AGE scanner
by Diagnoptics

CASE STUDY

Integrative dietician

Early metabolic insight in a young woman with PCOS

This case reflects the following clinical situation: a younger client presenting early in the course of metabolic dysfunction, often with less severe clinical markers but **significant uncertainty about what to prioritize.**

In these cases, the challenge is not long-standing resistance to change, but confusion. Clients are frequently exposed to a wide range of conflicting recommendations and struggle to identify which factors are most relevant to their situation.

This case involves a 31-year-old woman diagnosed with polycystic ovary syndrome (PCOS), where early metabolic insight helped guide both clinical direction and patient engagement.

Background and Presentation

The client presented following a diagnosis of PCOS, with concerns related to irregular cycles, acne, and persistent food cravings. Her primary goal was to regain a sense of control over her symptoms and establish a more stable routine.

Unlike many clients with more advanced metabolic dysfunction, she was motivated and actively seeking solutions. However, she reported feeling overwhelmed by the volume of information available to her. She had encountered a range of dietary approaches, supplement protocols, and lifestyle recommendations, many of which appeared contradictory.

Attempts at lifestyle change were inconsistent

As a result, she had not yet established a consistent approach. Instead, she moved between different strategies without maintaining any of them long enough to assess their impact.

Clinical Perspective

From an integrative dietary perspective, her presentation suggested early-stage metabolic dysregulation. PCOS is closely associated with insulin resistance, low-grade inflammation, and hormonal disruption, all of which can be influenced by lifestyle factors.

At this stage, the goal was not to reverse advanced pathology, but to intervene early and prevent progression. This requires clarity - both for the practitioner and the client on what is driving the symptoms and which interventions are most relevant.

In this case, the primary obstacle was not physiological complexity, but a lack of clear direction.

Introducing

AGE measurement

To support this process, Advanced Glycation End-products (AGEs) were used as a functional marker of metabolic load.

AGEs form through the interaction of sugars with proteins and fats, particularly under conditions of metabolic stress and inflammation. While they accumulate more prominently over time, early elevations can reflect the beginning of metabolic strain.

The AGE Scanner provides an estimate of this accumulation through skin autofluorescence. Although it is not a diagnostic tool, it offers a practical way to assess longer-term metabolic patterns and to track changes over time.

- **Scan metabolic health and biological aging**
- **Immediate result on the device**
- **Repeat for tracking progress**

Initial measurement and its effect

The client's baseline AGE measurement was slightly elevated for her age group.

This finding was clinically useful for two reasons. First, it confirmed that metabolic stress was already present, even if not yet advanced. Second, it indicated that there was still a clear opportunity for early intervention.

When this was explained, the response was noticeably different from what is often seen in more advanced cases. Rather than relief or validation of long-standing symptoms, the client expressed reassurance. The result provided clarity without being discouraging.

It also helped shift the conversation away from general advice toward a more targeted, individualized approach. Instead of asking, **"What should I try?"**, she began to understand why certain interventions were being prioritized.

Intervention approach

The intervention focused on establishing a consistent, manageable foundation rather than implementing multiple changes at once.

Nutrition

The primary focus was on stabilizing blood glucose and reducing glycation load. Meals were structured to include adequate protein and fiber, with an emphasis on whole foods. Attention was also given to cooking methods, aiming to reduce the intake of dietary AGEs by limiting high-temperature dry-heat preparation.

Dietary pattern

An omega-3–rich dietary approach was introduced to support inflammatory balance. This included regular intake of fatty fish, nuts, and seeds, alongside plant-based foods rich in polyphenols.

Cycle-supportive habits

Lifestyle adjustments were aligned with her menstrual cycle where possible, including attention to energy levels, recovery, and stress tolerance throughout different phases.

Stress modulation

Although not her primary complaint, stress regulation was addressed early. Foundational practices were introduced to support nervous system balance, recognizing its role in both metabolic and hormonal regulation.

The emphasis throughout was on consistency rather than intensity. Each element was introduced gradually to ensure it could be sustained.

Follow-up

AGE measurements were repeated at three, nine, and twelve months to monitor progression.

3 months AGE levels remained stable. This was considered a positive indicator, suggesting that metabolic load was no longer increasing. The client reported improved clarity around her routines and fewer fluctuations in energy.

9 months Stability was maintained. By this stage, dietary and lifestyle changes had become more consistent, and adherence no longer required the same level of effort.

12 months AGE levels remained stable, which, in the context of early intervention, was interpreted as a favorable outcome. Clinically, she reported improved cycle regularity, reduced cravings, and greater predictability in her symptoms.

Reflections

This case differs from more advanced metabolic cases in that the primary outcome was stabilization rather than reduction.

In early-stage dysfunction, preventing further progression is a meaningful clinical result.

However, this can be difficult for clients to recognize without a clear reference point. The AGE measurement helped make this visible.

It also played a role in reducing uncertainty. Rather than navigating multiple competing recommendations, the client had a clearer framework for understanding her condition and the rationale behind each intervention.

Over time, this translated into greater consistency. The focus shifted from trying new strategies to maintaining a set of habits that were already working.

Why this case matters

For younger clients, a mildly elevated AGE level can be a useful clinical tool. It provides evidence of early metabolic strain without creating unnecessary concern.

This balance is important. It allows for timely intervention while supporting a constructive, forward-looking approach.

In this case, the measurement supported engagement by making the situation more concrete, while still reinforcing that change was both possible and worthwhile.

Practical takeaway

AGE measurement can be used to support educational conversations with clients in the early stages of metabolic dysregulation. It helps provide context, guide prioritization, and reinforce the value of consistent, sustainable habits over time.