

# The Hypoglycemic Association

# NEWSLETTER

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**The NEWSLETTER of the Hypoglycemic Association is distributed to members of the Association and to Health Professionals with an interest in nutritional medicine and clinical ecology.**

Here is part of the **Hippocratic Oath** (460-370 BC) which has been accepted as the foundation for codes of medical conduct ever since:

"I will use treatment to help the sick according to my ability and judgement, but I will never use it to injure or wrong them. I will not give poison to anyone though asked to do so, nor will I suggest such a plan. Similarly I will not give a pessary to a woman to cause abortion. But in purity and holiness I will guard my life and my art. I will not use the knife either on sufferers from stone, but will give place to such as are craftsmen therein. Into whatsoever houses I enter, I will do so to help the sick, keeping myself free from all intentional wrong-doing and harm, especially from fornication with woman or man, bond or free. Whatsoever in the course of my practice I see or hear (or even outside my practice in social intercourse) that ought never to be published abroad, I will not divulge, but consider such things to be holy secrets. Now if I keep this oath and break it not, may I enjoy honour, in my life and art, among all men for all time; but if I transgress and forswear myself, may the opposite befall me."

Our Next Public Meeting will be at 2 PM  
on Saturday, the 3rd September, 1994  
at the YWCA,  
2 Wentworth Ave, Sydney and  
our guest speaker is

**Daniel Baden**  
who will be speaking  
on the subject of

***"Antioxidants & Free  
Radicals"***

Daniel Baden ND, Dip. Hom. graduated from Naturecare College (Sydney) in June 1989 and went directly into practice. He has had published articles on "osteoporosis" and "vaccination" and also made several radio and television appearances. He has been lecturing at Naturecare College in Clinical Nutrition and Case Studies for three years. Daniel is active in the health community, promoting natural health and encouraging closer ties between health professionals.

Any opinion expressed in this Newsletter does not necessarily reflect the views of the Association.

## Previous Copies of the Hypoglycemic Newsletter

Back issues of the Hypoglycemic Newsletters are available at the NSW State Library, Macquarie Street, Sydney. They are filed under NQ616.466006/1 in the General Reference Library

### Steve Duff telephone advisory service

Our life member Steve Duff is willing to talk to any person by phone on any problems relating to hypoglycemia, allergies and diet.

This voluntary advice is based on his personal experiences with hypoglycemia and allergies and any problems of a more complex nature will be referred to nutritional practitioners. If you would like to have a talk with Steve, please ring him at his home on 529-8040.

### Books for sale at the meeting

Jur Plesman: **GETTING OFF THE HOOK**

Sue Litchfield: **SUE'S COOKBOOK**

**Contributions of articles** by members and by practitioners are very welcome. If you would like to contribute an article to this Newsletter, please contact the Editor.

### The Newcastle branch of the Association

are still meeting with the assistance of Bev Cook. They meet on the last Saturday of each month beginning 1.30 PM to 3.30 PM at the Hillsborough Primary School. Enter the school from the Waratah Avenue. For further infor-

mation ring Mrs. Bev Cook at 049-59-4369.

### Organise local meetings

If any member would like to organise meetings in their local area or meet other members, we can help by advertising your name and phone number in this Newsletter.

### Entrance fee at meetings

Because of increase in costs the Committee has decided to charge an entrance fee of \$2 per person or \$3 per family at our public meetings.

### Donations for raffle

One way of increasing our income is by way of raffles. If any member has anything to donate towards the raffle, please contact Dr George Samra's surgery at 32-38 Montgomery, Kogarah.

**Elaine Campbell** won the Lucky Door Prize and **David Samra** won the Raffle Prize at our last public meeting on 4 June 1994.

# ALTERNATIVE MEDICINE NOW TO BE RECOGNISED

ONE OF THE AIMS of our Association is to encourage general practitioners to embrace alternative or more precisely 'complementary' medicine as part of their overall medical practice. We do this by liaising with doctors and medical consumers via the medium of our Newsletter and public meetings. In the past, doctors have been reluctant to use complementary medicine, not only because their medical education have left them ignorant of the benefits of natural medicine, but also the powers that be, controlling the medical industry, posed a threat to their career if they were found to be practising what was called "inappropriate" medicine. This has been defined recently by federal legislation - Health Legislation (Professional Services Review) Amendment Act 1994 (effective 1 July 1994) by which doctors could be questioned by a panel of "peers" whether their claims on Medicare were made in accordance with 'appropriate' medicine. It is difficult to escape the comparison of the medieval 'Inquisition' with this modern day inquisition in the faith of medical orthodoxy.

The procedure against offending doctors is initiated by the Health Insurance Commission following information received from computers, which show that certain doctors make claims on Medicare which fall outside certain statistical norms. Some alternative doctors stick out like a sore thumb as they may be high

on pathology tests and low in drug prescriptions, or may see patients for longer consultations than the average GP.

The praiseworthy object of this legislation of course, is to home in on certain high flying doctors who are abusing Medicare (and tax payers) for their own benefits rather than for their patients. These are the very doctors that threaten health care in Australia because of their extravagant fees and overuse of high-tech machinery.

The appointment of 'peers' on the Professional Services Review Panel (PSR) is crucial to the effectiveness of the legislation. The risk is that the PSR will be dominated by the very type of doctor against whom action should be taken, i.e., the rich.

The concept of complementary medicine stems not only from a substantial group of medical doctors who are critical of the direction of their profession - both inside and outside the AMA - but also from a popular dissatisfaction with modern medicine closely tied to the chemical industry and other high-tech invasive surgical procedures. For example, in this issue of the Newsletter Dr Joachim Fluhrer discusses 'chelation therapy' as an alternative to the more invasive and expensive heart surgery. Yet most medical consumers are denied the choice as 'chelation therapy' is not recognized as a possible cost-effective and legitimate alternative to heart surgery.

With the threat of the PSR legislation, and the failure to allow complementary doctors to have representation, the Australian Complementary Medical Association (ACMA) was formed marshalling the forces of those doctors (estimated at about 1500) and their patients who want to see a new direction in modern medicine and away from the more limited orthodoxy taught at University. The future direction of orthodox medicine appears to be guided less by scientific consideration, and more by economic profitability, especially with information provided principally by drug companies.

Our Association together with other allied natural health organisations is playing an important role to lobby the Government to alter the legislation so as to recognise complementary medicine as a legitimate form of medicine. Well over five thousand people have signed a petition addressed to Dr Carmen Lawrence - Federal Health Minister - and to the AMA. More are on the way. This shows the extent of public concern about the fate of complementary medicine.

After all, this legislation undermines the medical myth that patients have a right to choose their doctor.

The result is that ACMA and the Health Insurance Commission are in the process of negotiating with the aim that doctors practising complementary medicine will be recog-

nised as a legitimate form of medical practice, and will be represented on the PSR.

Naturally, the question as to 'what is inappropriate medicine' has now been shifted to ACMA and will require definition.

Surely, 'appropriate medicine' is subject to the rules of scientific methodology, which is universally recognised by scientists, not only in medicine (and complementary medicine for that matter), but also other fields of knowledge.

This is an exciting time for all those patients and doctors who want to have a broader choice in medicine. In summary it means;

1) ACMA has won the right to bypass the

PSR legislation, and to set internal reviews of "inappropriate practice".

- 2) This protection from PSR referral applies only to ACMA members.
- 3) ACMA is instituting peer review, quality assurance, educational programs and outcome studies.
- 4) Out of \$7.0 billion spent on health last year, \$1.8 billion was on medications. In 4 years, the bill for drugs will be \$3 billion out of \$9.5 billion total, or about one third of the total. ACMA doctors are definable with the lowest prescription rate.

Doctors who practise or have an interest in complementary medicine - including psychiatrists - are urged to become members of ACMA and participate in the development of more satisfying medicine to both doctors and patients by contacting:

**Australian Complementary  
Medical Association**  
**PO Box 328**  
**MOSMAN 2088**  
**Tel: (02) 968-1087**  
**Fax: (02) 968-3378**

Editor

# CHELATION THERAPY

*By Dr Joachim Fluhrer*

THERE is a safe and effective alternative to bypass surgery for atherosclerosis. Hardening of the arteries need not lead to coronary bypass surgery, heart attack, amputation, stroke, or senility. There is new hope of recovery for victims of these and numerous related diseases. Despite what you may have heard from other sources, EDTA chelation therapy, administered by a properly trained doctor and given in conjunction with lifestyle and dietary changes with specialised nutritional supplements, is an option to be seriously considered by persons suffering from coronary artery disease, cerebral vascular disease, brain disorders resulting from circulatory disturbances, generalised atherosclerosis and related ailments which lead to senility and accelerated physical decline.

Clinical benefits from chelation therapy vary with the total number of treatments received and with severity of the condition being treated. More than 75 percent of patients treated have shown significant improvement from chelation therapy. More than 90 percent of patients receiving 35 or more treatments have benefited when they have also corrected dietary, exercise and smoking habits, which are known to aggravate occlusive arterial disease. Symptoms improve, blood flow to diseased organs increases, need for medication decreases and, most importantly, the quality of life becomes much more enjoyable.

When patients first hear about or consider EDTA chelation therapy, they normally have lots of questions. Undoubtedly you do, too. Here are the answers to those most commonly asked questions, explained in non-technical

language.

## **What is "Chelation" as a medical therapy?**

Chelation is a treatment by which a man-made amino acid called ethylene diamine tetraacetic acid (commonly abbreviated to EDTA) is administered to a patient intravenously, prescribed by a medical practitioner. The fluid containing EDTA is infused through a small needle placed in the vein of a patient's arm. The EDTA in solution bonds with metals in the body and carries them away in the urine. Abnormally situated nutritional metals, which speed free radical damage, and toxic metals, such as lead, are most easily removed by EDTA. Several substances e.g., Magnesium and Vitamin C may be added to each infusion, according to individual needs.

## **Is it done just once?**

On the contrary chelation therapy is a course of treatments which usually consists of anywhere from 20 to 50 separate infusions, depending on each patient's individual status. Twenty treatments is the average number required for definite benefit in patients with symptoms of arterial blockage. Some patients eventually receive more than 50 infusions.

Each treatment takes from three to four hours or longer and patients normally receive one or more treatments each week. Over a period of time, these injections halt the progress of the free radical disease, which is the underlying condition triggering the development of atherosclerosis - and many other degenerative diseases of aging - giving the body time to heal and time to restore blood flow through diseased blood vessels. After several months these injections bring profound improvement

to many metabolic and physiological processes in the body. The body's regulation of calcium and cholesterol is improved by normalising the internal chemistry of cells.

Chelation benefits every blood vessel in the body, from the largest to the tiniest capillaries and arterioles, most of which are far too small for surgical treatment or are deep within the brain and other vital organs where they cannot be safely reached by surgery. In many patients, the smallest blood vessels are the most severely diseased. The benefits of chelation occur from the top of the head to the bottom of the feet, not just in short segments of a few large arteries which can be bypassed or opened by other invasive treatments.

## ***Do you have to go to hospital to be chelated?***

No, in most cases it is an outpatient treatment available in a doctor's office or clinic.

## ***Does it hurt? What does it feel like to be chelated?***

Being "chelated" is quite a different experience from other medical treatments. There is no pain, and in most cases, very little discomfort. Patients are seated in reclining chairs and can read, nap, listen to music, or chat with other patients while the fluid containing the EDTA flows into their veins. If necessary, patients can walk around. They can visit the restroom, eat and drink as they desire, or make telephone calls, being careful not to dislodge the needle attached to the intravenous infusion they carry with them.

### ***Are there risks - or unpleasant side effects?***

EDTA is relatively non-toxic and risk-free, especially when compared with other treatments. The risk of serious side effects, when properly administered, is less than 1 in 10,000 patients treated. By comparison, the overall death rate as a direct result of bypass is approximately 3 out of every 100 patients undergoing surgery, varying with the hospital and the operating team. The incidence of other serious complications following surgery is much higher, including heart attacks, strokes, blood clots, permanent brain damage with personality changes and prolonged pain.

Chelation is more than 300 times safer than bypass surgery.

Occasionally, patients may suffer minor discomfort at the site where the needle enters the vein. Some temporarily experienced mild nausea, dizziness, or headache as an immediate aftermath of treatment, but in the vast majority of cases, these minor symptoms are easily relieved. When properly administered by a doctor experienced in this type of therapy, chelation is as safe as taking aspirin. Patients routinely drive themselves home after treatment with no difficulty.

If EDTA is given too rapidly or in too large a dose it may cause harmful side effects, just as an overdose of any other medicine can be dangerous.

Reports of serious and even rare fatal complications have stemmed from excessive doses of EDTA, improperly administered. If you choose a doctor with proper training and experience, the risk of chelation therapy will be kept to a very low level.

While it has often been stated that EDTA chelation therapy is damaging to the kidneys, the newest research (in one study consisting of kidney function tests done on 383 consecutive chelation patients, before and after treatment with EDTA for chronic degenerative diseases) indicates the reverse is often true. On the average, there is significant improvement in kidney function following chelation. An occasional patient may be unduly sensitive, however, doctors experienced in chelation, monitor kidney function very closely to avoid overloading the kidneys. Treatments must be given more slowly and less frequently if kidney function is not normal. Patients with some types of severe kidney problems should not receive EDTA.

### ***What types of examinations and testing must be done prior to beginning chelation therapy?***

Prior to commencing a course of chelation therapy a complete medical history must be obtained. A detailed listing of diet will be analysed for nutritional adequacy and balance. Copies of pertinent medical records and summaries of hospital admissions will be ob-

tained. A thorough, head-to-toe physical examination will be performed. A complete list of current medications will be recorded, including the time and strength of each dose. Special note will be made of any allergies.

Blood and urine specimens will be obtained for tests to insure that no conditions exist which may be worsened by chelation therapy. An electrocardiogram, chest x-ray and EAV may be ordered. A hair specimen may be tested for tissue levels of various nutritional and toxic metals. Non-invasive tests may be performed, as medically indicated, to determine the status of arterial blood flow prior to therapy. A consultation with other medical specialists may be requested. Follow-up examinations and testing will be performed at regular intervals during and after therapy.

### ***Is chelation therapy new***

Not at all. Its earliest application with humans was during World War II when the British used another chelating agent, British Anti-Lewisite (BAL), as a poison gas antidote. BAL is still used today in medicine.

EDTA was first introduced into medicine in 1948 as a treatment for industrial workers suffering from lead poisoning in a battery factory. Shortly thereafter, the U.S. Navy advocated chelation therapy for sailors who had absorbed lead while painting government ships and dock facilities. Physicians then observed that adults receiving EDTA chelation treatments who had atherosclerosis also experienced health improvements - diminished angina, better memory, sight, hearing, sense of smell and increased vigour. A number of physicians then began to treat individuals suffering from occlusive vascular conditions with chelation therapy and reported consistent improvements.

Chelation therapy remains the undisputed treatment-of-choice for lead poisoning, even in children with toxic accumulations of lead in their bodies as a result of eating leaded paint from toys, cribs or walls. But from 1964 on, despite continued documentation of its benefits and the development of refined treatment methods, the use of chelation for the treatment of arterial disease has been the subject of controversy.

### ***Is it legal?***

Absolutely. There is no legal prohibition against a licensed Medical Practitioner using chelation therapy for whatever conditions he deems it to be correct, even though the drug involved, EDTA, does not yet have atherosclerosis listed as an indication approved by the Therapeutic Goods Act (TGA). The TGA does not regulate the practice of medicine, but merely approves marketing, labelling and advertising claims for drugs and devices.

It costs millions of dollars to perform the required research and to provide the FDA

(U.S.) or TGA with documentation for a new drug claim, or even to add a new use to marketing brochures of a long established medicine like EDTA. Physicians routinely prescribe medicines for conditions not yet included on TGA approved advertising and marketing literature

Several respected physician organisations sponsor educational courses in the proper and safe use of intravenous EDTA chelation. The American College for Advancement in Medicine publishes a physicians' protocol for the safe and effective method of treatment with EDTA. This protocol is used in training courses and in a certification program for chelating physicians. ACAM's educational programmes for physicians, followed by oral and written examinations, lead to credentials which certify demonstrated competence in the proper use of EDTA chelation therapy.

### ***What proof do you have that it works?***

Physicians with extensive experience in the use of chelation therapy observe dramatic improvement in the vast majority of their patients. They see angina routinely relieved, patients who suffered searing chest pains when walking only a short distance are frequently able to return to normal, productive living after undergoing chelation. Far more dramatic, but equally common, is seeing diabetic ulcers and gangrenous feet heal. Many individuals who had been told that their limbs would have to be amputated because of gangrene are thrilled to watch their feet heal with chelation, although some areas of dead tissue may have to be trimmed away surgically. The approximately 1,000 Medical Practitioners practising chelation therapy have countless files to prove they are able to reverse serious cases of arterial disease.

Weeks or months later, they're remarkably improved. There is a wealth of evidence from clinical experience that symptoms of reduced blood flow improve in more than 75 percent of patients treated.

In addition, several research studies have been published with results of before-and-after diagnostic tests using radioisotopes which prove statistically that blood flow improves following chelation. Regardless of blood flow studies if, clinically, claudication is relieved, angina becomes less bothersome, and physical endurance or mental acuity improves, such benefits would be quite enough to justify EDTA chelation therapy. Quality of life and relief of symptoms are far more important than the results of laboratory tests. There is ongoing research about the use and effects of EDTA chelation mainly in the U.S. A course of treatment for a patient with advanced hardening of the arteries generally requires from six weeks to six months.

### ***What about bypass surgery?***

Coronary artery bypass surgery, the popularly-prescribed procedure in which occluded portions of major coronary arteries are by-

passed with grafts from a patient's leg veins, has never been proven by properly controlled studies to offer an advantage over non-surgical treatments, other than relief of pain in a minority of patients who cannot be controlled with medicine.

It has even been suggested that the relief of pain following surgery might result from the cutting of nerve fibres which carry pain impulses from the heart and which also stimulate spasm of coronary arteries. It is not possible to perform bypass surgery without interrupting those nerves. Indeed, the most recent research suggests that many of the 200,000 or more bypasses and other invasive procedures performed each year for the relief of pain and other symptoms brought on by clogged or blocked arteries are not necessary. A good case against rushing into surgery is made by the findings of a ten-year, \$24 million study conducted by the National Institutes of Health (NIH) which compared postoperative survival rates of "bypassed" patients with a matched group of equally diseased patients treated non-surgically.

The study uncovered no additional benefits for most patients who had been operated upon, compared with non-surgical therapy. It is important to note that the non-surgical therapy reported in that study did not include either chelation therapy or the new calcium blocker drugs, and that only half of the patients received beta blocker drugs. Having surgery didn't improve their chances to live longer, live healthier, live better, or enjoy life more, when the results were statistically analysed. The incidence of heart attacks (myocardial infarction) and both employment and recreational status were the same in patients treated surgically and non-surgically, even without using chelation therapy for the non-surgical treatment group.

More important, cardio-vascular surgery does nothing to arrest or reverse the underlying disease which exists in varying degrees throughout the body. It is at best a piecemeal "cure" for a system-wide problem. By-passing a restricted portion of the body's blood vessels can have little lasting benefit when the same degenerating condition which caused the most extreme blockage at one or two sites must of necessity be taking place everywhere, throughout the circulatory network.

One thing the general public is not fully aware of is that many people who have one bypass operation later have a second bypass. Sometimes the blood vessels that weren't bypassed become clogged; sometimes the transplanted vessels used in the first graft become filled with new plaque; sometimes the transplants malfunction or turn out to be too small for the job.

As a matter of fact, studies have shown that by ten years after surgery, grafted vessels had closed in 40 percent of patients, and in the remaining 60 percent, half developed further coronary narrowing. Once you've had a by-

pass, your chances of having another go up about five percent a year. After five years, some specialists estimate, your chances of receiving a second operation could be as high as 30 to 40 percent. And some patients go on to even a third operation or more. And approximately 2 to 3 out of every 100 patients undergoing bypass surgery die as a result of the procedure - even more if they are severely ill at the time of surgery. The balloon treatments and other invasive procedures to open arteries are also risky.

Chelation patients are frequently able to return to work and to resume their sports and other activities, without the need to undergo surgery. Chelation is equally as effective in patients who have previously undergone one or more bypass operations or balloon procedures. If they stay on a proper diet, exercise regularly, continue to take the prescribed program of nutritional supplements and receive periodic maintenance chelation treatments (monthly, more or less, depending on the severity of the underlying medical diagnosis) they can usually go many years without suffering further heart attacks, strokes, senility or gangrenous extremities.

If you, like most people eager for additional information about chelation therapy, have been told you have advanced arterial disease, you may have been advised to have vascular surgery. It is essential for you to understand the nature of your disease and all the possible treatment choices before you can make an intelligent decision concerning the various options. Even if chelation and other non-surgical therapies should fail, bypass still remains a choice.

#### ***Why can't chelation be taken by mouth in pill form, instead of by intravenous injection?***

Chelation therapy is gaining recognition so rapidly that there is growing interest in developing a safe and effective oral chelator. Many nutritional substances administered by mouth are known to have weak chelating properties. But, none have the spectrum of activity of intravenous EDTA. Many nutrients such as vitamin C and the amino acid cysteine have the ability to weakly chelate metals. To label nutritional supplements containing vitamins and amino acids as "oral chelation", however, is misleading.

EDTA can be taken by mouth in small doses but less than 5 percent is absorbed and only if taken without food. The utilisation of EDTA by mouth is not adequate to treat established disease, although preventive and maintenance benefits might be obtained by that route.

Claims are being increasingly made for the use of vitamin supplements containing weak chelators in patients with atherosclerosis. There is nothing new about the benefits of vitamin-mineral supplements, which have recently been aggressively and deceptively marketed as "oral chelation". The use of vitamin-min-

eral supplements by mouth is a routine adjunct to a total program of chelation therapy, but they do not provide significant chelation by themselves. There are no potent oral chelating agents now available which are safe to take by mouth and which produce improvement comparable to intravenous EDTA.

#### ***Is it true that chelation therapy combats atherosclerosis by acting like a "liquid plumber" - by leeching calcium out of the atherosclerotic plaque?***

No. Before recent medical breakthroughs in the area of free radical pathology, it was hypothesised that EDTA chelation therapy had its major beneficial effect on calcium metabolism - that it stripped away the excess calcium from the plaque, restoring arteries to their pliable precalcified state. This frequently offered explanation - the so-called "rotorooter" concept - is not the real reason, as previously postulated, that chelation therapy produces its major health benefits. The fact that EDTA does remove some abnormal calcium is now felt to be one of the less prominent aspects of its benefits.

More important, EDTA has an affinity for the so-called transition metals, iron and copper, and for the related toxic metals, lead, mercury, cadmium and others, which are potent catalysts of excessive free radical reactions. Free radical pathology, it is now believed, is the underlying process triggering the development of most age-related ailments, including cancer, dementia and arthritis, as well as atherosclerosis. Thus, EDTA's primary benefit is that it greatly reduces the ongoing production of free radicals within the body by removing accumulations of metallic catalysts which accumulate as a person grows older at abnormal sites in the body, speeding the aging process.

This is a greatly oversimplified explanation of what actually occurs. For those of you with a decided interest in the scientific technicalities, you can send for the manuscript entitled "Free Radical Pathology in Age-Associated Diseases: Treatment with EDTA, Nutrition and Antioxidants" by Doctors Elmer M. Cranton and James P. Frackelton. For a fuller explanation of the many issues involved, written in popular form for the general public, you might enjoy reading "Bypassing Bypass" by Dr. Elmer M. Cranton and Arline Brecher, or "The Chelation Way" by Dr. Morton Walker, or "The Scientific Basis of EDTA Chelation Therapy", by Dr. Bruce Halstead.

#### ***Why haven't I heard about chelation before?***

If EDTA chelation therapy is a safe and effective as indicated by scientific studies and by the experience of hundreds of doctors, why haven't you heard more about it? That is a good question!

Until quite recently, relatively few patients have been informed that this therapy is avail-

able. Most heart specialists may not have even heard of the treatment and would be reluctant to prescribe it if they had.

The American and Australian Medical Associations have not yet approved chelation therapy for atherosclerosis, although it does endorse it in the use of lead and other heavy metal poisoning. Many insurance companies will not compensate policy holders for chelation therapy unless it is given for lead poisoning. If chelation therapy is given for atherosclerosis, it is often labelled "experimental" or "not customary" by medical insurance companies and payment is denied. They deny payment to patients even though they do pay for bypass surgery, and even though chelation might have saved them tens of thousands of dollars.

#### ***What else is involved in a complete program of chelation?***

**Your Lifestyle Counts:** Chelation therapy is only part of the curative process. Improved nutrition and improved lifestyle are absolutely imperative for lasting benefit from chelation treatments. Chelation is not by itself a "cure-all" - it merely reduces abnormal free radical activity, allowing normal control mechanisms to come into play so that free radical damage can be repaired and health can be restored with the help of applied clinical nutrition antioxidant supplementation and lifestyle corrections. Chelation therapy involves all of these fac-

tors. Chelation is also compatible with other forms of therapy, including bypass surgery.

In addition to receiving the necessary number of chelation treatments, patients eager for long term benefits should be warned: chelation alone won't last long. Individuals suffering any form of free radical disease must be prepared to improve the diet that started the disease, take nutritional supplements, be physically active and eliminate destructive lifestyle habits such as tobacco and excessive alcohol.

**Nutritional Supplements.** A scientifically balanced regimen of nutritional supplements reinforces the body's antioxidant defences and should include vitamins E, C, B1, B2, B3, B6, B12, pantothenate, PABA, and beta carotene. A balanced program of mineral and trace element supplementation should include magnesium, zinc, selenium, manganese and chromium. The exact prescription for nutritional supplements is determined individually for each patient, based on nutritional assessment and laboratory testing.

**Destructive Habits.** It is important to eliminate the use of tobacco altogether, but if that is not possible, a marked reduction in exposure would be helpful. This applied to cigarettes, pipe tobacco, cigars, snuff or chewing tobacco. It has been consistently observed that patients who continued to smoke following chelation have demonstrated less improve-

ment and for a much briefer time in comparison to non-smokers.

Only relatively healthy adults are able to tolerate alcoholic beverages without generating more free radicals than they can detoxify. Anyone who drinks more than one or two ounces of pure ethanol in 24 hours (four eight ounce glasses of beer, four small glasses of wine, or two to three shot glasses of hard liquor) risks free radical damage. Even that amount is harmful on a regular basis. Victims of chronic degenerative diseases should usually avoid the consumption of alcohol.

**Exercise:** Finally, physical exercise is very helpful. Even a brisk 45 minute walk several times per week will help maintain the health benefits and improved circulation resulting from chelation therapy. Lactate normally builds up in tissues during sustained exercise and lactate is a natural chelator produced within the body.

Excerpts from:

**Chelation Therapy:  
New Hope for victims of Atherosclerosis and Age-Associated Diseases.**  
By Elmer M. Cranton, M.D.

An Information pamphlet, courtesy of  
American College for Advancement in  
Medicine

# Nutrition-Behavior Inventory Questionnaire

By Jurriaan Plesman BA (Psych), Post Grad Dip Clin Nutr.

A COMMON COMPLAINT of teachers is that much of teaching time is lost owing to unruly behaviour of a minority of students. This could well be because much of human behaviour is not only determined by psychosocial factors, but also by underlying metabolic and nutritional disorders. This is often overlooked by psychologically oriented counsellors. If this is true it would be inappropriate and counter-productive to counsel a person with "behavioural problems" - such as hyperactivity, excessive aggressive behaviour, attention deficit syndrome, forgetfulness, insomnia, depression and so on - when such behaviour is caused primarily by a metabolic disorder. Such disorders very often mimic "psychological disorders".

The Nutrition-Behavior Inventory (NBI) was designed by Alexander Schauss<sup>1</sup> and can

also be found in my book, **Getting off the hook<sup>2</sup>**. A copy of the questionnaire is shown on page 7. (By photocopying it, teachers can use the test to administer it to students).

To explain how a metabolic disorder can affect behaviour let us look at one example what has been called **hypoglycemic syndrome**.

Hypoglycemia means low blood glucose, which can be caused by an excess production of insulin from the pancreas. The brain depends entirely on glucose for energy<sup>3</sup>, and any extreme fluctuations would therefore affect one's behaviour.

When a person consumes excess sugar (sucrose), the blood glucose may rise to very high levels. In response, the pancreas produces excessive insulin, which converts glucose into glycogen<sup>4</sup> - a storage molecules - in various body tissues, primarily the liver and muscles. Thus a high sugar consumption can

cause a sudden drop in blood sugar. When this occurs, the body compensates by producing an increasing amount of adrenaline from the adrenal glands. Adrenaline is the fight/flight hormone and functions to raise the blood glucose levels (from glycogen) in crises and gets the person ready for immediate action.

Consequently, the person with a hypoglycemic syndrome displays various symptoms associated with either low blood sugar concentrations (depression, fatigue, lethargy) or excess adrenaline (hyperactivity, sweating, aggression, restlessness). There are several types of hypoglycemia, the most common of which is when high blood sugar levels are followed by a sudden fall, which cause elevated adrenaline concentrations. Such people usually display marked mood swings. Other symptoms may be seen when the blood sugar

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level is constantly below the norm and this is often associated with lethargy, fatigue, depression. This may also be caused by an underactive thyroid gland and sometimes a person may need a thyroxine supplementation prescribed by a doctor. Hypoglycemia has been linked with a specific gene - similar to diabetes - and often runs in families<sup>5</sup>.

Behaviour is not only affected by blood sugar levels, but may be influenced by reactions to allergies and food substances. Caffeine is a known stimulant and also raises the blood sugar. Many youngsters are allergic to dairy products (milk and cheese) and many are even addicted to their allergies, as they give them a buzz. Many people resort to tranquillising drugs to cope with uncontrollable mood swings, high levels of adrenaline; and alcohol- or drug addiction is invariably identified with hypoglycemia. The use of drugs, of course, leaves its own trail of metabolic disorders that affect behaviour.

**Treatment**

The major treatment for hypoglycemia or for any nutritionally related emotional/physical complaint is the avoidance of offending foods that cause symptoms. In the case of hypoglycemia this would mainly be avoidance of refined carbohydrates - especially sugar and sugar containing foods and drinks<sup>6</sup> - and having small frequent high protein snacks together with supplementation of vitamins and minerals. In case of allergies and food sensitivities it means avoidance and substitution of offending food items (for instance milk), food ingredients and even environmental sources of allergies. Many alcoholics and

drug addicts are deficient in zinc and supplementation may bring on a marked improvement. The majority of people will respond favourably to a return to a more natural diet, however, in some instances the assistance of a nutritionally oriented doctor or clinician would be advisable in unmanageable cases.

**The Nutrition-Behavior Inventory test**

As a probation officer with the criminal justice system in NSW I have used this test to assess a person's likelihood of being affected by a metabolic disorder, which could contribute to his antisocial behaviour and/or drug addiction<sup>7</sup> (alcohol or street drugs). Fundamentally, it assesses to what extent nutrition affects personality.

The advantage of this test is obvious, for it allows me to help a person to sort out what part of his behaviour is due to biological and psychological factors.

In 1984, I administered this test<sup>8</sup> to four groups:

- 1) **vegetarians** from the Seventh Day Adventists Church,
- 2) **control group** among a randomly chosen group of people who volunteered to complete the test and who believed they did not have a particular problem,
- 3) **drug addicts** who were in a treatment programme and off drugs at the time of testing, and
- 4) **patients** who were diagnosed as having hypoglycemia by Dr George Samra (Kogarah) by means of a four hours glucose tolerance tests.

All participated in the test voluntarily. Although the vegetarians scored slightly lower

than the control group, there was no significant difference between the two groups. By combining the vegetarians with the control the results obtained were;

	Control	Addicts	Hypo
Number	87	49	40
Mean	49.79	85.39	102.70
St. Dev.	16.61	18.76	17.14

This clearly shows a significant difference between the means of controls on the one hand and the means among addicts and those diagnosed hypoglycemics<sup>10</sup>.

**Scoring the NBI**

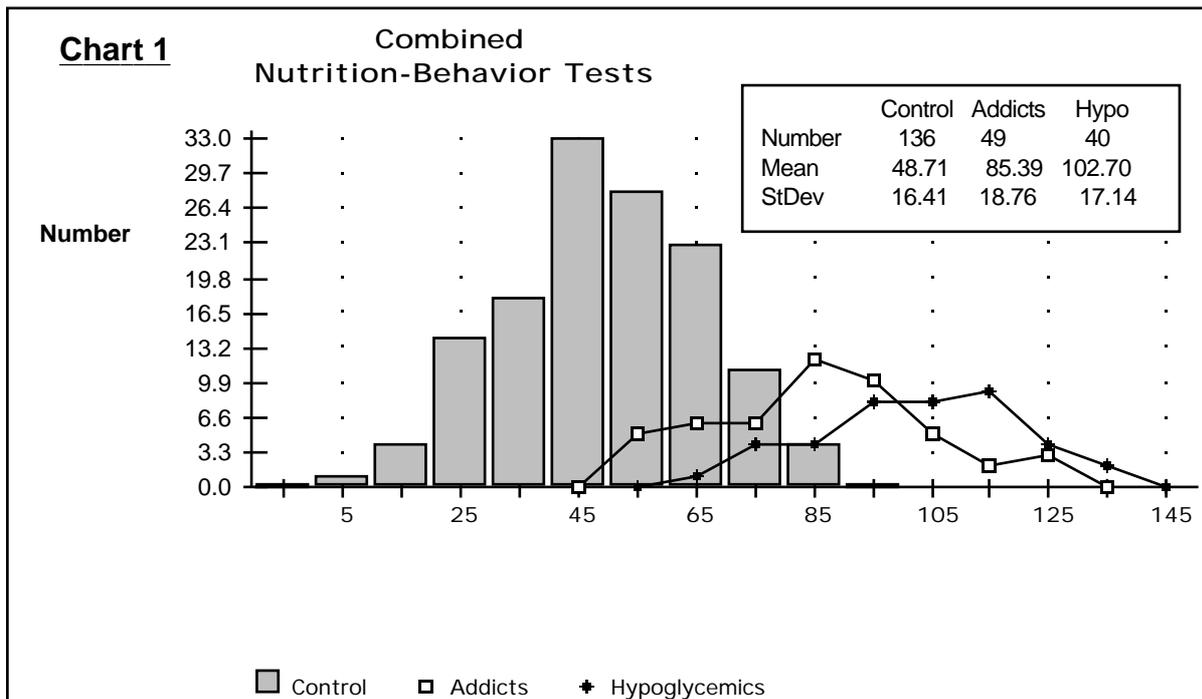
It takes a person between 15-20 minutes to complete the questionnaire and scoring the test is easy. A whole class could be tested in perhaps 20 minutes.

- 1) Sum the responses in columns under "Rarely", "Occasionally" and "Usually". Ignore scores under "Never".
- 2) Fill in the number of responses for each column below to get a total score:  
 "Rarely" \_\_\_\_\_ x 1 = \_\_\_\_\_(a)  
 "Occasionally" \_\_\_\_\_ x 2 = \_\_\_\_\_(b)  
 "Usually" \_\_\_\_\_ x 3 = \_\_\_\_\_(c)  
 (a)\_\_\_+(b)\_\_\_+(c)\_\_\_ = \_\_\_\_\_ Total score

**NBI Score of school students**

Scores of younger persons has often been called into question as it was suggested in the literature that school children, for example, would naturally score higher on the NBI. Presumably the reason being that younger persons tend to be more hyperactive, which would show up in the test.

A private high school in the Eastern suburb



was willing to cooperate and submitted the test to 49 students aged 17. They obtained a mean score of 46.80 with a standard deviation of 16. Compared to the adult population obtained previously there was no significant difference. Hence these scores have been combined with the control groups now totalling 136 with a mean of 48.71 and standard deviation of 16.41.

#### How useful is the NBI test

Chart 1 on page 8 shows the scores of the three groups including school students; 1) controls, 2) addicts, 3) hypoglycemics.

Statistically, 95 percent of the three population are expected to score between the ranges shown below;

	Low	High
Controls	46	52
Recovered Addicts	80	91
Hypoglycemics	97	108

Consequently there seems to be borderline ranges between the groups. From a practical point of view the results of a NBI test becomes useful when we want to assess the influence of nutrition (or a metabolic disorder) versus psychological factors in "abnormal" behaviour. In the absence of any such behaviour there does not appear to be anything definitive about the NBI test, although it may point to some 'possible' symptoms. A further limitation is that it is self-report test, so that it is of little use with people who tend to deny symptoms.<sup>12</sup> In my experience with the test, benefits may be derived in a case, where a recovered drug addict appears to be doing alright, yet continues to score high on the test. Normally, this would indicate that he remains at risk, and that a break-down could be expected in a crisis

situation. Drug addicts and hypoglycemics themselves find the test useful as a monitoring instrument, when they administer the test to themselves over a period of time.

#### The NBI can be useful in schools

It is suggested that the test becomes very useful in the school environment where rowdiness is seen to be a problem.

In a matter of twenty minutes the teacher will be aware of those students in the class who may be expected to have difficulties in their academic careers, and/or perhaps behavioural problems that typically do not respond to discipline, punishment or encouragement.

Students that score high - that is in excess of 52 - should be suspected of having a metabolic disorder that may affect their attention span and their ability to concentrate. By observing their nutritional habits - addiction to sweets etc., food allergies - the teacher has another means at his disposal to understand his student and to help him. In case of severely disturbed behaviour, he should refer him to a professional for further assessment.

#### References

- 1) Schauss, A.G. (1980), **Diet, crime and delinquency**, Parker House, Berkely, Cal.
- 2) Plesman, J (1986), **Getting off the hook**, J. Plesman, Bondi Beach
- 3) The brain, although only 2 percent of the body by weight, requires over 75 percent of available glucose as its source of energy. [L. Stryer(1981), **Biochemistry**, W.H.Freeman & Co, NY., page 438]
- 4) Excess glycogen is transformed into fat and many hypoglycemics tend to put on weight.

- 5) The insulin gene, situated on the short arm of chromosome 11, has been investigated as a possible genetic marker for non-insulin dependent diabetes mellitus (NIDDM). This gene could also be responsible for the hypoglycemic syndrome, which is regarded as the fore-runner of diabetes. Macleod, J. (Ed)(1984), **Davidson's Principles & Practice of Medicine**, Churchill Livingstone, Melbourne, 459.
- 6) Alternative sweeteners are acceptable, but be careful about aspartame - contained in many cola drinks - as it contains phenylalanine, which when taken in excess may cause hyperactivity. Phenylketonurians should avoid aspartame altogether.
- 7) Over 70 percent of offenders appearing before courts have abused alcohol and/or drugs, and many of their offences are drug-related.
- 8) Plesman, J. (1984), "The behavioural aspects of hypoglycemia as tested by the N.B.I.", **Probation & Parole Officers' Assoc. Journal**, 1984, 1-23.
- 9) Samra, George (1984), **The Hypoglycemic Connection**, M.I.N.T. Sydney.
- 10) The hypoglycemic syndrome is diagnosed as a fall in blood glucose of 2.8 mmol/L per hour, or 1.9 mmol/L per half hour, or any blood glucose recorded below 3.4 mmol/L in a four hour glucose tolerance test. For further details [Samra (1984), page 19]
- 11) Although scores in the "Never" column can be ignored, entries should be counted to make sure that a total of fifty (50) responses have been given.
- 12) I remember one person with an obvious psychotic condition who scored 15 on the NBI.

## CRAVINGS

Earl Mindell (1979), from  
**THE VITAMIN BIBLE**, Guild Publishing, London, p 129

When you find yourself craving it could mean allergies, but more often nature tells you that you are not getting enough of certain vitamins and minerals.

**Peanut Butter** This is definitely among the top ten, and it's not all surprising. Peanut Butter is a rich source of B vitamins. If you find yourself dipping into the jar often, it might be because you are under stress and your ordinary intake has become insufficient. Since 50 g. of peanut butter - a third of a cup - is 248 284 calories, you'll find it easier on your waistline to take a B-complex supplement if you do not want to gain weight.

**Bananas** When you catch yourself reaching for this fruit again and again, it could be because your body needs potassium. One medium banana has 555 mg. People taking diuretics or cortisone [which rob the body of needed potassium] often crave bananas.

**Cheese** If you're more a cheese luster than a cheese lover, there's a good chance that your real hunger is for calcium and phosphorus. [If it's processed cheese that you have been snacking on, you've been getting aluminium, too, without knowing it.] For one thing, you might try eating more broccoli. That's high in calcium and phosphorous, and a lot lower in calories than cheese.

**Apples** An apple a day does not necessarily keeps the doctor away, but it offers a lot of good things that you might be missing in other foods - calcium, magnesium, phosphorus, potassium - and is an excellent

source of cholesterol-lowering pectin! If you have a tendency to eat a lot of saturated fat, it could account for your apple craving.

**Butter** Most often vegetarians crave butter because of their own low-saturated-fat intake. Salted butter, on the other hand, might be craved for the salt alone.

**Cola** The craving for cola is most often a sugar hunger and an addiction to caffeine. The beverage has no nutritive value.

**Nuts** If you're a little nutty about nuts, you probably could use more proteins, B vitamins, or fat in your diet. If it's salted nuts you favour you could be craving the sodium and not the nuts. You'll find that people under stress tend to eat more nuts than relaxed individuals.

**Ice cream** High as ice cream is in calcium, most people crave it for its sugar content. Hypoglycaemics and diabetics have great

hungers for it, as do people seeking to recapture the security of childhood.

**Pickles** If you're pregnant and want pickles, you're probably after the salt. And if you're not pregnant and crave pickles, the reason is most likely the same. [Pickles also contain a substantial amount of potassium.]

**Bacon** Cravings for bacon are usually because of its fat. People on restricted diets are most susceptible to greasy binges. Unfortunately, saturated fat is not bacon's only drawback. Bacon is very high in carcinogenic nitrates. If you indulge in bacon, be sure you are ingesting enough vitamin C and A, D and E to counteract the nitrates.

**Eggs** Aside from proteins [two eggs gives you 13 g.] sulphur, amino acids, and selenium, egg lovers might also be seeking the yolk's fat content or, paradoxically, its cholesterol- and fat-dissolving choline.

**Cantaloupe (rockmelon)** Just because you like the taste might not be the only reason you crave this melon. Cantaloupe is high in potassium and vitamin A. In fact, a quarter of a melon has 3,400 IU vitamin A. Since the melon also offers vitamin C, calcium, magnesium, phosphorus, biotin, and inositol, it's not a bad craving to give in to. There's only about 60 calories in half a melon.<sup>1</sup>

**Olives** Whether you crave them green or black, you're likely to be after the salt. People with underactive thyroids are most often the first to reach for them.

**Salt** No guess-work here, it's the sodium you're after, Cravers quite possibly have a thyroid iodine deficiency or low sodium Addison's disease<sup>2</sup>. Hypertensives often crave salt, and shouldn't.

**Onions** Cravings for spicy foods can sometimes indicate problems in the lungs or sinuses.

**Chocolate**<sup>3</sup> Definitely one of the foremost cravings, if not the foremost. Chocoholics are addicted to the caffeine as well as the sugar. [There are 5 to 10 mg. of caffeine in a cup of cocoa.] If you want to kick the chocolate habit, try carob instead. [Carob also called St. John's Bread, is made from the edible pods of the Mediterranean carob tree.]

**Milk** If you're still craving for milk as an adult, you might need a calcium supplement. Then again, it might be the amino acids - such as tryptophan, leucine, and lysine - that your body needs. Nervous people often seek out the tryptophan in milk, since it has a very soothing effect.

**Chinese food** Of course it's delicious, but often it's the monosodium glutamate in the food that fosters the craving. People with salt deficiencies usually go all out for Chinese food. [MSG can cause an histamine reaction in some individuals. Headaches and flushings may occur. Most Chinese restaurants will now prepare your food without MSG if you request it.]

**Mayonnaise** Since this is a fatty food, it is often craved by vegetarians and people who have eliminated other fats from their diet.

**Tart fruit** A persistent craving for tart fruits can often indicate problems with the gall-bladder or liver.

**Paint and dirt** Children have a tendency to eat paint and dirt. Frequently this is an indication of a calcium or vitamin D deficiency. A hard re-evaluation of your child's diet is essential, and a visit to your paediatrician is recommended.

- 1) However, hypoglycemics should be careful with rockmelon. 1/3 medium contains 15 grams of carbohydrates which equals one exchange. Editor
- 2) Addison's disease is due to insufficient secretion from the adrenal cortex (outer layer of organ) causing electrolyte upset, diminution of blood volume, lowered blood pressure, anaemia, hypoglycemia, muscular weakness, gastro-intestinal upsets and pigmentation of the skin. Treatment is by way of administration of the hormones affected (chiefly hydrocortisone and fludrocortisone), which replaces cortisol.
- 3) William Vayda (1992), **Psycho-nutrition**, A Lothian Book page 185, mentioned how people thwarted in their love affair might go on a chocolate binge to replace phenylethylalanine in the brain produced from a neurotransmitter phenylalanine and rich in chocolate, together with theobromine. Perhaps chocoholics might benefit from a good love affair!

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## Recipes from The Low Blood Sugar Cookbook by Francyne Davis

### OLD MUFFINS

(Makes 6-8 Muffins)  
1 Cup sifted oat flour  
1/8 teaspoon of salt  
2 1/2 teaspoons of baking powder  
8 drops of noncaloric sweetener  
1 egg  
1/4 cup cold water  
2 tablespoons melted butter

Preheat oven to 425 degrees F.  
In a bowl, combine oat flour, salt and baking powder. Add liquid sweet-

ener, egg and water. Mix until smooth. Stir in butter. Pour into buttered muffin tins. Bake for 25 minutes.

### GRIDDLE CAKES (makes 2-3 servings)

1 egg, lightly beaten  
2 tablespoons salad oil  
1/2 cup milk  
1/2 oat flour  
1 1/2 teaspoon baking powder  
1/4 teaspoon salt  
Few drops noncaloric liquid sweetener

In a bowl, combine egg, salad oil and milk. Add remaining ingredients. Combine thoroughly. Cook by spoon-

fuls on a hot griddle until browned on both sides.

### COCONUTTY COOKIES (Makes about 12)

1/2 cup oat flour, 1 egg, slightly beaten, 1/2 cup unsweetened shredded coconut, 1/4 cup peanut butter, 1/8 teaspoon salt, 1 teaspoon noncaloric liquid sweetener  
1 1/2 teaspoon vanilla extract

Preheat oven to 350 degrees F.  
In a bowl, combine all ingredients. Mix well. Chill for 1 hour. Form dough into balls about walnut size.

Place on a greased cookie sheet. Press with a flat-bottom glass to form circles. Bake for about 12-15 minutes.

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## 1994 MEETING DATES

5th MARCH - 4th JUNE - 3rd SEPTEMBER - 3rd DECEMBER

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