

Multidisciplinary Assessments

In a multidisciplinary model, pathology laboratory tests, measures from Psychology, Neuroscience and Psychophysiology can be used to investigate medical and neurophysiological conditions that can give rise to sleep difficulties, anxiety, depression chronic fatigue minor head injuries and psychiatric disorders. The information provided by these tests guide treatment protocols that are tailored to the causal factors that underpin the difficulties experienced.

Amines, depression and impaired mental function

Amines are naturally-occurring substances in food, which the body can cope with in small amounts. However in larger amounts they can cause serious disturbances in the brain, triggering depression and reduced mental alertness. Recent studies have found amine receptors in the brain, suggesting that increased dietary amines, and increased amine production from food allergies and from overgrowth of some gut bacteria may cause treatment-resistant depression and anxiety.

Based on an extensive intake questionnaire and clinical interview,
one or more of the following assessments may be used, as required,

Red Cell Essential Fatty Acid Profile

Every cell in the body has a lipid membrane protecting its boundaries. The brain consists of 70% lipids and 40% of the brain is made up of the long chain Omega 3 EFAs (of the kind we get from fish). Studies consistently indicate that deficiencies of Omega 3 EFAs (derived from fish) are associated with serious brain and systemic dysfunctions. Many of these studies prove that Omega 3 EFAs are essential for brain function. It is known that deficits are associated with all kinds of Psychiatric disorders, cardiovascular disease, diabetes and cancer. The red cell Essential Fatty Acid Profile test is a specialised blood test that gives detailed composition of fatty acids in the red cells and is an excellent marker for identifying specific EFA deficiencies.

Omega3 EFAs and Gut function

The gut cell wall, the epithelium, is constantly exposed to billions of organisms and toxins daily. The importance of the protective effect of the lipid membrane of each cell in the epithelium cannot be understated. If the lipid membrane is lacking in Omega 3 fatty acids, the protection fails and unfriendly organisms, irritants and toxins irritate the gut wall, possibly giving rise to Irritable Bowel Syndrome and Inflammatory Bowel Diseases. Of course it is not as simple as that, there is a multitude of other nutrients and systems and their interactions at play, and these also need to be considered

Extended Faecal Microbiology Investigation (EFMI)

Intestinal dysbiosis is a condition whereby the various bacteria usually found in the large bowel are abnormally distributed. Often there is an overgrowth of streptococcus and enterococcus for example and a reduction in the beneficial flora such as E-Coli, lactobacillus and bifidobacteria. This imbalance can interfere in the breakdown of food into nutrients and may also lead to Irritable Bowel Disease and malabsorption, conditions which are strongly associated with depression, anxiety disorder and fatigue.

EFMI is conducted by Bioscreen, a pathology laboratory at Melbourne University. Bioscreen grows the faecal bacteria over three weeks and counts the colonies to estimate the bacterial profile. The test provide the most accurate estimate of bacteria profile in the bowel enabling experienced clinicians to treat the disorder effectively. This test should not be confused with the parasitology and pathogen testing usually conducted through the path lab faecal tests.

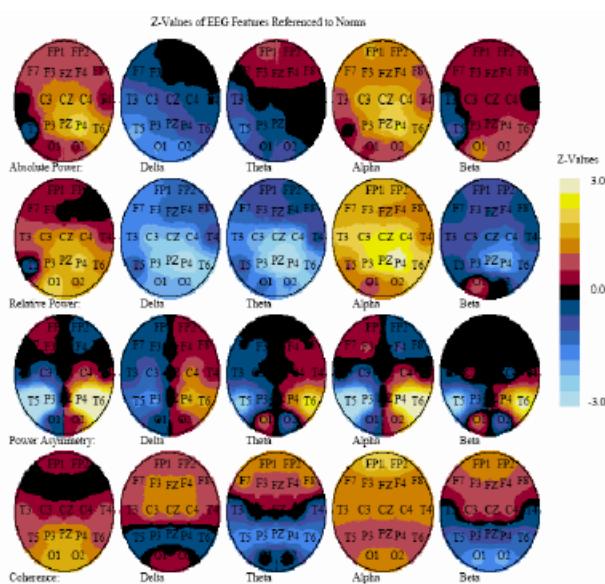
IgG food allergy panel

This is a blood test that assesses and quantifies IgG mediated autoimmune antibodies to foods. It is very useful in identifying food allergies. It tests for an autoimmune reaction very different to that measured by the usual “pin prick” allergy tests which may be associated with histamine and IgA /IgE reactions.

Intestinal Permeability Test

Leaky gut is an expression which means that the gut lining has become impaired or “leaky,” allowing molecules of partially digested food or bacterial toxins to cross the gut barrier and irritate the gut wall or cross into the blood stream. A measured amount of two sugars, Lactulose and Mannitol, is given and all urine passed for the next six hours is collected. The recovery of the sugars in the urine is used as a marker to estimate intestinal permeability, with higher than normal recovery suggesting a “leaky gut”.

QEEG Neuroimaging



Quantitative EEG (QEEG) is the statistical analysis of the electrical activity of the brain. It is a brainmapping tool used to evaluate differences in brain function from a database of individuals without difficulties. Results facilitate the formulation of treatment options guided by the brain patterns associated with abnormal sleep, mood and behaviours rather than by symptoms that can easily lead to misdiagnosis and less than optimal treatment.

It is very useful in revealing the underlying abnormal brainwave patterns associated with most disorders. Many disorders have symptoms that overlap. The system can discriminate with more than 90% accuracy many disorders from each other and from normal. It helps in providing more accurate diagnosis and in determining which treatment is best suited for

an individual, rather than relying solely on clinical interviews and behavioural questionnaires that may lack the objectivity and specificity.

Test of Variables of Attention (T.O.V.A.)

The Test of Variables of Attention (TOVA) is a computer administered continuous performance task, that requires participants to press a specially designed microswitch whenever a “target” appears on the screen, and to refrain from pressing when a “non-target” appears. The scores are compared to an age appropriate database to produce standardised scores, which gives useful “objective” information on four variables of attention: (a) Ability to concentrate and sustain attention (b) Impulse control (c) brain processing speed (reaction time) and (d) distractibility (variability in the response times). These measures are used to quantify the degree of impairment to brain function and to measure progress.

IntegNeuro™ Cognitive Battery

IntegNeuro™ is an easy to use, fully automated computer administered series of cognitive tests that reflect an individual’s cognitive performance profile, drawing on the Brain Resource International Database. The database consists of over 1000 normal individuals who have undergone a complete neurophysiological, psychophysiological and cognitive battery of tests. It is mostly used to establish the degree of cognitive impairment due to stroke, head injuries (even minor) and degenerative dementias, and to evaluate treatment progress.