Gut and Psychology Syndrome*

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In his seminal book, Good Calories, Bad Calories, *Gary Taubes quotes Hilde Bruch who wrote: "The literature on obesity is not only voluminous, it is also full of conflicting and confusing reports and opinions. One might well add to this the words of Artemus Ward: "The researches of so many eminent scientific men have thrown so much darkness on the subject that if they continue these researches we shall soon know nothing."*

Determining the causes of the hundreds of psychiatric disorders and their treatment has almost reached that state of total darkness. Dr. Campbell-McBride, in her book Gut and Psychology Syndrome, *blows away some of the fog and shows us where to look. After I read it, I wrote to the author: "Had I read your excellent book forty years ago I would have thought you were nuts. Thirty years ago I would have seen some merit and in the last years what I have learned has confirmed what you have written. It is a very good book. Isn't it a shame that psychiatric illnesses are fueled by foods and the way we deal with them. Ironically, psychiatry may never accept this idea, as it has become the unpaid servant of the drug industry. Many thanks for sending it to me."*

To learn more, please read the book by Dr. Natasha Campbell-McBride, Gut and Psychology Syndrome: Natural Treatment for Autism, ADHD/ADD, Dyslexia, Dyspraxia, Depression, Schizophrenia.

–Abram Hoffer, MD, PhD

We live in the world of unfolding epidemics. Autistic Spectrum Disorders, Attention Deficit Hyperactivity Disorder (ADHD/ADD), schizophrenia, dyslexia, dyspraxia, depression, obsessive –compulsive disorder, bipolar disorder and other neuro-psychological and psychiatric problems in children and adults are becoming more and more common.

In clinical practice these conditions overlap with each other. A patient with autism often is hyperactive and dyspraxic. There is about 50% overlap between dyslexia and dyspraxia and 25-50% overlap between ADHD/ADD and dyslexia and dyspraxia. Children with these conditions are often diagnosed as being depressed, and as they grow up they are more prone to drug abuse or alcoholism than their typically developing peers. A young person diagnosed with schizophrenia often suffered from dyslexia, dyspraxia or/and ADHD/ADD in childhood. When we start examining the patients with these so-called mental conditions, we find that they are also physically ill. Digestive problems, allergies, eczema, asthma, various food intolerances and immune system abnormalities are universally present amongst them. We have created different diagnostic boxes for these patients, but a modern patient does not fit into any one of them neatly. The modern patient in most cases fits into a rather lumpy picture of overlapping neurological and psychiatric conditions.

Why are all these conditions related? What underlying problem are we missing?

To answer all these questions we have to look at one factor, which unites all these patients in a clinical setting. This factor is the state of their digestive system. I have yet to meet a child or an adult with autism, ADHD/ADD, dyspraxia, dyslexia, schizophrenia, bipolar disorder, depression or obsessive-compulsive disorder who does not have digestive abnormalities. In many cases they are severe enough for the patients or their parents to start talking about them first. In some cases the parents may not mention their child's digestive system, yet when asked direct

*GAP Syndrome or GAPS™

questions, would describe a plethora of gut problems. So, what have digestive abnormalities got to do with these so-called mental problems? According to recent research and clinical experience – a lot! In fact it appears that the patient's digestive system holds the key to the patient's mental state.

What is a typical scenario we see in clinical practice? Before examining the patient it is very important to look at the health history of the parents. Whenever the parents are mentioned people immediately think about genetics. However, apart from genetics there is something very important the parents, mother in particular, pass to their child: their unique gut micro-flora. Not many people know that an adult on average carries 2 kg of bacteria in the gut. There are more cells in that microbial mass than there are cells in an entire human body. It is a highly organized micro-world, where certain species of bacteria have to predominate to keep us healthy physically and mentally. Their role in our health is so monumental, that we simply cannot afford to ignore them. We will talk in detail about the child's gut flora later. Now let us come back to the source of the child's gut flora – the parents.

After studying hundreds of cases of neurological and psychiatric conditions in children and adults, a typical health picture of these children's mums has emerged: due to various modern factors a modern mum has seriously compromised gut flora by the time she is ready to have children. Indeed, clinical signs of gut dysbiosis (abnormal gut flora) are present in almost 100% of mothers of children with neurological and psychiatric conditions.

A baby is born with a sterile gut. In the first 20 or so days of life the baby's virgin gut surface is populated by a mixture of microbes. This is the child's gut flora, which will have a tremendous effect on this child's health for the rest of his/her life. Where does this gut flora come from? Mainly from the mother at the time of birth. Whatever microbial flora the mother has, she passes to her newborn child. Fathers with abnormal gut flora contribute to the bodily flora of the mother and through her to the gut flora of the child.

The Role and Importance of the Gut Flora

Gut flora is something we do not think much about. And yet the number of functions the gut flora fulfils is so vital for us that if some day our digestive tracts were sterilised we probably would not survive.

The first and very important function is appropriate digestion and absorption of food. If a child does not acquire normal balanced gut flora, then the child will not digest and absorb foods properly, developing multiple nutritional deficiencies. And that is what we commonly see in children and adults with learning disabilities, psychiatric problems and allergies. Many of these patients are malnourished. Even in the cases where the child may grow well, testing reveals some typical nutritional deficiencies in many important minerals, vitamins, essential fats, many amino acids and other nutrients.

Apart from normal digestion and absorption of food, healthy gut flora actively synthesizes various nutrients: vitamin K, pantothenic acid, folic acid, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pyridoxine (vitamin B_6), cyancobalamin (vitamin B_{12}), various amino-acids and proteins. Indeed, when tested, people with gut dysbiosis present with deficiencies of these nutrients. Clinical experience shows that restoring the beneficial bacteria in their gut is the best way to deal with these deficiencies.

Apart from taking a vital part in nourishing the body, beneficial bacteria in the gut act as the housekeepers for the digestive tract. They coat the entire

surface of the gut protecting it from invaders and toxins by providing a natural barrier and producing anti-bacterial, anti-viral and anti-fungal substances. At the same time they provide the gut lining with nourishment. Beneficial bacteria normally control various opportunistic and pathogenic microbes in the gut. Lack of beneficial bacteria would allow disease-causing microbes to grow and occupy large parts of the digestive system causing damage and inflammation in the gut wall. So, it is no surprise when the gut flora is abnormal, the digestive tract itself cannot be healthy. Indeed most patients with learning disabilities, psychiatric disorders and allergies present with digestive problems: constipation and diarrhoea, infantile colic and abdominal pain, bloating and flatulence, reflux and indigestion. Examination by gastroenterologists commonly reveals inflammatory process in the gut and many of these patients are diagnosed with coeliac disease. Housing a mass of pathogenic microbes the gut cannot be healthy. Indeed, long before these patients develop so-called mental symptoms they usually suffer from digestive problems and all other typical symptoms of gut dysbiosis pretty much from the start of their lives.

The Role and Importance of the Immune System

A baby is born with an immature immune system. Establishment of healthy balanced gut flora in the first few days of life plays a crucial role in appropriate maturation of the immune system. If the baby acquires compromised gut flora from the mother then the baby is left immune compromised. The result is lots of infections followed by lots of courses of antibiotics, which damage the child's gut flora and immune system even further.

The beneficial bacteria in the gut ensure appropriate production of different immune cells, immunoglobulins, keeping immunity in the right balance. Damage inflicted upon the gut flora typically leads to an imbalance between major parts of immunity, resulting in allergies, asthma and eczema – symptoms, which children and adults with neurological and psychiatric conditions commonly suffer from.

There has been a considerable amount of research published into the state of the immune system in patients with learning disabilities and psychiatric problems. The research shows deep abnormalities in all major cell groups and immunoglobulins. The most common autoantibodies found are to myelin basic protein (MBP) and neuron-axon filament protein (NAFP). These antibodies specifically attack the person's brain and the rest of the nervous system.

To summarize: A child born from parents with abnormal gut flora did not acquire normal gut flora from the start. The flora may have been damaged further by repeated courses of antibiotics and vaccinations. As a result, these children commonly suffer from digestive problems, allergies, asthma and eczema. However, in children and adults who go on to develop neurological and psychiatric problems, something even worse happens. Without control of the beneficial bacteria, different opportunistic and pathogenic bacteria, viruses and fungi have a good chance to occupy large territories in the digestive tract and grow large colonies. Two particular groups, which are most commonly found on testing, are yeasts (including Candida species) and the Clostridia family. These pathogenic microbes start digesting food in their own way producing large amounts of various toxic substances, which are absorbed into the blood stream, carried to the brain and cross the blood–brain barrier. The number and mixture of toxins can be very individual, causing different neurological and psychiatric symptoms. Due to the absence or greatly reduced numbers of beneficial bacteria in the

gut flora, the person's digestive system instead of being a source of nourishment becomes a major source of toxicity in the body.

The mixture of toxicity in each child or adult can be quite individual and different. But what they all have in common is gut dysbiosis (abnormal gut flora). The toxicity, which is produced by the abnormal microbial mass in these patients, establishes a link between the gut and the brain. That is why it is logical to group these disorders under one name: the Gut and Psychology Syndrome (GAPS)3. The GAPS children and adults can present with symptoms of autism, ADHD, ADD, OCD, dyslexia, dyspraxia, schizophrenia, depression, bipolar disorder, sleep disorders, allergies, asthma and eczema in any possible combination. These are the patients who fall through the gap in our medical knowledge. Any child or adult with a learning disability, neurological or psychological problems and allergies should be thoroughly examined for gut dysbiosis. Re-establishing normal gut flora and treating the digestive system of the person has to be the number one treatment for these disorders, before considering any other treatments with drugs or otherwise.

Gut And Psychology Syndrome (GAP Syndrome or GAPS) establishes the connection between the state of the patient's gut and the functioning of the brain. This connection has been known by medics for a very long time. The father of modern psychiatry French psychiatrist Phillipe Pinel (1745–1828), after working with mental patients for many years, concluded in 1807: "The primary seat of insanity generally is in the region of the stomach and intestines." Long before him Hippocrates (460-370 BC), the father of modern medicine has said: "All diseases begin in the gut!" The more we learn with our modern scientific tools, the more we realize just how right they were.

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