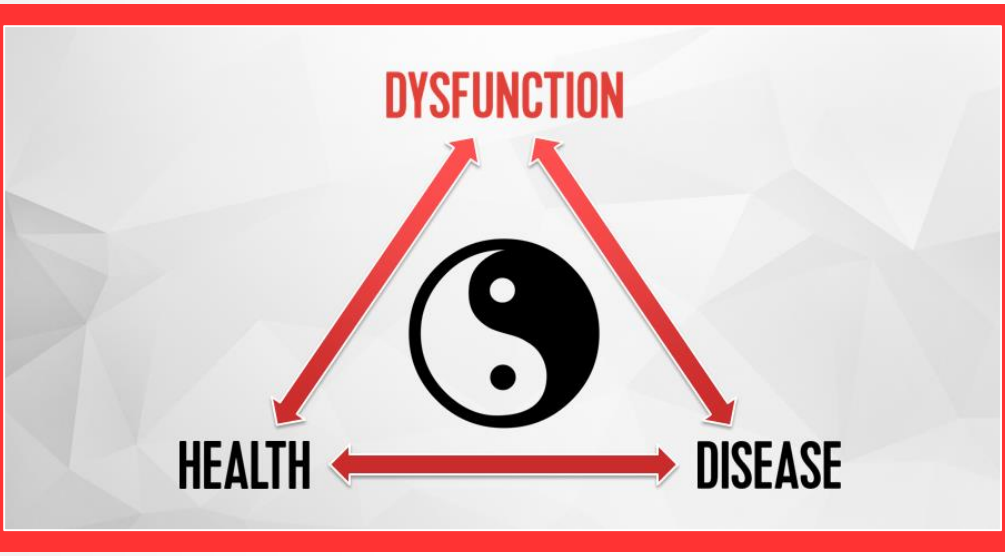
My evaluation of the any athlete starts with three questions:

Why **this** athlete?
Why **this** dysfunction?
Why **now**?

And it starts before I meet them.

A definitive diagnoses of an illness is nothing more than a label that represents the final step of a cascade of psycho-physiological compensations and alterations, often rooted as early as the individuals prenatal stage. However, all compensation comes with an expiration date, at which point symptoms fitting a more traditional diagnosis often emerge.

There are numerous instances when we shift directly from health to Acute disease – trauma, acute ischemia, a potent virulence, acute poisoning to name a few. When it comes to chronic diseases however, we inevitably move to and through an often reversible intermediary state called **Dysfunction**.



IDENTIFYING DYSFUNCTION

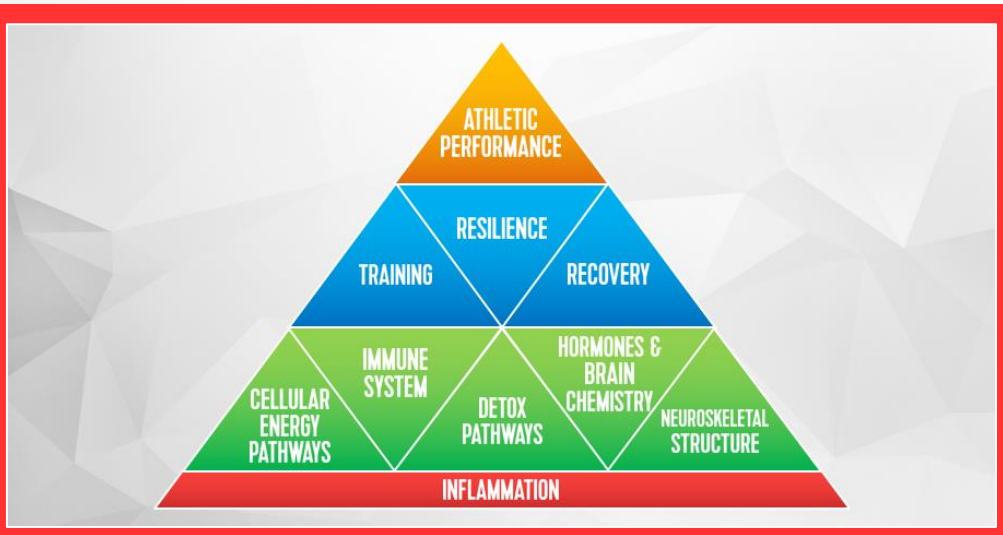
The heart of the
Functional Sports Medicine matrix

Dysfunction may be overt or covert. **Overt** cases are symptomatic – muscle fatigue, brain fog, alteration in the menstrual cycle. They imply a single or series of compensations from a primary trigger. Sleep deprivation (the trigger) for instance, has been strongly linked to the development of cancer. The dysfunctional state before cancer may be central obesity, recurrent infections or a rising blood pressure. If these dysfunctional clues are ignored, they may progress to the more classical diseases we have come to know.

Covert dysfunction may be in the form of a rising total toxic burden, pelvic rotation and shortened leg, food sensitivity. Their silence renders them dangerous culprits that warrant screening using a detailed functional history and examination. Dysfunction leaves clues; we need to become astute at seeing them.

DYSFUNCTIONS ARE ALMOST ALWAYS REVERSIBLE.

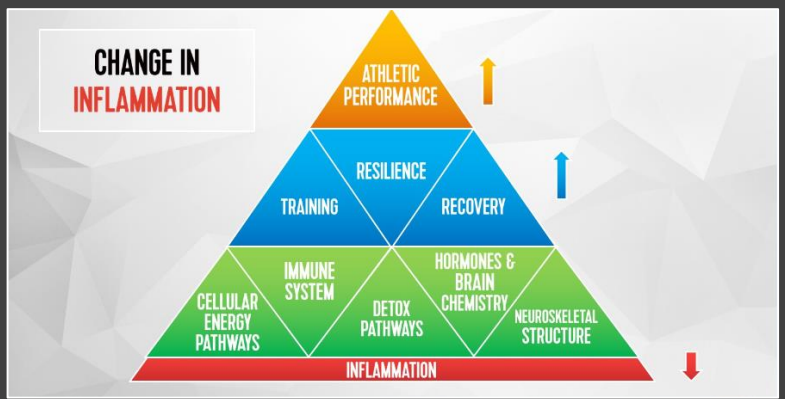
I propose that identifying and rectifying dysfunction promotes vitality and prevents disease.



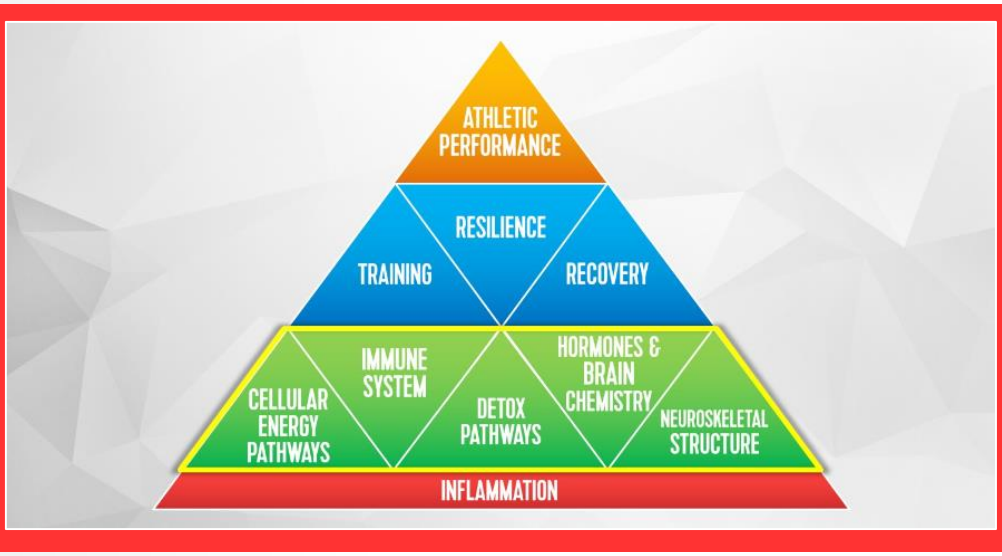
THE TRIANGLE OF PERFORMANCE

(TOP) stems from my 15-year study of dysfunction in athletes and its relationship to performance.

Unregulated Chronic Inflammation (UCI) is the foundation of this triangle. Why? UCI is at the heart of all major chronic diseases and dysfunctional states, and kills athletic performance directly, or indirectly by robbing us of recovery. More significantly, it shortens life span.



UCI has a direct cause and effect relationship with the five regulators of the Support Platform – these governing bodies are the Hormonal System and Brain Chemistry, Cellular Energy Pathways, The Neuroskeletal system, The immune system and Detoxification.



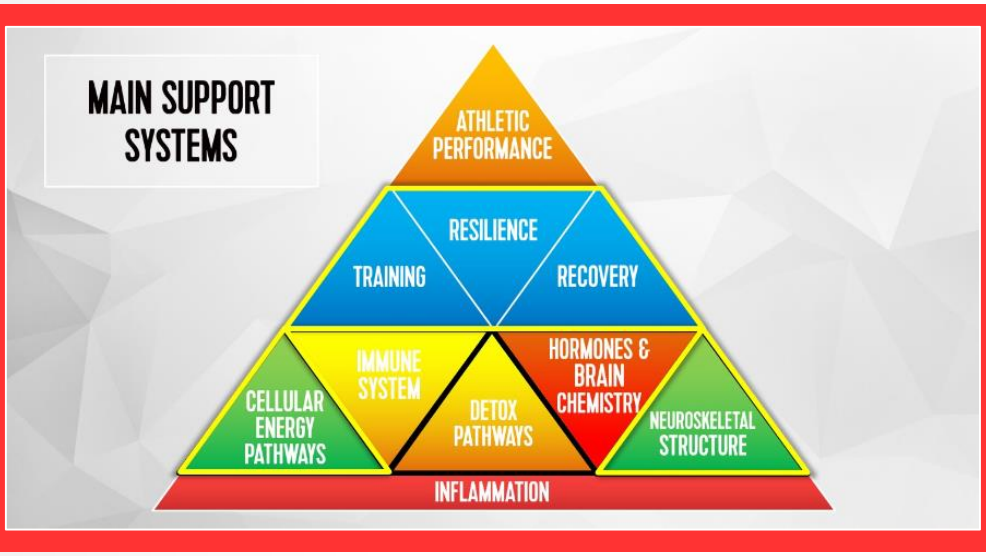
The five regulators may be the source of UCI,

OR ITS VICTIM.

For example, Leaky gut results in UCI through sensitization of the immune system. UCI then leads to adrenal fatigue and functional Hypothyroidism. Conversely, Adrenal fatigue (from overtraining/under-recovery) leads to UCI, which reduces digestive enzyme production, increased GI transit time, and Leaky gut. In either case however, the cycle continues to fuel itself. Hence, finding the cause or effect of UCI isn't clinically as relevant as determining the state of the 5 governing bodies.

The state of each governing body is color coded **green** (optimum), **yellow** (suboptimum) and **amber** (dysfunctional) based on a detailed functional history, examination and laboratory markers. The clinician should then get a picture as to which systems are the healthiest and playing the lead roles in supporting the training platform, at any given time.

OPTIMUM SUBOPTIMUM DYSFUNCTIONAL



The support platform is an extremely fluid environment in constant

SYNERGY AND FLUX.

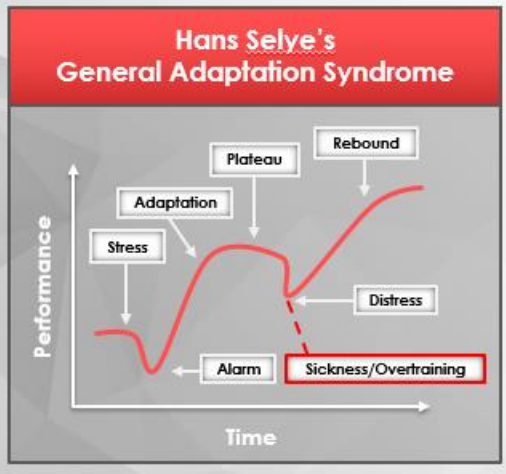
Whist these systems appear in isolation or are described as such, it is incumbent upon us to appreciate that they are interconnected as one regulatory web, by blood vessels, nerves, interstitial and intracellular fluid, connective tissue an electromagnetic field, polarity of charge, space and a myriad of other forces that remain to be named. As such they are a united front that enhance, down regulate, adapt and compensate each other. This is the basis of biological systems - it can suffer the loss of a unit without immediate obvious catastrophe through compensation. (Unlike mechanism, where the components work in isolation without the ability to compensate for each other. Mechanisms cannot handle any loss or dysfunction.

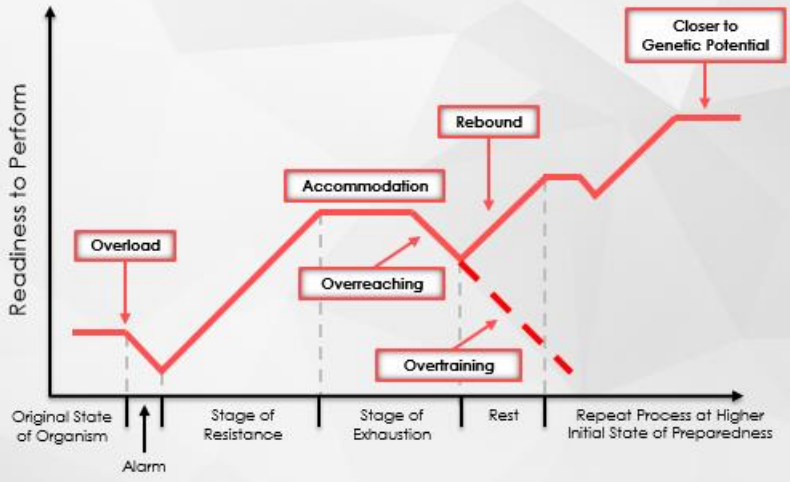
Once supported, the Training platform is prepared to efficiently produce high quality training and rejuvenating recovery, with a singular purpose, building adaptation.

ADAPTATION, OVER TIME, MAKES AN ATHLETE RESILIENT.

Hans Selye's description of the General Adaptation Syndrome in 1950, beautifully demonstrates that human physiology has a predictable and reproducible response to a stressful trigger, called Adaptation. When balanced, cycles of training with adequate and timely recovery provide the trigger that generates the desired adaptive response. In athletes, this adaptive response is primarily the ability to handle forces generated by physical activity, allowing for increased physical performance, and ultimately, fulfilling the individual's athletic potential without suffering injuries or illnesses.

It was accepted, that in traditional periodization models, there are multiple bouts of training, resulting in **multiple flights of alarm and resistance stages.**





However, continued training without adequate recovery, generates a maladaptive response called distress. The initial stage of distress is referred to as the **overreaching** phase. If unaddressed this progresses to the more malignant **overtraining** phase.

In the triangle, this imbalance in training and recovery looks like this:

At this stage the athlete is in a dysfunctional state (silent or symptomatic) and highly prone to a disease or injury.

THE TRIANGLE OF PERFORMANCE PROVIDES A FLEXIBLE FRAMEWORK TO EVALUATE THE STATUS OF AN ATHLETE AT ANY POINT IN TIME.

Whether playing well or poorly, it provides physiological transparency that can be archived. In a symptomatic athlete, it allows us to answer why THIS athlete, why THIS dysfunction and why NOW.

In a "healthy" athlete, it allows to identify and rectify dysfunction before it turns into a catastrophe or a serious loss of form. In that sense, The Triangle empowers us to see around corners.