EMOTIONAL OR BEHAVIOURAL PROBLEMS IN CHILDREN

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EXTERNAL CAUSES OF EMOTIONAL DIFFICULTIES

In children, only five external stressors can cause chronic emotional or behavioural difficulties. These external stressors are:

- abusive or punitive parenting including child abuse
- parental domestic violence
- parental drug abuse
- mismanaged parental mental illness
- chronic poverty.

Hospitalisation of oneself or a family member, birth of a sibling, death of a family member or friend, or parental separation can all trigger short- and medium-term stress responses. However, these will abate in the children when their parents support them to cope. Only those five external stressors will produce ongoing, chronic behavioural or emotional problems.

If none of these five issues is relevant for a given family whose child has long-standing behavioural or emotional difficulties, the stressor is unlikely to be coming from the outside – but instead will be something internal. (This is a binary issue: either the stressor is external, or it is internal.)

INTERNAL CAUSES

If there are no significant external stressors, then the source of the stress must be internal. A few disabilities will contribute to behavioural difficulties but if this can be ruled out for a given child because he or she has no known serious disability, it is safe to hypothesise that a physical illness is at the root of the child's emotional or behavioural difficulties.

Unlike all other body organs, the brain does not have pain receptors. This means that it cannot signal when it is unwell in the same way that an appendix hurts when it is becoming inflamed. Brains only think, feel and behave and, when they are subjected to irritants, they will think, feel and behave erratically. Signs that this is the case are listed in Box 1.

For young people to have toxicity that is affecting brain function (thoughts, feelings or behaviour), four things have happened (as illustrated in Figure 1):

- They have food allergies and a viral load that are overwhelming their body.
- They have compromised detoxification capabilities (almost certainly genetically).
- They have been exposed to a number of infections, either naturally or in vaccines.
- They have nutrient deficiencies, as a result of either inadequate intake or malabsorption.

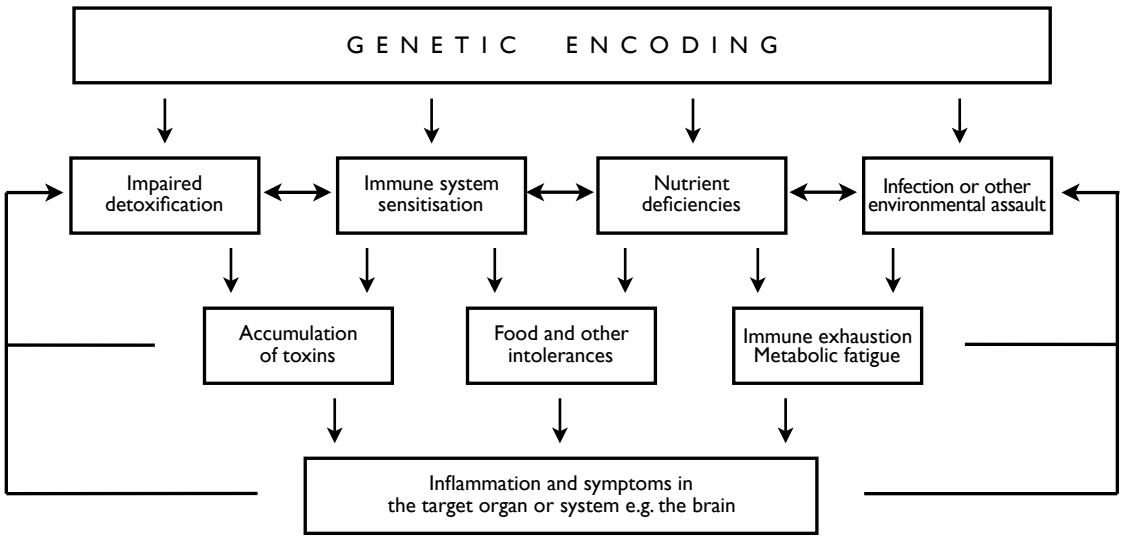
In the case of emotional or behavioural difficulties, the resulting toxins are targeting their brain – because, genetically, the brain happens to be the target organ in this family. This is in contrast with families were the two factors above target the bronchials, with many family members having asthma, or the toxic buildup targets the skin, with many family members having eczema and hives, for example.

Genetics

Genetics are responsible in three ways for children's acquisition of food allergies:

- they determine the target organ for toxicity – in the case of emotional difficulties, extended family members can have a history of emotional problems such as depression or suicide attempts
- genetics determine detoxification abilities, accounting for up to a 100-fold difference in children's detoxification capacities[1]
- children of allergic parents are likely to inherit both the tendency toward allergy and, as a result of in utero exposure to the mother's toxic load, to be sensitised to the same allergens to which their parents react.

FIGURE 1 THE MULTIPLE ASPECTS OF ALLERGIC CONDITIONS



BOX 1 SIGNS THAT THE BRAIN IS THE TARGET ORGAN OF PHYSICAL HEALTH CONDITIONS

Physical signs of allergy

- The child has known food intolerances (including those he or she has appeared to outgrow).
- The child is a very fussy eater and restricts him or herself to only a few food groups (which typically have high allergenic potency, e.g. wheat, milk).
- The child has a history of nappy rash, colic, gastric reflux, ear, nose, throat or respiratory infections, eczema, chicken pox (or vaccination for chicken pox), or infections by other viruses (especially the herpes family), digestive difficulties such as constipation, or permanent dark rings under the eyes.

Nervous system manifestations

- The child often has morbid thinking, ruminating over bad things that may happen in the future, or over events that are long past but which, when upset, the child still reports being troubled by
- parents report that the child can 'go from zero to a hundred in microseconds' – that is, there is little build up to the child's emotional outbursts. (These children can be said to have the temperament of car alarms)
- The smallest frustration sets the child off into despair or rage.
- The child declares 'I can't help it'
- The child wonders (often out loud) what is wrong with him or her.
- The child has low self-esteem despite being loved and capable in most other respects.
- The child has longstanding difficulties falling or staying asleep, sleeps too deeply, requires more sleep than normal, is still tired in the mornings (that is, sleep is not restorative), or wets the bed after the age when these issues are usually resolved.
- The child over-reacts to sensory input – to taste, touch, smell, vision, hearing, vestibular information (the middle ear balancing mechanism) or proprioceptive input (receptors in joints that signal where our body is).

Extended family health conditions

- A parent has known food intolerances.
- The mother had a viral infection (especially influenza) during or just before pregnancy with this child.
- The mother had post-natal depression with second or subsequent pregnancies, signalling a zinc deficiency. This also leads to low stomach acid and hence food allergies in the babies.
- Extended family members have histories of nervous conditions such as depression, anxiety disorders, addictions which signal that, in this family, the brain is likely to be the first to show signs of toxic overload (that is, the brain is the target organ).
- An extended family member has late-onset diabetes – which raises questions about the health of the child's pancreas and liver which, when hypoglycaemia results, can lead to deprivation of sugars from the pre-frontal lobes of the brain that are responsible for self-control.

Parenting style

- The parents use caring and what ought to be successful parenting methods (guiding, rather than punishing the child) and yet these methods are not working.

Allergy

Many children with emotional or behavioural difficulties have sensitised immune systems – that is, they react allergically to many foods and substances. This comes about because of their genetic predisposition (as just mentioned), and because they will have developed a leaky gut as a result of nutrient deficiencies, the repeated use of antibiotics, gastrointestinal infections or inflammation of the intestines. When digestion is impaired and the gut is damaged, proteins or peptides exit the gut into the bloodstream in a partially digested form. These molecules can be large enough for the immune system to class them as a foreign agent and potential threat (or 'antigen'). Having detected their presence, lymphocytes (white blood cells) produce special proteins known as antibodies to destroy them.

This process is, of course, vital to protect the body from harmful foreign substances and to prevent the proliferation of damaged or cancerous cells. However, when the immune system becomes sensitised to and begins attacking benign substances, individuals become symptomatic when exposed to these. An inflammatory response will occur via the production of histamine at the site. Its role is to dilate the blood vessels so that more lymphocytes can congregate there, and to speed up the metabolism of cells.[2] However, too much histamine results in excessive inflammation that is symptomatic of allergy.

Impaired detoxification

Alongside the core problem of immune system sensitisation, the other main contributor to allergies is impaired detoxification capacities. These can be compromised genetically, by exposure to external toxins, or by the accumulation of internal toxins.

- Genetic differences limiting individuals' capacity to excrete toxic metals.[3]
- Early or excessive exposure to exogenous (external) toxins. Children are particularly susceptible to metal toxicity, as their intestines absorb any lead that they ingest five times more readily than do adults',[4] and their developing brains are particularly susceptible to this neurotoxin.[5] Children's brains are also highly vulnerable to mercury (from their own or their mother's amalgam fillings), aluminium and chlorine (both in drinking water), cadmium (from passive smoking) and arsenic. Children are all the more susceptible when they have a leaky gut.[6]

  One commonly overlooked source of toxicity is environmental pollution from the airborne toxins released by fires.[7] Burning off of vegetation releases toxins into the air that are readily absorbed by the brain.
- Internal toxins. When (as already described) a leaky gut allows partially digested food into the bloodstream, toxins will accumulate and circulate throughout the body, producing inflammation and symptoms in the organ that is most vulnerable. In the case of children with emotional or behavioural difficulties, the target organ is clearly the brain.

Infections

Receptors for neurotransmitters are found not only in the brain but also in immune cells; and, in reverse, receptors for the immune system are found in the brain.[8] Therefore, any allergy or virus affecting the immune system will also affect the brain.

> When the immune system 'speaks', the nervous system 'listens'.[9]

In the case of emotional difficulties, infections can be targeting the brain, thus impairing cognitive function. The mechanism for this is that the presence of viruses in the body causes the release of 'alarm molecules' known as cytokines (such as interferon) that alert immune cells of the presence of a pathogen.[10] These cytokines cross the blood-brain barrier so that the immune cells within the brain can be triggered to protect it from damage. The cells in the brain release hydrogen peroxide to kill the pathogen and nitric oxide to safeguard nearby cells by putting them into effective hibernation.[11] While the brain will survive a mild acute infection, persistent allergies or illnesses will produce chronic inflammatory reactions in the brain that lead to persistent 'brain fog', cognitive impairments, poor concentration, irritability and emotionality.[12]

In terms of viruses, the most suspect are the herpes family (herpes simplex, herpes zoster or chicken pox, Epstein-Barr virus and CMV). These are viruses of the nervous system: individuals who contract chicken pox in childhood may have a case of shingles later in life after the virus has lain dormant in their system until their resistance was lowered. Shingles is an inflammation of the nerve endings – that is, herpes zoster affects the nervous system. Of the herpes family, the first likely culprit is herpes simplex in any child whose mother has ever had cold sores. The next most likely in younger children is chicken pox, particularly in those countries where vaccination against chicken pox is part of the usual immunisation schedule. By later

childhood and adolescence, young people can have been exposed to any of the herpes family, including Epstein Barr (glandular fever) and CMV (cytomegalovirus).

A second common culprit is influenza. There is a three-fold increased incidence of schizophrenia in children whose mothers contract the flu during the first half of pregnancy.[13] This tells us that the flu virus can affect the brain.

Third, streptococci infections seem to affect the nervous system in addition to the immune system.[14]

Nutrient deficiencies

Just as the brain has a voracious appetite for oxygen, it is also sensitive to nutrition.

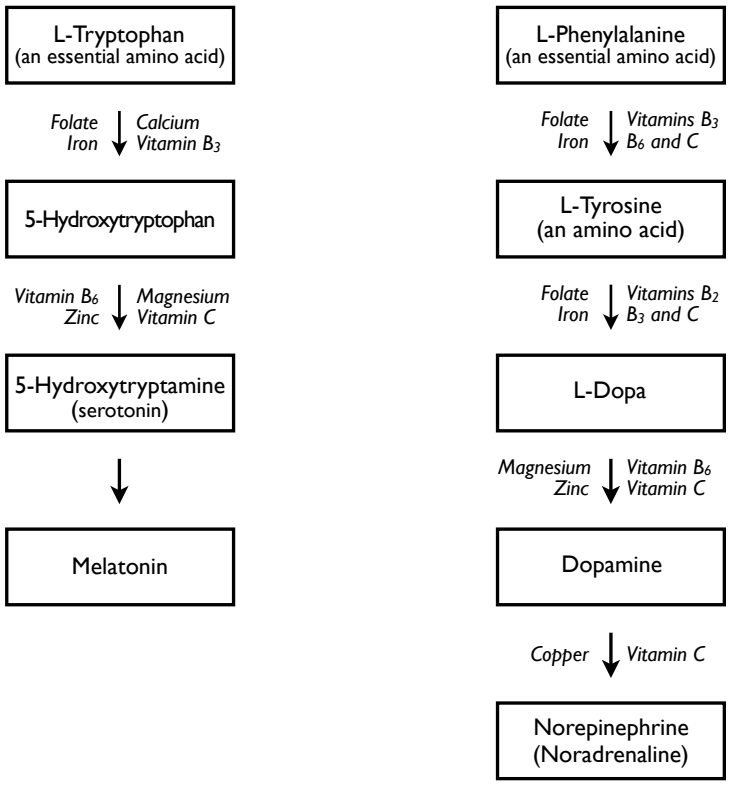
Protein. Protein provides the amino acids necessary to manufacture neurotransmitters and slows the absorption of carbohydrates, thus levelling out sugar levels in both the blood and brain.[15] Inadequate digestion of protein leads to amino acid deficiencies. As shown in Box 2, this will cause a deficiency of vital neurotransmitters which, in turn, affects cognition and behaviour.[16]

BOX 2 AMINO ACIDS NEEDED TO MANUFACTURE NEUROTRANSMITTERS

Amino acid	Neurotransmitter
Tyrosine and phenylalanine	Norepinephrine and dopamine
Glutamine	GABA
Tryptophan	Serotonin and melatonin

In addition to lacking protein, neurotransmitters can be also deficient when other constituent nutrients that are needed to produce the neurotransmitters (as listed in Figure 2) are in short supply.

FIGURE 2 NUTRIENTS NEEDED TO PRODUCE NEUROTRANSMITTERS[17]



Third, neurotransmitters can be deficient when metals are in excess, because these block the absorption of the nutrients needed to manufacture neurotransmitters:

- a copper excess blocks folate, iron, magnesium, zinc and vitamin C[18]
- excessive mercury blocks the absorption of iron and zinc[19]
- a cadmium excess blocks magnesium and zinc in particular.[20]

Essential fatty acids. A second significant nutritional deficiency in children with cognitive difficulties is the essential fatty acid, DHA. Eighty percent of the nerve endings that produce the neurotransmitter, dopamine, are made up of DHA.[21] If the supply of DHA from the diet is low during brain development, other thicker fats will substitute, leading to sluggish production of dopamine, particularly in the pre-frontal lobes where executive control is performed.[22]

If there is insufficient DHA in the diet, the body can often manufacture it from ALA (alpha linolenic acid). However, this production is impaired by toxicity, while DHA itself is damaged by oxidation.

Minerals. The following mineral deficiencies are common in children with learning difficulties. Given that the minerals affect brain function, they can also be implicated in emotional issues as well.

- *Calcium*. Those with a low-dairy diet or who take stimulants (caffeine, nicotine or amphetamines) become calcium deficient. In turn, low levels of calcium can lead to elevated lead levels.[23]
- *Chromium*. This is vital for regulating blood sugar levels that, in turn, affect the supply of fuel for brain functions.
- *Iron*. This is necessary to produce energy, for muscle function, for efficient brain functioning and for detoxification.[24] It is also needed by white blood cells to make peroxide to kill infections.[25]
- *Magnesium*. Low levels of magnesium lead to irritability of brain neurones and to DHA deficiencies.[26] It also contributes to low levels of melatonin, resulting in insomnia.[27]
- *Molybdenum*. A deficiency of molybdenum leads to the absorption of too much copper.
- *Selenium*. Low levels of this mineral leave the brain susceptible to toxic stress and subtly affects thyroid function which can diminish brain function.[28] A selenium deficiency also leaves individuals vulnerable to an accumulation of mercury.
- *Zinc*. Low levels of zinc impair the elimination of toxic metals[29] – see the section below.

Vitamins. Common vitamin deficiencies are of vitamins C, E and some of the B group.[30] Inadequate levels of these, in turn, impair the conversion of ALA into DHA, while bioflavonoids protect the brain from oxidation and therefore a deficiency of these will also leave the brain vulnerable to oxidative damage.[31]

Water. In very active children, an often overlooked deficiency is dehydration. Children who are very active can be too busy to drink, while many have low levels of DHA (an essential fatty acid) whose deficiency exacerbates dehydration. Not only does this produce physical symptoms such as constipation, but also cognitive impairments such as irritability, lethargy or overactivity.[32]

Probiotic bacteria. Finally, priobiotic flora in the gut (lactobacillus and bifidobacteria) improve the absorption of DHA and amino acids, thereby directly affecting brain function in addition to their renowned ability to decrease allergic responsiveness to food and reduce gut inflammation.[33]

Excesses. As for excesses, high intake of saturated fats (in meat, diary products and tropical oils) can, over time, harm circulation to the brain, while the hydrogenation process that converts polyunsaturated fats into solid form produces what are known as trans-fatty acids, which interfere with the production of DHA and therefore compromise brain function.[34] Trans-fatty acids (hydrogenated vegetable oils) are found in processed ('fast') foods.

Finally, an excess of high-carbohydrate foods or impaired pancreatic function can lead to hypoglycaemia. In turn, low blood sugars can cause the pre-frontal lobes of the brain to be deprived of sufficient fuel to function. Hence, children with emotional difficulties will need to be checked for insulin-glucagon balance and allergies to the four sugars (lactose, fructose, glucose and sucrose).

Zinc

Functions. Zinc has four major functions:

- First, it is vital for digestion, because it is essential for creating stomach acid.
- Second and consequently, it is vital for healthy pancreatic function.
- Third, it assists emotional wellbeing and cognitive function through its role in the conversion of amino acids into melatonin (the sleep hormone) and the neurotransmitters responsible for cognitive function and mood.
- Fourth, it is needed to maintain optimal levels of vitamin E and for the absorption of vitamin A.[35]

Other functions are listed in Box 3.

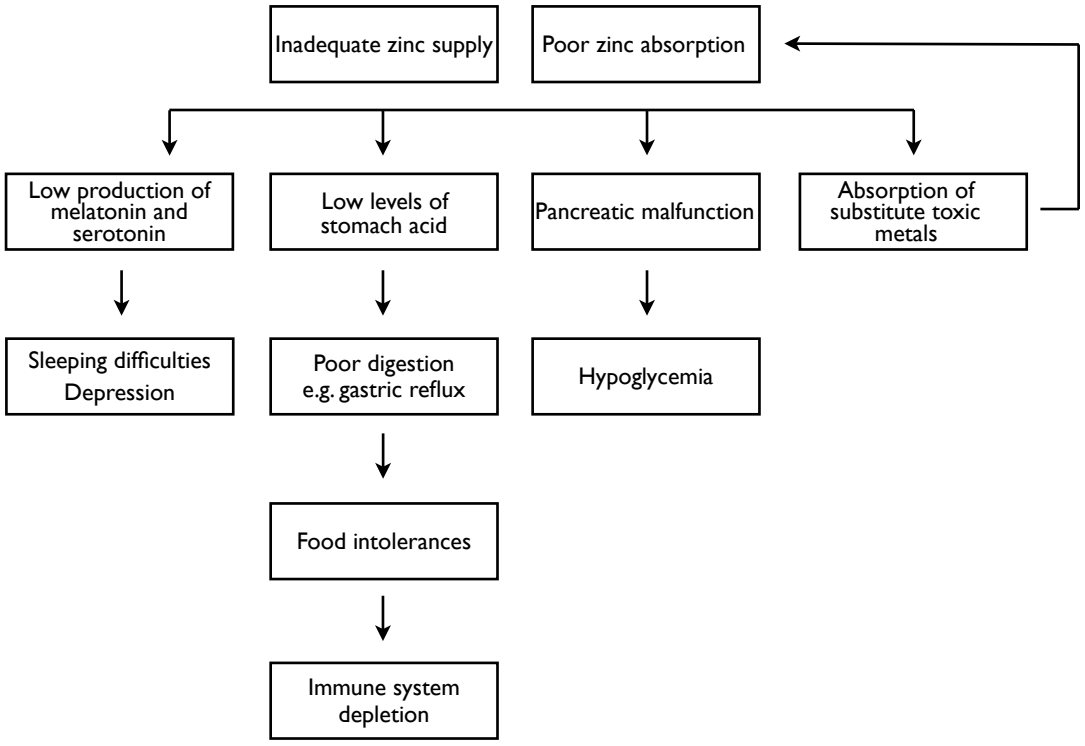
Symptoms of deficiency. The first sign of a zinc deficiency in babies can be gastric reflux, colic, disturbed sleeping patterns and a milk intolerance. Gastric reflux comes about because a deficiency of zinc leads to an inadequate amount of stomach acid. This, in turn, causes food to remain undigested for too long in the stomach, whereupon it ferments, producing air pressure that the valve at the bottom of the gullet cannot contain, with the result that stomach contents (including acid) push up into the lower gullet.[36] This is known as gastric reflux and is often treated as if it resulted from an excess of stomach acid when, instead, it is the opposite. Antacids only exacerbate the problem.

In infants and children, allergies, eczema and hayfever are the next to appear, followed by frequent sore throats and ear and respiratory infections, particularly during growth spurts.[37] These infections inevitably lead to the repeated use of antibiotics which themselves compromise digestion.[38] In adults, a zinc deficiency is associated with low white blood cell count, increased susceptibility to infection, diabetes, raised cholesterols, heart disease, anorexia, allergies, recurrent throat and respiratory infections, delayed wound healing, estrogen dominance, arthritis, prostate problems, impaired night vision, hair loss, acne, eczema, infertility, depression, and chronic fatigue syndrome or fibromyalgia.[39]

The food intolerances that result from low zinc levels lead to fussy eating in children,[40] both in an effort to avoid abdominal pain and hypoglycaemia, but also because a zinc deficiency depletes individuals' sense of smell, with the result that the bitterness of some foods is not counteracted by their attractive aroma.[41] Correction of a zinc deficiency can increase children's willingness to eat a wider range of foods.[42]

A third outcome of low stomach acid is that the pancreas cannot help with the absorption of zinc; again, zinc levels drop. Hypoglycemia is a common outcome of disrupted pancreatic function.

FIGURE 3 FUNCTIONS OF ZINC



In terms of emotional wellbeing and cognitive function, zinc's role in the production of melatonin and serotonin accounts for the disrupted sleep cycles, poor concentration and depression that are found in many individuals with a zinc deficiency. A zinc deficiency is a common culprit in post-natal depression because the mother has donated much of her limited zinc stores to her baby, leading to a deficiency in herself. This is particularly common when women have a number of pregnancies (including miscarriages) within only a few years, as they have not had time between pregnancies to replenish their zinc stores. It is often the case that these mothers do not experience anything other than the normal 'baby blues' for the first pregnancy, but suffer increasingly with depression following the birth of each subsequent child.

Moreover, when zinc is deficient, its receptors instead absorb other minerals, particularly copper, cadmium, mercury, aluminium and arsenic. In turn, high copper levels further inhibit the absorption of zinc, while low zinc levels impair the body's ability to excrete toxic metals.[43]

Box 3 Zinc[44]

Functions	Signs of a deficiency
Digestion	Gastric reflux, colic in babies Fussy eating Food intolerances
Production of insulin	Hypoglycemia Diabetes
Lubrication	Arthritis Impaired night vision Hair loss Acne
Production of immune cells	Increased susceptibility to infection
Recovery from infection	Recurrent ear, nose, throat infections
Tissue repair	Delayed wound healing Depleted collagen
Liver function	Allergies e.g. eczema, hayfever Intolerance to alcohol
Synthesis of serotonin, melatonin, dopamine and norepinephrine	Disturbed sleep Depression Poor concentration
Production of the steroidal hormones	Estrogen dominance Prostate problems Infertility
DNA synthesis	Chronic fatigue syndrome or fibromyalgia
An antioxidant	Heart disease Raised cholesterols Arteriosclerosis

Causes of a deficiency. Zinc deficiencies come about from the following causes.

- Zinc is the least plentiful mineral in our diet. Especially in Australasia, it is deficient in soils and therefore in plant foods.
- Babies with poor digestion (which includes those born prematurely, babies exposed early to antibiotics, those eating solid foods prior to 6 months of age, and infants with a leaky gut) will frequently develop a milk intolerance, in response to which parents withdraw milk from their diet, yet milk is a key source of zinc.
- The body absorbs zinc by producing an acid known as picolinic acid which, however, becomes depleted when zinc levels are low. Insufficient picolinic acid produces, in turn, a further reduction in body's ability to absorb zinc and, consequently, downward spiralling levels of the mineral.
- Pancreatic insufficiency impairs the ability of the pancreas to absorb zinc.
- Women's zinc stores can be depleted by pregnancy.
- Growth spurts in children put pressure on their zinc stores.

- High copper levels in the body inhibit the absorption of zinc.[45]
- Diuretic medications (that encourage water elimination), caffeinated beverages (tea and coffee) and the food additive, tartrazine (number 102), all lower zinc levels.
- Excessive calcium levels interfere with the absorption of zinc.[46]

HYPOGLYCAEMIA

In around one-third of children who are diagnosed with ADD or ADHD, their symptoms are due to hypoglycaemia (low blood sugar levels). This can also be true of children with other emotional or cognitive difficulties. Low blood sugar levels particularly affect the brain because it uses between 40 and 50 percent of the available blood glucose, while the brains of children aged under ten use twice as much glucose as do adults' brains.[47]

When children's blood sugar levels drop too low, blood (containing the fuel, sugar) is directed away from non-essential areas of the brain: namely, the pre-frontal lobes.[48] The symptoms of ADD/ADHD then surface, manifesting as concentration difficulties, vagueness, and emotional meltdowns. Furthermore, low blood sugar levels create an emergency that causes the liver to release adrenaline to rebalance blood sugar levels, resulting in emotional meltdowns, jitteriness, vagueness and attention difficulties while the adrenaline is in the child's system.[49] If this happens repeatedly over the years, the children can react as if intolerant to their own adrenaline, resulting in emotional meltdowns for as long as their adrenaline levels are high.

Hypoglycaemia is most likely in children who crave carbohydrates, whose meltdowns occur when they have not eaten for more than 90 minutes, and who have family members with diabetes or difficulty controlling their weight.

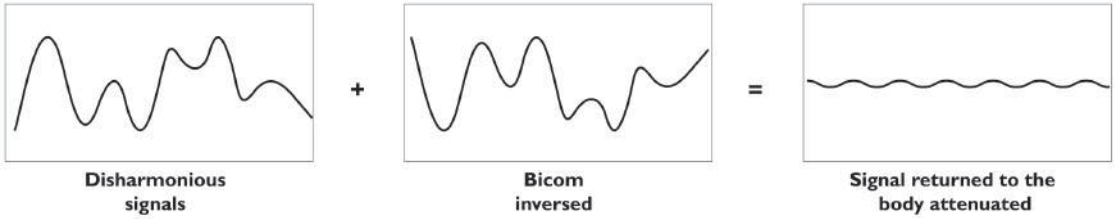
BIORESONANCE TREATMENT FOR PHYSICAL CAUSES OF EMOTIONAL DIFFICULTIES

Western medicine adopts a biochemical model, which focuses on changes in a cell's chemistry. For example, when cells produce the chemical, histamine, in response to the ingestion of peanuts or inhalation of pollens, the histamine causes inflammation in the throat. In that event, western medicine administers a counteracting chemical (which we call a drug or medication) – in this case, an antihistamine.

However, the cells of an individual's throat do not 'decide' to inflame in response to peanuts or pollens. Chemicals cannot 'think' or initiate the production of other chemicals without some instigator or input.[50] In this instance, the input is in the form of information (or a signal) being sent from the immune system to cells of the throat, instructing them to produce histamine.

Bioresonance uses a computer (known as the Bicom machine) that maps these signals within the body and can perform four functions that will help restore the body's natural healing. First, it will map unhealthy signals within the body, then produce their inverse or opposite wave form. During treatment, these are returned to the body, thereby neutralising the pathological information. This is known as destructive interference – see Figure 4. Removing the unhealthy signals allows the body to regulate itself, unhindered by pathological forces.[51]

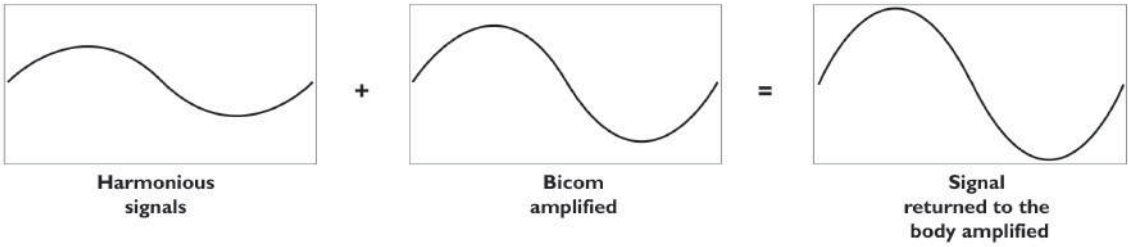
FIGURE 4 DESTRUCTIVE INTERFERENCE



Second, the Bicom machine can detect healthy but weakened bodily signals and amplify these to support the body's own natural healing and metabolic processes.[52] In treatment, this is achieved when the Bicom machine generates multiple waves of the same amplitude, frequency, phase (rhythm) and direction as the body's own natural waves. This produces a composite wave with the combined strength of all the waves (like

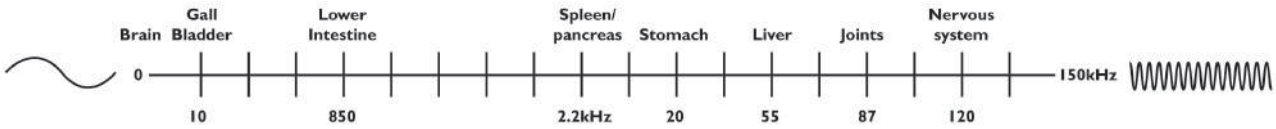
a tidal wave in nature). This is known as constructive interference (– see Figure 5). Thus strengthened, organs can function more efficiently.

FIGURE 5 CONSTRUCTIVE INTERFERENCE



Third, the Bicom will detect when particular organs are stressed. It can do this because the various cells in the body give off and absorb different frequencies. For example, cells in the liver differ in their frequency output from cells in the stomach – see Figure 6. These signals can be instructions to cells that promote their healthy functioning. When the signals are weak, the Bicom practitioner can determine specific programs to deliver that will support the organs' functioning.

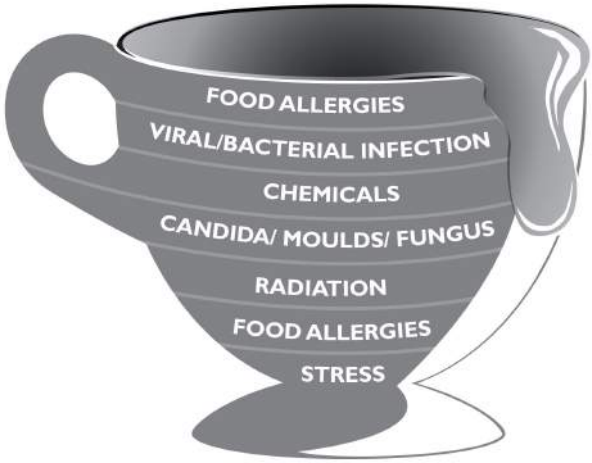
FIGURE 6 FREQUENCY BAND OF THE ORGANS[53]



Fourth, the bioresonance model endorses a branch of healing known as homotoxicology. This believes that chronic illness is a result of an accumulation of toxins in the body. Healthy individuals are able to deactify and excrete toxins and thus detoxify satisfactorily. However, when the body becomes overwhelmed with excessive exposure to toxins, or its detoxification mechanisms are compromised, accumulating toxins become stored or deposited in the connective tissue or matrix and also circulate throughout the body, affecting first the weakest (or 'target') organ.

This is like when we progressively pour water into a cup. If we do not drain the cup of the water and continually add more, eventually the cup will overflow (as illustrated in Figure 7). The load exceeds the coping capacity of the vessel.

FIGURE 7 TOXIC OVERLOAD



BIORESONANCE TREATMENT PRIORITIES

Bioresonance can assist with brain function, so that the brain no longer thinks morbidly, feels emotional and behaves erratically. Children's emotional difficulties will be assisted by reducing their toxic load and removing strains. The specific treatment priorities for emotional difficulties are:

- *The allergic process*, including a leaky gut and 'masked' allergies in particular.
- *Detoxification.*
- *Nutrient deficiencies*, particularly of DHA and the amino acids needed to produce neurotransmitters.
- *Blockages* to energy transmission, especially any trauma to the head, laterality and metal toxicity.
- *Infections*, especially those known to target the brain – namely, the herpes viruses, influenza and streptococcus.
- V*accination* damage.
- *Hypoglycaemia.* Children with fluctuating emotional abilities need to be checked for hypoglycaemia. If found, they will need treatment for:
    - pancreatic function
    - infections to the pancreas, particularly tuberculinum, eurytrema pancreaticum and chicken pox;
    - magnesium levels
    - sensitivity to sugars: lactose, fructose, glucose and sucrose
    - dehydration
    - sensitivity to adrenaline.

  During the early phases of treatment, these children may benefit from a low-carbohydrate diet, or a diet in which every meal contains at least half protein and not more than half carbohydrates.54 The children should go no longer than 60-90 minutes without eating. Bioresonance treatment will balance their pancreatic function; therefore, this diet will not be necessary over the long term and would indeed be inadvisable. However, these children's need for grazing is likely to be a lifelong pattern.)
- *Emotional support.* Stress about being out of control and awareness of letting down oneself and disappointing one's parents and teachers can impair the transfer of information from the left to right hemispheres of the brain. Anxiety can also impair working memory.[55] Therefore, children with associated learning difficulties will need emotional support for anxiety and depression, and also adrenal calming.

Additional treatment modalities

- *Foot detox baths*. Given their compromised abilities to detoxify (as demonstrated by the early ages at which they develop symptoms), children with emotional difficulties may need a lifelong regimen of foot detox baths, which can produce more efficient detoxification than chelation.
- *Dental care*. It will be advisable for the children to have amalgam fillings removed and to use resin fillings for any new cavities.

  Children with emotional or other cognitive difficulties can experience a severe exacerbation of their symptoms when they have braces installed on their teeth. Acrylic braces would be better – although these are more fragile and thus prone to breaking in the course of orthodontic treatment and, even then, they still involve the use of some metal. For the duration of their orthodontic treatment, the children will need extra help to detoxify and may need to be treated to strains for the component metals in the braces.

BEHAVIOURAL GUIDANCE

Your main premise when responding to the disruptive behaviour of unwell children is that they cannot help it. Their body is playing tricks on their brain. If the site of inflammation were their appendix, discipline (or rewards and punishments) would not help; neither will they help when the site of inflammation is the children's brain. Instead, therefore, of punishing children for health-triggered behaviours that they cannot help, the children will need compassion and support during their meltdowns, and reassurance that it is 'only their body playing tricks on their brain'.

When available, you need to cuddle and soothe them, using the 'broken record' technique of saying over and over again things such as, 'I'm sorry you're feeling so angry/sad/awful/upset. I'll be here for you until you feel better'. When you are not able to do this, you can invite the children to do a favourite activity until they have soothed themselves, letting them know that you will be nearby if they need you. (For more information, see the resources at the end of this paper.)

Nutrient supplementation

Children with emotional or learning difficulties may benefit temporarily from dietary supplementation of any of the nutrients to which they are deficient – as long as these are not also strains (or 'allergies'). High priorities will be supplementation of omega-3 fatty acids and of probiotic bacteria. However, these all produce lactic acid which in its right-handed form (D-lactic acid) is highly acidic and will lead to poor brain function. Therefore, if using, it is vital that any probiotic supplement produces only the left-handed form of lactic acid (known as L-lactic acid).[56]

Conclusion

With respect to identification of allergens, the advantage of bioresonance – particularly for children – is that parents do not have to guess at which substances may be provoking their children's reactions. In terms of treatment, parents do not have to hover over their children to enforce strict dietary and medication regimes (that, in themselves, are antisocial for the children).

Bioresonance offers a solution that is not available from any other treatment. Instead of imposing the restrictive diets and supplementary regimes characteristic of most other models of healing, bioresonance re-programs individuals' immune systems to become less reactive. It does not 'cure' particular allergic reactions, but instead rids the body of its burden of stressors so that it can heal itself. This is in tune with Hippocrates' advice to leave nature to perform its own repair work.

Once the body has rid itself of high levels of toxicity, individuals' physical health and central nervous system function will improve. For most children, the treatment is efficient, with relief being noted from early in the treatment series.

Further resources

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