Protein Synthesis

Protein is needed by every living organism, and next to water, makes up the largest portion of our body weight since it is contained in muscles, organs, hair, etc. The protein used in making up the body is not directly derived from diet, but the dietary protein is broken down into amino acids, and the body then re-constitutes these amino acids into the specific proteins needed. Its vital we synthesise the protein we eat into a readily usable form.

Enzymes and hormones that regulate body functions are also proteins. Amino acids are used in most body processes from regulating the way the body works to how the brain functions—they activate and utilize vitamins and other nutrients.

Your body's DNA is an important factor in protein synthesis. The amino acids from the protein which you eat are essentially used and rearranged into a sequence already predetermined by your body's DNA sequence. Each protein has a different amino acid sequence which determines its structure and function.

Proteins in foods however can cause complications within the body for some people. Common examples are the proteins gluten and casein, found in grain and dairy products respectively. Approximately half of the clients we test in clinic have a sensitivity to gluten. These proteins are poorly broken down in some individuals as they may not have the required enzymes or digestive capacities. Common gastrointestinal complaints of these individuals often include flatulence/gas bloating, constipation, diarrhoea, abdominal pain to name a few. However, when these proteins are not digested properly, they can also be absorbed intact into blood circulation. These proteins can affect the brain by crossing the blood-brain barrier and binding to opioid receptors. This can affect mood, concentration, mental performance and pain tolerance.

It is important to make sure you are including protein in your diet, however it is just as important to know if certain proteins are affecting your body in a negative way. It is often only by further testing to identify sensitivities or intolerances that you may have.

We recommend that you get your epigenetics tested regularly to prevent protein synthesis and wellbeing challenges.