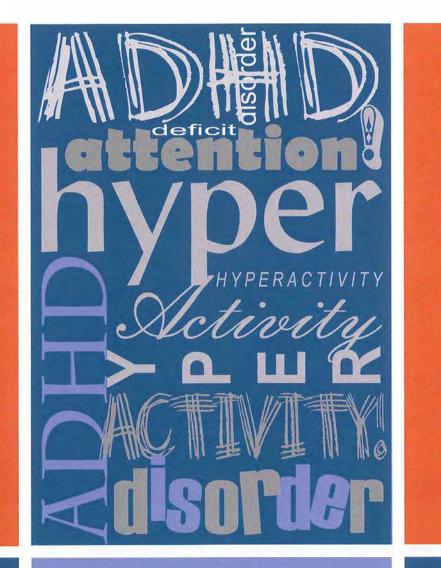
## The Hyperactive Children's Support Group (HACSG)

Brief Guide for Parents & Profess-ionals to the Dietary & Nutritional Approach to ADHD/Hyperactivity



## HACSG PUBUCAnONS

## **About the HACSG**

The Hyperactive Children's Support Group (HACSG) was founded in 1977. The aims of the Group are to help and support hyperactive children and their parents and to disseminate information concerning this condition. Support and shared experience can reduce stress caused by having a child with allergies and behavioural difficulties.

The HACSG, a registered charity, has over the past decades responded to thousands of requests for help f<sup>r</sup>om distraught, and at times, desperate parents, and our experience has shown, conclusively in our opinion, that the behaviour of ADHAD/Hyperactive children can be improved substantially - and at times dramatically - through dietary intervention.

We hope this short introductory booklet will lead to a clearer understanding of the importance of sound nutrition - especially in the case of growing ADHD children - but also in the general sense of helping to clarify the link between diet and behaviour by highlighting the role of certain essential nutrients - such as the Essential Fatty Acids and zinc - in the way the brain and body function, and the serious health problems and behavioural difficulties that can arise as a result of deficiency in these essential nutrients.

As Richard M Lerner concluded in his book "On the Nature of Human Plasticity", in a chapter on neurochemistry and neurotransmitters," we may summarise the research by noting that *diet, brain chemicals and environmental stimulation appear to exist in a system of reciprocal relations".* Research shows that the behaviours of ADHD children can be clearly linked to deficiences in their nutrition and that by making sure they get the essential nutrients their bodies and brains require ( and by cutting out all those non-essential inputs that may be playing a substantial disruptive role) these behaviours and the suffering they engender can, with care and determination, be made manageable.

-Sally Bunday, Founder/Director, HACSG.

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# The HACSG Brief Guide

## 1. NUTRITION & HYPERACTIVITY An Introduction page 4-5

Food Allergy and Intolerance, intake of artificial food additives (such as colourings and preservatives), artificial sweeteners and sugar overload,-are, without doubt, major contributory factors in *Attention Deficit Hyperactivity Disorder (ADHDJ* 

## 2. ESSENTIAL FATTY ACIDS & CO-FACTORS pages 6-7

Symptoms of EFA deficiency and an integrated approach to nutrition

3. ARE FOOD ADDITIVES AFFECTING YOU & YOUR FAMILY? page B The symptoms of artificial additive and salicylate sensitivity\*

### 4. FOOD & CHEMICAL SENSITIVITY CHECKLIST pages 9-10

Although the research may lag behind, parents and educators know from experience that some children and adults live with chronic conditions that can very often be related to their food and chemical environments. We list some signs and symptoms for you to do your own check.

5. THE IMPORTANCE OF MAGNESIUM & VITAMIN 86 IN ADHD page 11 Research has shown that ADHD is linked to low levels of magnesium

## 6. UNDERSTANDING THE ESSENTIAL ROLE OF ZINC pages 12-15

Zinc is what is called a major mineral. It is a traffic policeman in the body, directing and overseeing the efficient maintenance of enzyme systems and cells and the uninhibited flow of body process.

### 7. A NOTE ABOUT NEUROTRANSMISSION page 16

*Neurotransmission* is the method by which our brain and nerve cells communicate and send messages to our bodies. Artificial food additives and some naturally occurring chemical agents, such as salicylates, disrupt the chemical and electrical functioning of the brain cells.

## 8. THE NEXT STEP page 17-18

Getting started on the Food Programme.

## 1. Nutrition & Hyperactivity (ADHD) A brief introduction

Food allergy or intolerance, food additive intake, artificial sweeteners and a sugar overload, can often be contributory factors in Attention Deficit Hyperactivity Disorder (ADHD), symptoms of which include :

#### IN INFANCY:

Crying, screaming, restlessness; some ADHD infants need very little sleep Colic; difficult to feet, whether breast or bottle. Will not be pacified and rejects affection. Excessive dribbling, and very often an excessive thirst. Cot-rocking, fits and tantrums.

## IN OLDER CHILDREN (some of the above symptoms continue into childhood):

Clumsy, impulsive and accident prone. Erratic and disruptive behaviour Compulsive "touching"; constant motion. Disturbs other children. Lacks ability to concentrate. May be withdrawn. Normal to high IQ, but fails at school. Uncooperative, defiant and disobedient. Poor appetite. Poor hand/eye coordination.

Self abusive, with a high pain threshold. Continues to be very thirsty. The late **Dr Ben Feingold MD**, an eminent American llergist, spent many years researching the possibility of chemical food additives and salicylates being linked to hyperactivity and behavioural disturbances. From his research he formulated a "food programme" which the HACSG adapted for use in the UK.

This "food programme" is designed to eliminate some synthetic food additives from the child's diet (it should also be borne in mind that ADHD children may have an intolerance to some staple foods such as cow's milk). Thousands of children have responded well to this food programme. They have become calmer, attentive and less disruptive. They have, indeed, become much happier children in general.

In addition to other therapies, educational support and behaviour management, etc., it is vitally important to consider changes to the child's diet, always taking into consideration specific food and chemical intolerances which each individual may suffer from.

An adequate intake of vitamins, minerals and Essential Fatty Acids (EFAs), especially the B complex vitamins, vitamin C, Zinc, Chromium, Magnesium, Evening Primrose Oil and Fish Oils, (providing Omega 3 and Omega 6 EFAs), is essential for us all and even more so in the case of these children.

Very often the ADHD child, whatever his or her age, only consumes foods high in chemical additives and artificial sweeteners (which are present in many processed and packaged food and drinks). In addition, these children often eat food of low nutritional value, so that their level of intake of vital nutrients is even lower, and, as a result, various bodily systems, such as the Immune System and the Nervous System, cannot function properly as they lack the necessary input of *vitamins and minerals*.

With a diet inadequate in those nutrients known to be vital for the functioning of these systems, especially in a growing child, the result is a kind of system overload, an enormous stress which undermines the child's well-being and his or her ability to be calm, contented, sociable and interested to learn.

Worldwide research amongst doctors, nutritionists and other researchers, has confirmed the importance of diet in Hyperactivity and ADHD. The HACSG BriefGuide/page 6

## 2. Essential Fatty Acids (EFA's), are just that - ESSENTIAL!!

The brain consists of *lipids*, that is, fats which are only ;wailable through the food we eat and which *the body cannot manufacture*. We generally eat far too many saturated fats which are found in meat and dairy products like butter and cheese. Margarine, although made from Sunflower Oil or other vegetable oils, is also high in *transfats\**. Oils from nuts, seeds, plants and fish (especially "blue" fish - sardines, tuna etc), contain the Essential Fatty Acids we need. Evening Primrose Oil, Linseed Oil and Fish Oil are high in EFA's. The **co-factors** - that is the vitamins and minerals which allow the body to make use of these EFA's, are Zinc, B6, B3, Magnesium and Vitamin C.

#### Symptoms of EFA deficiencies are as follows:

- -ADHD, Hyperactivity
- -Mood changes; poor attention
- -Eyesight problems
- -Digestive problems
- -Excessive thirst and/or insatiable appetite
- -Dry, flaking skin; "chicken-skin" bumps on back of arms and/or thighs or on cheeks
- -Brittle, soft or splitting fingernails
- -Dry, unmanageable hair; dandruff
- -Excessive or hard earwax
- -Eczema, asthma or multiple allergies
- -Presence of candida/yeast infection

The above symptoms may be due to the lack of EFA-rich foods in the diet and/or an insufficiency of co-factors - *see the following page for more details*. These dietary deficiences are compounded by the consumption of hydrogenated vegetable oils (i.e., in margarine and snack foods), the consumption of too much white flour and processed food and the consumption of too much sugar above all of white, refined sugar).

\*There are two sources of *trans* fat, also known as *trans* fatty acids:

*Trans fat formed naturally* - this type of *trans* fat is produced in the gut of some grazing animals. That's why small quantities of *trans* fat can be found in animal products like meat, milk, and milk products. *Trans* fat *formed during food processing* - *this type of trans fat is created when hydrogen* is added to vegetable oil (a process called **hydrogenation**) to make it more solid. **Partially hydrogenated oils** are used by food manufacturers to improve the texture, shelf life, and flavor stability of foods.

Eating *trans* fat raises the level of low-density lipoprotein (LDL or "bad") cholesterol in the blood. An elevated LDL blood cholesterol level can increase your risk of developing cardiovascular disease. Cardiovascular disease is the leading cause of death in both men and women so it is advisable to keep your intake of *trans* fat as low as possible.

Limiting *trans* fats is one component of a healthful diet that also includes limiting saturated fat and dietary cholesterol. (*With acknowledgements to the US Food* & *Drug Administration webpage on trans fatty acids*)

## **Essential Fatty Acids: the Co-factors**

A series of **co-factors**, including magnesium, biotin, pyridoxine(B6), nicotinic acid(B3), iron, zinc and ascorbic acid (vitamin C) are required for the normal metabolism of linoleic acid, one of the Essential Fatty Acids. All these nutrients must be present in adequate amounts if the EFAs are going to do their job properly.

In the context of EFAs and immune responses, it is possible that zinc, vitamin C and pyridoxine are of particular importance, and it has been established that zinc deficiency leads to several immunological abnormalities and also to a clinical syndrome which is remarkably similar to that of EFA deficiency. Vitamin C deficiency is known to inhibit normal immune function and its intake is very often low in people with poor diets.

Vitamin B6 deficiency is also common in Western society, especially among the elderly, and why its supplementation is associated with improved immune responses.

Thus, an integrated approach to good nutrition, with particular emphasis on Zinc, Ascorbic acid (Vit.C) and Pyridoxine is likely to lead to optimal results from EFA supplementation.

What research has to say...

#### Vitamin B-6 supplementation reverses ADHD

Results of a study indicate that vitamin B-6 at doses between 15-30 mg/kg body weight *are as effective as Ritalin in treating attention deficit hyperactivity. Coleman M et al. A prelimina,y study of the effect of pyridoxine administration in a subgroup of hyperkinetic children: a double blind crossover comparison with methylphenidate. Biological Psychiatry 14: 741–751,1979.* 

Fatty Acid deficiences and learning difficulties

Boys with lower Omega3 fatty acid values in blood were much more likely to have learning problems and lower overall academic and maths skills than children with higher fatty acid values.

Stevens, L.J. & Burgess, J. Omega3 Fatty Acids in Boys with behaviour, learning and health problems. *Physiology & Behaviour*, 1996. 59:915-920.

Magnesium is a mineral required for in the functioning of nerves, muscles, etc. For further information on the importance of magnesium and Vit.86 in ADHD, refer to page 11. Zinc is a vital trace element required for enzyme activity, growth, wound healing, eye health, pancreatic functioning and many more bodily processes (seepages 12-15 for more information on the role of zinc). Ascorbic acid (Vitamin C) is vital in all bodily processes.

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## **3.** Are Food Additives affecting you and your family? *Symptoms of additive and salicylate sensitivity.*

- Poor sleeping habits
- Behavioural deficits
- Lack of muscle coordination
- Marked hyperactivity and fidgetiness
- Weak gross muscle control
- Excitable, impulsive, clumsy, trips when walking
- Collides with objects, cannot ride a bicycle or swim and may have a problem with team games.
- Short attention span; unable to concentrate
- Compulsive aggression
- Lack of fine muscle coordination eyes and hands do not seem to operate together. May have difficulty with buttoning or tying, writing and drawing
- Marked anti-social traits
- Irritability; speech problems stuttering, enunciation difficulties
- Problems with reading. Dyslexia
- Cognitive & Perceptual Disorders

Other conditions which may respond to the Feingold Diet include:

- Auditory & memory deficits

- Visual memory deficits
- Asthma; Hives; headaches; stomach aches; salicylate\* sensitivity
- Bedwetting; ear infections; sleep disorders; seizures
- Difficulties in reasoning (e.g. simple maths problems, meaning of words)
- Difficulty in comprehension; Disturbances in spatial orientation
- Eye-muscle disorder (up-down, right-left)

#### \*What are SALICYLATES?

Salicylates are chemical cousins of aspirin. They are found in varying degrees in a range of foods, for example:

COLA ORANGE BLACKCURRANT TOMATO GRAPES & RAISINS Salicylates, along with synthetic additives, have been found to affect the health, behaviour and learning ability of both children and adults. Anyone with a sensitivity to aspirin could be affected by salicylates.

Equally, anyone finding themselves reacting to salicylates in food should avoid medication containing aspirin.

## 4. Food & Chemical Sensitivity Checklist (following page)

The most unfortunate thing to happen to any child is to be lapelled dumb, spoiled, stupid, troublesome, lazy, loner, learning disabled, hyperactive, mean, bad news, ignorant, autistic, or complainer, when the trouble could be related to food and chemical sensitivity. Although the research lags behind, parents and educators know that some children and adults live with chronic conditions that can very often be related to their food and chemical environments.

If you have been repeatedly called to school because your child's behaviour has been inappropriate; if your child is described as socially/emotionally/or academically delayed; if you are worried because your child refuses to take responsibility for his/her behaviour (continual denial, blaming, and/or lying when caught in the act), consider food or chemical sensitivity. Food and chemical sensitivities have been proven to be the missing link to helping some children find relief. It will take family commitment, time and persistence, but the rewards may be truly surprising.

The following checklist will help in assessing your child's problems and determine if they are possibly the result of ingesting a specific food or being affected adversely by exposure to environmental chemicals.

If you find you have ticked more than three items, and these symptoms occur f<sup>r</sup>equently *and have done so for more than 6 months,* this is a clear indication that diet management and/or avoiding household cleaners, may be of benefit. Becoming chemically aware and reducing the chemical overload benefits everyone in the household.

(From Moving Forward Inc., Philadelphia)

### What research has to say...

Double-blind, placebo controlled study shows clear link between synthetic food colouring and behavioural alterations in allergic children.

"...This study demonstrated a functional relation between the ingestion of a synthetic food colour (tartrazine) and behavioural change in 24 atopic (allergic) children, with marked reactions being observed at all six dosage levels of dye challenge. When they reacted to the (food) dye, the younger children had constant crying, tantrums, irritability, restlessness, severe sleep disturbance, and were described as "out-of-control, easily distracted and excited, and high as a kite".

Rowe Kand Rowe K Synthetic food coloring and behavior: A dose response effect in a double-blind, placebo-controlled, repeated measures study.]. Pediatrics 125: 691-698,1994.

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Sensitivity checklist: Is your child.? (Tick where applicable)

- 1. a continual complainer stomach/leg/head ches?
- 2. exhibiting inconsistent behaviour-good days-bad days?
- 3. craving/begging/fighting over certain foods?
- 4. a fussy eater-eats only a limited number of foods?
- 5. easily fatigued-falls asleep at play, in class?,
- 6. disorganized: last to be ready, indecisive, forgetful?
- 7. allergic in nature dark/red circles under eyes?
- 8. showing bright red ear lobes flushed face/neck?
- 9. crying more than usual seems to be in pain?
- 10. behaving differently after eating?
- 11. talking incessantly or is speech delayed?
- 12. having difficulty establishing good sleep habits?
- 13. radiating heat on torso, pulling off or down clothing?
- 14. prone to ear/hearing problems?
- 15. repeating behaviours after being disciplined?
- 16. introverted, showing poor eye contact?
- 17. unable to understand the word "NO"?
- 18. aggressive -biting and kicking?
- 19. having bowel problems diarrhea, gas, bloating?
- 20. Is there a family history of allergy/asthma diabetes/alcohol/or drug addiction?

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## 6. Understanding the essential role of ZINC

Some 'essential elements' such as hydrogen, carbon,. nitrogen and calcium are needed in fairly large amounts in our bodies, but others, though equally essential, are required only in trace amounts. These are called 'trace. elements'. They include iron, zinc, copper, manganese and selenium, among others:

We are concentrating on zinc because of growing evidence that many modern diets are seriously **zinc deficient**, and that much ill health - including mental disorders - is caused or made worse by zinc deficiency. In addition, certain pollutants such as cadmium and lead, which are substances most definitely *not* needed by the human body, hinder our innate ability to utilize zinc. Any extra demands made on the body by physical or mental stress, or by stressors such as infections, alcohol, and cigarettes can increase the need for zinc, or cause our bodies to lose extra zinc. **So**, **zinc deficiency touches our lives in very many ways**.

The amount of zinc needed by the human body every day amounts to about two pinheads, that is, 15 mg for the average adult. Yet, though this amount is so very small, zinc is absolutely essential for the correct formation and working of every single cell in the body. When cells are deprived of zinc they cannot function, grow or reproduce as they should. In time this sets up a complicated chain of adverse reactions that can send biochemical shock waves throughout the body and brain.

Trace elements are just as important as vitamins, though it is only over the past few years that their vital role in sustaining life has been recognized. Since they cannot be manufactured in the body they have to be taken in daily through the diet. *A* properly balanced diet should contain the correct quota of these essential trace elements. Zinc is naturally present to some extent in all diets and it is found in both animal and vegetable proteins, though the highest concentrations tend to come from the animal variety.

Over two hundred different body enzymes require zinc for their proper functioning. Digestive enzymes are substances which enable food molecules to be broken down into smaller fragments, or changed in other ways: these are then reassembled by other enzymes into forms used in the body. Enzymes are biochemical catalysts. So if zinc is in short supply the body's chemistry can go awry.

We now know that **zinc is required for all major metabolic pathways**, just as oil is needed to make a car engine run. The correct amounts will make the body's 'internal-

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combustion engine' go, and a deficiency will make it miss on one or two cylinders. As noted above, food cannot be broken down in the body without the action of zinc enzymes; these themselves have to be synthesized from foodstuffs. The right foodstuffs have to be taken in constantly in order to produce the enzymes which break down the food and perform numerous other chemical processes.

If at any time the enzymes are not able to metabolize our fo\_od properly, serious physical and mental disorders can result. The mental aspects need to be emphasized because it has only fairly recently been realized that some socially important mental disturbances, such as hyperactivity, educational underachievement, and even violent criminality (according to some researchers), can have their origins in defective diets.

As soon as a zinc deficiency arises, there is an **immediate blockage in the biochemical production line.** Some of the elements which are needed for enzyme function, for example, zinc, cannot be stored in large amounts in the body so **dietary deficiencies are liable to take effect quite quickly.** 

Zinc is particularly essential for all forms of life, both plant and animal, as it acts as a kind of electron acceptor. Many metabolic processes involve electron transfers and zinc can relay efficiently from one biochemical molecule to another, acting catalytically as a special type of acid. Zinc also combines with proteins and is essential for all protein synthesis in the body. But zinc has many more functions than this. As has been described, this element is essential for very many metabolic pathways, including the way the body handles carbohydrates and fats, for respiratory processes, for the utilization of certain vitamins, and for the formation of blood and various enzymes and hormones. It is also used in wound healing (hence the use of zinc ointment), for the senses of taste, smell and vision, a host of both male and female reproductive processes, the efficiency of the immune system, and the development and function of the brain.

Zinc also plays a vital part in the formation of DNA and RNA, the genetic molecules of life itself. Without zinc, neither DNA nor RNA can form. Zinc is therefore required for the expression of genetic potential, and certain effects of a deficiency have been shown to be passed from one generation to another. Thus zinc is involved in the all-round development of individuals - for physical growth, sexual maturity, the development of intelligence, learning ability, stress resistance, and behavioural control. It is also needed for fertility, and the successful outcome of pregnancy.

From The Zinc Solution, by the late Derek Bryce-Smith, Ph.D., DSc., CChem., Emeritus Professor in Organic Chemistry at Reading University & Liz Hodgkinson, London, 1985. With grateful acknowledgements. Bryce-Smith was for many years a supporter of the HACSG and a scientific advisor to the group.

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## To sum up.

here is a brief guide to the main nutritional functions, uses, and sources of zinc as a trace element.

#### **1. Zinc and Nutrition**

An adequate supply of zinc is essential for growth and physical development. It is required in the metabolism of proteins, fats and carbohydrates. It therefore plays a fundamental role in nutrition.

#### 2. Zinc and Reproduction

Zinc is required for the production of sperm and development of the primary and secondary sexual characteristics in the male and in all phases of reproduction processes in the female, ranging from menstruation to pregnancy, foetal growth, and lactation. Zinc is required for the formation and function of DNA and RNA, so is necessary for the expression of genetic heredity. **3. Zinc and Infections** 

Zinc definitely plays key roles in the immune system (though many functions are still not fully understood) and so helps to protect against infection. Thus a low zinc status leads to increased susceptibility to all kinds of infections, and perhaps cancer.

#### 4. Zinc and Toxins

Zinc is antagonistic to the toxic effects of cadmium, mercury and

lead, so tends to act as an antidote.

#### 5. Zinc and the Brain

Zinc is necessary for the development and function of the nervous system, including the brain, both before and after birth. Zinc deficiency is therefore liable to disturb the ways in which we think and behave.

#### 6. Zinc and the Senses

Impairments of taste, vision, smell, and appetite are often early signs of zinc deficiency.

#### 7. Sources of Zinc

Nearly all comes from the diet where it tends to be found in association with proteins. Lean meat is a major source; vegetarian diets are liable to contain less zinc than more general diets. Some dietary constituents such as 'phytate' in unfermented cereals can impair zinc absorption, whereas citrate (present in citrus fruits) can promote absorption.

From The Zinc Solution, by the late Derek Bryce– Smith, Emeritus Professor in Organic Chemistry at Reading University & Liz Hodgkinson, London, 1985. With grateful acknowledgements.

#### What research tells us... Zinc deficiency: the evidence from scientific studies

In scientific studies, children with ADHD had significantly lower zinc levels than \_control children. 30% of children with ADHD had severely deficient values. It is possible that low zinc values may result in depressed production of melatonin and serotonin in the brain, resulting in some of the symptoms of ADHD. *Toren P. et al. Zinc deficiency in attention deficit hyperactivity disorder.* 

*Biological Psychiatry 40: 1308– 1310,1996.* 

## **...** Monkeys with moderate zinc deficiency

had impaired visual attention and impaired short term memory. Golub MS et al. Modulation of behavioural performance of prepubertal monkeys by moderate dietary zinc deprivation. American Journal of Clinical Nutrition 60: 238–243,1994.

## ZINC deficiency and supplementation.

#### What Zinc can do for your child.

- + Get rid of white spots on the fingernails (often a sign of zinc deficiency)
- + Improves learning aptitude by increasing mental alertness.
- + Helps to reduce cholesterol levels.
- + Promotes a better appetite by improving ability to taste.
- + Accelerates healing time for scrapes, cuts and internal wounds.
- + Promotes growth.

#### What foods contain high levels of zinc?

Lamb chops, pork, wheat-germ, ground steak, pumpkin seeds, sunflower seeds, eggs, ground mustard, brewer's yeast, non-fat dry milk

#### What you should know about Zinc supplements.

Zinc, which is measured in milligrams (mg.) is available in all good multi-vitamin and multi-mineral preparations. It is available as zinc sulphate or zinc gluconate. Both are effective, but the latter has been found to be more easily tolerated.

#### ZINC SUPPLEMENTATION

II I · I 0

How much is enough ?	
Age group D	aily minimum for Optimum Health
Newborn-6 months	3-5 mg.
6 months-1 year	5 mg.
I year - 3 years	5mg.
4 years - 6 years	8mg.
7 years - 10 years	10-15 mg Boys and girls
II years-18 years	15 mg.
VD:1 (* 1)11 1 1)11 (1)	1 (37) 100 11:1

\*Diabetic children and children taking large amounts of Vitamin 86 need higher intakes of Zinc.

#### How much is too much?

Doses over 100 mg. are not recommended. It is virtually non-toxic, but large doses taken over an extended period can decrease copper levels, which in turn can lead to anaemia and abnormal heart rhythms.

### **TESTING FOR NUTRITIONAL DEFICIENCES**

There are a number of testing facilities in the UK, all of which will be private.

The HACSG has no means of offering testing.

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## 7. A note about Neurotransmission

*Neurotransmission* is the method by which our brain and nerve cells communicate and send messages to our bodies. An electrical signal travels down a nerve cell (a pre-synaptic neuron). When it reaches the synapse (the space between two nerve cells ), the electrical signal changes to a chemical one.

The pre-synaptic neuron ( the nerve cell which is sending the message ) releases chemicals called neurotransmitters into the space between the two cells. The nerve cell receiving the message (the post-synaptic neuron) has receptors on its surface to "catch" the neurotransmitter molecules being released.

When enough neurotransmitters are captured by the receptor molecules, the post-synaptic neuron begins a new electrical signal to be transmitted down the second neuron. The process is repeated along many neurons as they transmit nerve impulses around the brain and to the rest of the body.

After nerve signals have been transmitted, the excess neurotransmitter molecules in the synapse are almost immediately destroyed by special enzymes. This ensures that the neuron does not continue to send signals when it shouldn't. At any point in this process, interference with the delicate balance can disrupt the workings of the system.

Small molecules, such as the chemicals used to create *artificial food colours* or naturally-occurring *salicylates*, are carried f<sup>r</sup>om the intestine to the brain through the bloodstream. In the brain, these molecules interfere with the chemical and electrical functioning of brain cells. The effects can be produced by drugs, cosmetics, food additives and preservatives.

When we eat a food to which we are allergic, our bodies identify the allergen as a foreign substance and respond as they would to an invading infectious microbe.

Allergic responses have been shown to reduce the levels of neurotransmitters in our brains, and it takes very little of the offending chemical to produce the toxic effect. When neurotransmitters are in short supply in the brain, behaviour can be affected.

*From Pure Facts. Vol. 19 No, L 1995. Reproduced from HACSG]ournal 56.* 

## 8. The Next Step...

What is the next step if a few, or perhaps several, signs and symptoms of hyperactivity/ADHD/allergy have been identified in your child, by you, his or her parents, or by a nurse or doctor?

While artificial colours are clearly a problem for all children, there \_are other additives, foods, drinks and household chemicals that can present challenges to our health. In industrialized countries we all now live in what has been called a "synthetic environment", and we ingest chemicals daily from the air we breathe and the food we eat; they are also present in cleaning products we use at home, in plastic goods and toys, etc. Growing children are especially vulnerable to the effects all these chemicals can have, as they clearly can interfere with normal growth patterns and brain activity.

The approach of the HACSG has therefore been to identify those chemical agents which have been shown to contribute to behavioural alterations (such as ADHD), and propose their elimination, as far as is possible, from the diet. We cannot, unfortunately, eliminate all possibly toxic chemicals from our environment, but we can give our bodies (especially those of our children) a fighting chance by controlling *what we choose to take directly into our bodies by eating*. We can also help our bodies by making sure our diet contains optimum levels of vital nutrients such as vitamins and minerals. Supplementation should be considered where there are deficiencies.

## The Feingold Diet - an excellent starting point.

Try the Feingold Food Programme for 4-6 weeks. This eliminates not just artificial colours, but some other additives and foods and fruit juices containing salicylates.

After trying the Programme for the 4-6 weeks, some improvements should be seen depending on the age of the child concerned.

The younger the child, the earlier improvements should be seen.

We recommend you keep a record of any changes as you progress with the diet.

Full details of the Food Programme are contained in the HACSG publication ".ADHD /Hyperactive Children - A Guide for Parents".

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### Please bear in mind also ....

.that research finds that even the most wholesome, natural foods, can be a problem for sensitive children. If any of the following behaviours are observed, we need to consider further dietary investigation:

1. If your child has strong liking for a particular food or drink, i.e. cheese, sugar or cereals, which leads to the consumption of a lot of a particular item, it may be a sign of allergy or intolerance problems. Paradoxically we often become addicted to our allergens!

#### 2. Your child seems to have abnormal THIRST.

Research has shown that abnormal thirst is a cardinal sign of chemical imbalance, involving the lack of Essential Fatty Acids and co-factors.

Hyperactive children are often thirsty and will often be drinking one of the worst items for them, i.e. Cola and squashes, which not only contain colourings, etc but high levels of refined sugars, and/or artificial sweeteners.

The most unfortunate thing to happen to any child is to be labelled dumb, spoiled, stupid, troublesome, lazy, loner, learning disabled, hyperactive, mean, bad news, ignorant, autistic, or complainer, when the trouble could be related to food and chemical sensitivity. Although the research lags behind, parents and educators know that some children and adults live with chronic conditions that can very often be related to their food and chemical environments.

From "Moving Forward'; Philadelphia, USA.

Beginning with the night that I went through all my cupboards and threw out everything that had the forbidden things in them, life began to get better. Initially we just eliminated all artificial colours, flavours and preservatives. But a few weeks later I decided to throw out the sugar & white flour. Now we bake all our foods with honey and whole grains. The changes we have seen are truly remarkable. Bed wetting has stopped, tics are gone. School progress has been dramatic and life in general is a

pleasure.....

Carol Robson, The Tale of Two Teens, 1977

## HACSG PUBLICATIONS