

# Learning how the body fits together

One of the key challenges for CAM students is to understand how things “connect together” within the body. University of West London first-class honours graduate and biomedicine lecturer **JAN CLEMENTSON** explains how to crack the basic sciences.

**C**onnecting it all up is a hard task given the enormity of the subject and the rate at which research is changing our understanding. The fact that many colleges still teach on a topic by topic basis doesn't help, as it assumes each system operates in isolation.

The result is that many students only fit together the pieces of the jigsaw puzzle once they have ventured into practice. Others never quite get to grips with these connections, leading to frustration and unsatisfactory outcomes.

Yet it doesn't have to be this way. You can develop the fundamental building blocks that will enable you to start making those connections. Here's how, using the integral role of energy regulation as an example.

## Revisit and master anatomy and physiology basics

Never skim on your core science. Without a thorough grounding in the basics of anatomy and physiology (A&P), you will never grasp how the body really works. This will impair your later studies as you try to build on patchy and misunderstood knowledge. If you have never previously studied A&P, the subject can feel like information overload, but it really is worth persevering and getting familiar with organ and system function and how they work together.

My experience tells me that too often the essential basics are glossed over or not retained. Working as a clinical nutrition advisor on BioCare's advice line, this disconnect became apparent. Yet, it was only when I began lecturing in biomedicine for London CNM that a potential cause of this puzzle became evident – many students were simply more interested in progressing to their chosen disciplines, where they could see more personal relevance.

But the devil really is in the detail. Connecting the A&P dots provides the

groundwork that will underpin your clinical investigations. If you have not grasped the science basics yet, this is the chance to go back and put that right. You will never regret it.

## Start thinking like a clinical detective

Personally, I liken the role of a practitioner to that of a clinical detective. Upon presentation of the facts, you must be able to pick up the clues and work backwards to understand how the condition came about so that you can get to the root cause. Having a good grasp of how the body works makes the detective work much easier and will allow you to find a more effective treatment plan. It will also enable you to start putting into context new research, so that it doesn't feel so overwhelming.

## Use case studies to identify connections between systems

Case studies are often the most effective way to learn how things fit together. Understanding the body in terms of energy requirements is one of the easiest ways to draw connections. Central to life itself is our ability to convert energy from food into biological energy to power every system in the body. Using iron-deficiency anaemia as an example, it is not hard to understand why “tiredness” or a “lack of energy” would be the main presenting symptom when you understand that red blood cells require iron to carry oxygen and that oxygen is required for aerobic respiration (the main mechanism of energy production). When our energy regulation systems are impaired, then health conditions can manifest.

## Try mapping energy production and regulation mechanisms to identify links

As part of BioCare's research team for their Energy Education Seminar Programme I came to really understand the importance of energy regulation as a key mechanism. Ultimately, I

developed and expanded upon this research, which became the basis of my book – “The Energy Solution”. I thoroughly recommend that you investigate the key mechanisms of cellular energy production and regulation, as well as the organs and hormones involved. It's the perfect starting point for developing connections. Think in terms of energy supply and demand and how each part contributes to the overall production, delivery and utilisation of fuel. Take on board the notion that stress, in all its myriad of forms, is integrally linked to energy demand, and without the ability to satisfy that demand there will inevitably be a health consequence.

## Spend time building a bigger picture

Use external webinars, seminars and conferences to build a broader perspective and help you to more easily put things into context. Early on in my studies, I attended a Functional Medicine seminar presented by Dr Jeff Bland. Most of what he said that day went right over the top of my head, but it really inspired me to learn more and to try and understand what he was saying. I kept going back and each time I understood more. Search out seminars that will challenge you and give you a different viewpoint. Challenging yourself in this way will help you to piece together that jigsaw more quickly. You can do it! **CELESTE**



## About the author

**JAN CLEMENTSON** has a first-class BSc honours degree in nutritional medicine from the University of West London. Her specialist area of interest is in metabolism,

which encompasses energy, stress, weight control and sports nutrition. She has worked as lecturer in biomedicine (anatomy, physiology and pathology) for London CNM (College of Naturopathic Medicine), and as a Clinical Nutrition Advisor for BioCare, as well as conducting individual nutritional consultancy work. She has just published her first book.

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