APEIRON ZOH

Understanding Lab Tests & Interpretation

This 12-week series will take you through the advanced blood work and urine analysis that is available to all coaches through the Apeiron partnered labs. The Core section will take you through all of the lab analysis that we currently utilize with our premium clients in the Apeiron Medical Centers. This course is not designed to accredit you in reading lab work, nor does it constitute an endorsement by Apeiron or any of its members in the delivery of interpretation of lab results. The purpose of this course is to educate students as to the understanding of the way lab analysis can be used to identify and guide lifestyle advice based on the relationships of lab studies to lifestyle, genetics, epigenetics, and individual goals.

Outline:

- **Overview and lega**l – Legality and the best way to language lab reviews for non-medically licensed providers. Check your state laws as well. How to provide disclaimers and get signed forms of understanding from clients.
- **Complete Metabolic Profile** – The most basic of lab values with liver, kidney, protein, and electrolyte function. Understand when to pay attention to numbers outside of normal and when even normal values are relevant.
- **Complete Blood Count & Iron** - CBC is one of the most underappreciated set of labs. Most physicians order this and only consider the WBC, H&H, and platelet count, sometimes considering the differential and yet there are many more numbers that can provide insight into human health & wellness.
- **Metabolic markers** – This module will dive deeper into the blood markers that correlate with the bodies metabolic function. Here we will also relate many of these values to genetics and epigenetics.
    - Thyroid
    - Metabolism specific – glucose, A1c, insulin, fructosamine, leptin, adiponectin
- **Cholesterol** – From understanding the basic cholesterol lab values to a deep dive into the understanding and relevance of particle fractionation and how it interplays with lifestyle recommendations and genetics.
    - Standard panel
    - Fractionation
    - Specialty – Lp(a)
    - LP-PLA-2
- **Fatty Acid profiles** – In. this module we will dissect the different forms of fat measured, omega-3, omega-6, omega-9, and saturated fats. What these ratios actually mean, how are they measured, and how do we intervene to produce real outcomes.
- **Inflammation Overview** – Understand what you are looking at from the obscure and obvious markers of inflammation, what factors can influence them and how they can lead to misinterpretations when not taken in the context of the individual.
    - Fibrinogen
    - CRP
    - Homocysteine
    - Ferritin

- **Sex Hormones** – Much of the understanding of the sex hormones has been through a biased eye and this is no more obvious than the lack of agreement on what constitutes "normal" values. We will dissect the specifics of each of these levels and relate then=m to current research and our anecdotal clinical experience.
    - Testosterone
    - DHEA
    - Estrogen & Progesterone
    - Growth hormone
    - PTH, FSH, LH
- **Assessing Stress and Adrenal function** – We will discuss the various ways in which the bodies stress response is measured and how understanding the purpose of each of these modalities. Urine and salivary testing modalities and their relevance to the current state of the HPA axis are essential to understand.
    - Cortisol
    - DUTCH testing
- **Urinalysis & hormone metabolites** – There is a great deal of information contained in a standard urinalysis that can help guide lifestyle interventions for optimization but most of the data points are ignored. We will discuss all of the various metrics that are reported and how they pertain to the health of the human system. Urinary hormone metabolites can also reveal more information that can be missed with blood alone.
- **Vitamins and Minerals** – Even many functional practitioners experience confusion around what is actually being measured when we obtain lab work around vitamins and minerals. We will outline the difference between the form of the measured vitamin or mineral and the difference between intracellular and extracellular measurements.
- **Aging biomarker panels** – Epigenetic age and Glycan age along with other relevant metrics. We will discuss how to utilize these markers to maximally impact your clients roadmap to youthful longevity.

Advanced: (bonus)

- Cardiac specific
    - MPO
    - Lp-PLA2, CRP, fibrinogen
    - ADMA ?
    - Oxidized LDL
- Gut & microbiome markers
- CIRS – assessing chronic inflammatory response (Lyme, Mold)
- Sensible Food Sensitivity Testing
- Athletic Assessments