

The Hypoglycemic Health Association

NEWSLETTER

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

By the time you receive this Newsletter you may be thinking of what you are going to do at Xmas. Well, the Association has a little Xmas party just **one hour** before the commencement of the talk by Dr Nimmi Chima. See the instructions at the top left-hand corner of page 2 and you have an opportunity to make somebody really happy!!

The cost of producing this Newsletter and hiring of a room at the YWCA is steadily rising and members are reminded, that the prompt receipt of membership subscriptions will keep us in the black. The Committee has also decided very reluctantly to delete the name from the mailing list of any member, who has not paid his fees by April each year. Please check your expiry date printed at the top right hand corner of the address label and send copy of the Application Form from page 12 to the Association together with your fees.

The Committee has also decided to encourage Professional members to make a tax-deductible contribution to the Association.

Over the years the Association has made much progress in educating the public and professionals about the impact of Hypoglycemia upon our health, and especially in mental health. Your continued support is required to continue this work.

Our Next Public Meeting will be at 2.00 PM
on Saturday, the 6 December 2003
at **YWCA**

5-11 Wentworth Ave, SYDNEY
and our guest speaker is
Dr Nimmi Chima

who will be speaking
on the subject of

**"Pain Management
without Drugs"**

Dr Nimmi Chima is one of those remarkable doctors, who has combined traditional Western medicine with various complementary disciplines. She has Post graduate Qualifications in Nutritional Medicine, Botanic Medicine, Homeopathy, Acupuncture, Bowen Therapeutic Technique, Relaxation Therapy and Hypnosis.

Researchers define chronic pain as a lasting pain that is unresponsive to conventional medical treatment for more than six months. As many as 86 million Americans experience chronic pain, according to the American Chronic Pain Association.

Furthermore, conventional medicine relies mainly on drug therapy for the relief of chronic pain, often leading to debilitating drug addiction.

Dr Nimmi Chima's discussion on pain to our Association should provide our members with valuable information about the alternative management of pain without recourse to drugs.

Christmas Party

Our next meeting at the YWCA, 5-11 Wentworth Ave, Sydney will start one hour earlier at 1 pm on 6 December 2003, to celebrate our Super Christmas Party.

Please bring along a plate of sugar-free foods. **Present:** The Committee asks everyone to participate in the Lucky Dip. Bring a wrapped present worth about \$5.00 with you and mark it "male" or "female". These will be placed in special bags as presents to your fellow members. If you don't you will not be disappointed!!

There will be presents for kids, and they are welcome.^o

Books for sale at the meeting

Sue Litchfield: **SUE'S COOKBOOK**
Dr George Samra's book

The Hypoglycemic Connection II is available at Dr Samra's surgery or PO Box 394, Kogarah NSW 2217. Fax: 612-9588-5290

Jurriian Plesman: **GETTING OFF THE HOOK**

This book is also available in most public libraries (state and university). By buying this book at the meetings you are supporting the Hypoglycemic Health Association.

The Newcastle branch of the Associa-

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

DISCLAIMER: The articles in this newsletter are not intended to replace a one-to-one relationship with a qualified health professional and they are not intended as medical advice. They are intended as a sharing of knowledge and information from research and experience in the scientific literature. The Association encourages you to make your own health care decisions based upon research and in partnership with a qualified health care professional.

tion are still meeting with the assistance of Bev Cook. They now meet at ALL PURPOSE CENTRE, Thorn Street, TORONTO. Turn right before lights at Police Station, the Centre is on the right next to Ambulance Station. For meeting dates and information ring Mrs. Bev Cook at 02-4950-5876.

Entrance donations at meetings

Entry donation is tax deductible and for non-members will be \$5, for members \$3 and family \$5. People requiring a receipt for taxation purposes will be issued when asked for it.

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 19 Princes Highway, Kogarah, Phone 9553-0084 or Sue Litchfield at (litch.grip@bigpond.com).

At the meeting on the 6 September 2003, **Noaomi Wilson** again won the lucky door prize. The raffle was won by **Jack van der Mark**. Thanks for **Marie Grady**, Lynn's mother-in-law for donating the raffle for this meeting. **Pat Parr** has donated a raffle, (beauty case) for the next december 2003 meeting.

Fund raising activities

We need money, ideas, donations, bequests (remember us in your will), **all donations over \$2 are tax deductible.**

Raffles

Conducting raffles is an important source of additional revenue for the Association. Raffle tickets are available at \$1 each or three tickets for \$2 at Dr George Samra's surgery. Donations for raffles would be appreciated. Items to be raffled should be on display at the surgery and will be raffled at the next public meeting of the Association.

The Kogarah support group meets every 3 months at 19 Princes Highway Kogarah (1st floor Dr. Samra's surgery) at 1.30 pm. The members of this support group meet every second Saturday of the months of February, May, August and November. The cost is \$ 2. Afternoon tea provided - family and friends welcome. For further information please telephone - Lorraine on 02-95209887 or Jeanette on 02-95259178

The Tasmanian Hypoglycemic support group. For members in Tasmania if you want to form a group or meet people with hypoglycemia phone Alison on 040 9966 385 A/hours or for more info (alternan@bigpond.com).

NEWS FROM THE KOGARAH SUPPORT GROUP

Carrot cake recipe which appeared in Sue's column in the last edition was one of ours. However there was a misprint in the quantity of oil. It should have read **three-quarter** of a cup of oil, not one-quarter. It is definitely worth trying. ALL SOY FLOUR can be used if desired, instead of some rice and some soy flour. Freeze in slices for a quick snack.

More recipes are available at our meetings, and also ideas for meals and snacks. Access to the web site for recipes suitable for Christmas, as well as everyday.

Do you prefer white rice? Basmati is low GI. Other low GI cereals include Barley and Buck-

wheat.

Have you purchased your copies of Dr Samra's new books?

They are for sale at his surgery. They can also be obtained from the web site, see **Dr Samra's Books**. Treat yourself to an early Christmas present. The information included is vital to every one of us.

The next Support Group Meeting will be in the new year, **on Saturday 14th February, 2004 at 1.30pm**, at Dr Samra's rooms (upstairs) at Kogarah. Diet recipes will be served for Afternoon Tea, after the meeting.

For further information and enquiries please ring **Jeanette 9525-9178 or Lorraine 9520-9887.**

Vegetarianism is harmless enough, though it is apt to fill a man with wind and righteousness

DRUG ADDICTION IS IT A DISEASE?

by the Editor

The idea that alcoholism is caused by an excess consumption of alcohol is prevalent, not only among alcoholics but also among those experts who set themselves up to help addicts.

Hence we find an extraordinary effort to force alcoholics to stop drinking by for example attending AA meetings or sending them to jail.

This approach is based on a confusion between symptoms and causes. It is like saying that hallucinations causes schizophrenia, or that excessive drinking of water is the cause of an undiagnosed diabetes, or that jealousy is the cause of a low self-esteem.

The other argument suggests

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Easing The Fear of Cancer: Part I

by
Roger French, Dip. Nutr.

Eighty-one per cent of Australians list cancer among their most feared diseases, according to a recent survey. Heart disease comes a distant second, arousing fear in only thirty-two per cent of people.

The fear of cancer is understandable and, unfortunately, modern medicine doesn't offer much hope. Scientific American recently featured a cover story entitled, 'The War on Cancer – It's Being Lost'. In the article, eminent epidemiologist, John C. Bailar, Chairman of the Department of Epidemiology and Biostatistics at McGill University, cited "the relentless increase in cancer deaths in the face of growing use of toxic chemotherapy." He concluded that scientists must look in new directions if they are ever to make progress against this unremitting killer.⁽¹⁾

This is in spite of billions of dollars being spent on cancer research annually. Part of the trouble lies in orthodox treatment. A past president of the American Chemical Society, Alan C. Nixon, PhD, wrote,⁽¹⁾ "As a chemist trained to interpret data, it is incomprehensible to me that physicians can ignore the clear evidence that chemotherapy does much, much more harm than good."

The World Health Organisation Cancer Program assesses that there are 10 million new cancer cases diagnosed around the planet each year and that this number will double by the year 2020.⁽²⁾ This represents an enormous amount of suffering caused by this most feared

of all diseases. In Australia, one in three men and one in four women will develop some form of cancer during their lifetimes, according to figures from the Australian Institute of Health and Welfare. However, the majority of these will be skin cancers, which are relatively accessible for treatment.

From Roger French's book: *"The man Who Lived in Three Centuries - The secrets to his freedom from illness and early aging"* Chapter 17

Cancer can't be blamed on genetics, at least not primarily. In Japan breast cancer is rare, with an incidence less than one-fifth of that in the United States, but when Japanese women move to the United States, before long their risk is the same as that of American women. The difference is not genetics – it's lifestyle, and particularly diet.

Which explains why Eric Storm remained safe from cancer, despite his many years on the planet. If cancer was in our genes, Eric's success would have been a matter of luck. From the evidence we are about to see in the following pages, there is no doubt that, once healed of his own life-threatening illness – heart disease – he *created* his low susceptibility to cancer. On top of that, he largely overcame the weakness of the lungs that he *did* inherit from his father.

In spite of all the uncertainties about the origins of cancer, the scientific evidence is overwhelming that it is a lifestyle disease, and this gives each of us the opportunity to gradually reduce our de-

gree of risk, just as Eric Storm did.

Here's What Causes Cancer

In contrast to the standard medical view, that the tumour is the disease, the wholistic view is that the tumour is merely the symptom of a body that is systemically unwell. This was explained lucidly by Dr Archie Kalokerinos, Dr James Reid and Ross Horne in a letter to the *Sydney Morning Herald*, 16-7-81, of which the following is an extract: "*Cancer is a slow process of degeneration of body chemistry which affects the entire body, and cancer growths, when they appear, are symptoms of the general state of diseased body chemistry.*"

It must be stated at the outset that, while genetic factors are not the *primary* cause of cancer, our health inheritance certainly does play a part. As a secondary factor, it determines our degree of susceptibility to adverse aspects of lifestyle. This applies not only to cancer, but to the broad spectrum of diseases.⁽³⁾

Scientific reviews published in 1999 give a reasonably consistent view of the causes of cancer. Here is a summary compiled from a number of reviews:

Dietary Factors account for approximately 40% of all human cancers. Key concerns with the modern diet are excessive calorie intake, high fat, meat and maybe dairy intake, and low intake of vegetables and fruits.

Smoking accounts for between 25% and 30% of all cancer deaths

and is the major avoidable risk factor for a number of cancers.

Chronic infections with 'onco-genic' viruses. Occur mostly in developing countries.

Hormonal factors, mainly reproductive hormones, influenced primarily by lifestyle.

Alcohol increases the risk of mouth and throat cancers. Even moderate intake appears to increase the risk of cancers of the breast and large bowel.

Man-made and natural chemicals including nitrosamines, heterocyclic amines and polycyclic aromatic hydrocarbons, along with some pesticides and food additives, and environmental pollution.

Some **pharmaceutical products**.

Radiation. Electromagnetic radiation from electrical appliances. Ionising and ultraviolet radiation.

Lack of physical activity.

Interestingly, researchers are now recognising that carcinogenic factors can act *synergistically*.⁽⁴⁾ This means, for example, that the danger of both high animal fat intake and smoking is many times greater than for either factor alone. When this is applied to the large number of possible carcinogenic factors, the implications are enormous. Conversely, the more beneficial lifestyle practices that we adopt, such as plenty of fruits and vegetables, adequate exercise and avoidance of chemicals, the more our protection will increase exponentially.

It is estimated that the incidence of cancer in middle and later ages could be reduced 80–90% simply by avoiding the risk factors that are avoidable.

TWO PROMINENT CANCERS – BREAST AND PROSTATE

In the USA, one woman in every eight will develop breast cancer

during her lifetime and, again, the researchers conclude that this is decidedly a lifestyle disease. High-calorie diets associated with rapid weight gain and obesity increase the risk, especially during post-menopausal years. A Harvard School of Public Health study of 95,000 female nurses found that a weight increase of 10 kg or more after age 18 was significantly associated with increased incidence of breast cancer in post-menopausal women.⁽⁵⁾ As with many other cancers, there is a strong correlation with excessive fat intake.

Alcohol is currently recognised as the most established dietary risk factor in this disease. A study of 300,000 women⁽⁶⁾ found that two to five alcoholic drinks every day increased the risk of breast cancer by 41% compared to drinking no alcohol.

Other carcinogens for breast cancer include heterocyclic amines and polycyclic aromatic hydrocarbons found in cooked meat.

Preventative approaches include increasing fruit and vegetable consumption, eating a low-fat diet, reducing cooked meat consumption and avoiding alcohol.

Prostate cancer is the most common malignancy in males. The strongest causative factor is believed to be total fat intake,⁽⁷⁾ followed by obesity, red meat consumption, deficiencies of zinc, selenium and vitamin E, and high cadmium intake.

Researchers have recently proposed why diets high in dairy products and meat are related to prostate cancer.⁽⁸⁾ The high intake of calcium and phosphorous in dairy products lowers the blood level of vitamin D, which lowers an important barrier to this cancer. Further, sulphur-containing amino acids derived from animal protein lower the acidity of the blood, which also depresses vitamin D

production.

EXCESSIVE CALORIE INTAKE

When calorie intake is consistently greater than calorie expenditure, the result is likely to be overweight. This can lead to insulin resistance in the body and an increase in the risk of hormone-dependent cancers. It also increases cellular proliferation and slightly increases body temperature, which tends to accelerate oxidative damage, including damage to DNA, the genetic blueprint in every cell.⁽⁹⁾

A British family health survey found a significant association between childhood energy intake and mortality from cancer. Rapid growth in childhood leads to earlier puberty which in turn increases the risk of breast cancer. The accumulated body fat in adulthood is related to cancers of the colon, kidney and endometrium.⁽¹⁰⁾

An earlier study (reference not available) found that women who consumed more than 2,700 calories a day had almost twice the risk of breast cancer as those who ate fewer than 1,900 calories daily.

TOO MUCH FAT

Excess fat in the diet, especially animal fat, is a major factor in many cancers including breast, bowel, skin and prostate cancers. Rancid fat is strongly carcinogenic and is much more dangerous than fresh fat.

In 1995 it was observed that reducing fat in the diet did not greatly reduce the incidence of breast cancer. However, other researchers believe that to make a difference to cancer risk, dietary fat must be drastically reduced from the typical 40% of total calories down to 20% or even 15%.

This is consistent with the low level of breast cancer in Japan referred to above. Dr Neal Barnard states⁽¹¹⁾ that the critical factor in the Japanese diet is that only about

15% of calories come from fat, in contrast to the United States where the fat content is in the range of 37–40%. The more fat consumed by women, he says, the greater the cancer risk.

This is partly to do with the female sex hormones, oestrogens, the principal one of which is *oestradiol*. Many breast tumours are ‘fuelled’ by oestrogens, and the amount of oestradiol produced is linked to the amount of fat in the diet. On high-fat diets, oestradiol production increases; on low-fat diets, it decreases.

People who consume plant foods exclusively have significantly lower oestrogen levels than people on meat-based diets. Further, with a high level of fat in the blood, more oestradiol breaks free from its carrier molecules and becomes biologically active.

Early puberty is also associated with increased risk of breast cancer. Over the last century and a half, the average age of puberty in girls in Western countries has dropped from about 17 years to around 12 or 13 years. This decrease in age parallels an increase in fat in the diet, with corresponding increases in oestrogen levels.

High-fat diets may also encourage the absorption of carcinogens into the body.⁽¹¹⁾ It has been observed that the carcinogens in cigarette smoke tend to be carried by fats in the blood.

Too much fat weakens the immune system. When the fat intake was reduced to 20% of total calories, the activity of the immune system’s natural killer cells (which destroy cancer cells) was greatly increased.⁽¹²⁾ People on vegetarian diets, which are typically lower in fat, have been found to have more than twice the natural killer cell activity of people on meat-based diets.

It appears that fats and oils in

excessive quantities, whether from animal or plant sources, impair the immune system,

Skin cancers are also promoted by excessive fat. In a two-year study of people with skin cancer, one half continued their normal diet averaging 40% calories from fat while the other half reduced the fat intake to approximately 20% of total calories. By the end of the study, the low-fat group fared much better than the high-fat group. The number of new pre-cancers was three times less and there were significantly fewer basal cell and squamous cell carcinomas in those on the reduced fat diet.⁽¹³⁾

There are good fats and bad fats. A review⁽¹⁴⁾ of fat type in relation to breast and colon cancer concluded that: saturated fats such as beef fat or lard, have a weakly enhancing effect; monounsaturated fats (omega-9) such as olive oil and the oils in nuts, have no significant effects; polyunsaturated oils (omega-6), such as sunflower oil, have a strongly promoting effect; the highly polyunsaturated omega-3 oils (such as fish oil and flaxseed oil) have a pronounced inhibitory effect on breast and colon cancer.

Interestingly, whether their intake was 40% or 10% of total calories, there was little difference in the effect of monounsaturated oils.

In view of the established health benefits of polyunsaturated oils, their cancer promoting effect comes as somewhat of a surprise. Israel has one of the highest ratios of polyunsaturated to saturated fat in the world, and yet there is a higher cancer incidence and death rate than in Western countries.⁽¹⁵⁾ The reasons may be that these oils aggravate insulin problems, and they oxidise to form free radicals more readily than saturated fats.

MEAT AND DAIRY PRODUCTS

In 1994 the *British Medical Journal* (issue of 25-6-94) reported that vegetarians are 40% less likely to die from cancer than meat eaters.

Dairy products are also implicated in cancer. Most population studies indicate that the higher the milk consumption, the higher the risk of breast cancer, and it makes no difference whether or not the milk is low fat.⁽¹⁶⁾ Ovarian cancer is also linked to milk consumption. A Harvard University study found that the one thing that women with this cancer had in common was that they had eaten dairy products much more frequently than women without the cancer.⁽¹⁷⁾

It was proposed that the culprit is milk sugar, *lactose*, which is digested to another sugar called *galactose*. When dairy consumption is high, galactose tends to build up in the blood and may then damage a woman’s ovaries. Some women have low levels of the enzymes that break down galactose, so their risk of ovarian cancer can be much higher than that of other women. The problem is not solved by using low-fat yoghurt or cottage cheese, because the problem is not the fat, it’s the lactose and galactose.

As mentioned earlier, there is a higher risk of prostate cancer with diets high in dairy products and meat.

Similarly, non-Hodgkin’s lymphoma has increased risk in older women who have diets high in red meat and animal fat.⁽¹⁸⁾

Cooking of meats can increase carcinogenicity. Frying, barbecuing, grilling and broiling induce the formation of chemicals called *heterocyclic amines*, which are potentially carcinogenic and mutagenic (damage genes).⁽¹⁹⁾

So extensive is the evidence implicating red meat in cancer that in 1997 the British government’s

Department of Health issued a warning.⁽²⁰⁾ It had concluded that people who eat 140 gm of red meat a day run an increased risk of cancer, while those who eat an average of 90 gm a day should *still* cut down.

In a similar warning, the Department of Nutrition and Food Studies at New York University announced that study after study had shown that people should eat very little meat.

LACK OF FIBRE

Besides excessive fat, another major problem with the typical Western meat-based diet is lack of fibre. All animal foods – meat, poultry, fish, dairy products and eggs – are devoid of fibre. In fact, fibre is the difference between the plant and animal kingdoms. If a living thing contains fibre, it's a plant; if it doesn't, it's an animal (ignoring bacteria and viruses).

Back in the 1970s, the British Medical Research Council established that lack of fibre in the diet is the major cause of bowel cancer, as well as a significant cause of other conditions including appendicitis, diverticular disease, haemorrhoids and so on. The chronic constipation that goes hand in hand with lack of fibre is akin to a slow form of self-poisoning.

The typical fibre content in the Western diet is around 15 gm a day, which is about half of the 30–40 gm that we need for optimum bowel health. An early CSIRO study found that women who ate more than 28 gm of fibre a day had half the risk of breast cancer compared to those who ate less than 14 gm daily.

Besides stimulating bowel movements and reducing the level of oestrogen by trapping it in the gut, fibre has other benefits. The European non-digestible fibre project⁽²¹⁾ reported in February 1999 that there is strong evidence that fibre:

- (a) increases the number of friendly lactic-acid bacteria and bifidobacteria in the large intestine;
- (b) increases calcium absorption;
- (c) benefits lipid metabolism;
- (d) is preventative against colon cancer.

MINERAL AND VITAMIN DEFICIENCIES

Approximately 40 minerals, vitamins and other micronutrients are required in the human diet. Deficiencies of some appear to lead to damage to DNA, creating the potential for cancer. Those recognised so far are deficiencies of the vitamins folic acid, B₆, B₁₂, niacin, C and E, and the minerals iron and zinc.⁽²²⁾ Half the population may be deficient in at least one of these nutrients.

Micronutrient deficiencies may explain why the quarter of the population that eats the least fruits and vegetables has approximately double the cancer rate compared to the quarter that eats the most.

Another study of patients with head and neck cancers found that 50% were zinc deficient.

Numerous studies have found that lower selenium intake is associated with higher cancer rates.⁽²³⁾ In areas where selenium levels are low in the soil, supplementation reduces the risk of lung, colorectal and prostate cancers. In Australia, selenium is available only on medical prescription. The richest food sources of this mineral were given in the previous chapter.

There is evidence that intakes greater than the recommended daily allowances for certain nutrients reduce the risk of certain diseases, according to the Council for Responsible Nutrition, Washington DC.⁽²⁴⁾ This applies to folic acid, vitamin E, selenium, calcium and chromium. In contrast, very high intakes of vitamins A, D, ni-

acin, B₆ and selenium can produce adverse effects.

ALCOHOL

As already mentioned, women who consume two to five alcoholic drinks daily almost double their risk of breast cancer. If they are pregnant, just one or two alcoholic drinks *per week* during the last six months of pregnancy may considerably increase the risk that the child will develop leukaemia.⁽²⁵⁾ The risk of rare acute myeloid leukaemia (AML) goes up 10 times, and that of the more common acute lymphoid leukaemia (ALL) increases more than twice.

The connection between alcohol and mouth and stomach cancers is well established. Dr Michael Fenech of the CSIRO Division of Human Nutrition in Adelaide reported to a 1996 wine and health conference that three drinks a day increase the risk of oral, pharyngeal, throat, stomach, breast and possibly colo-rectal cancers.⁽²⁶⁾ It is also well known that chronic excessive alcohol consumption is associated with liver cancer.

Taking a firm stand, the American Cancer Society warned in 1996 that people would be wise not to drink even moderate amounts of alcohol because of the risk of cancer.

COFFEE

A suspicion that coffee may be associated with cancer is not confirmed. Earlier controversial reports linked five cups per day with increased risk of lung and pancreatic cancers, and 'excessive' coffee consumption with bladder and kidney cancers.

However, in 1997 the University of California reported that of the 1,000 chemicals in coffee, 28 had been tested and 19 of these found to be rodent carcinogens.⁽²⁷⁾ This does not indicate that coffee can cause cancer, because the usual levels of chemicals tested on ro-

dents are unrealistically high. Nevertheless, this 'drug' deserves to be treated with considerable caution.

GENETIC ENGINEERING OF FOODS

Genetic engineering of foods is so new that any long-term effects on human health are totally unknown. However, the first glimmerings of a possible contribution to cancer have appeared.

In tests on cows fed a diet of genetically modified Roundup Ready soya beans, their milk was found to contain more fat and more oestrogen than the milk of cows fed a normal diet. A press release concerning the study noted that the residue is traceable in infant soy formulas.⁽²⁸⁾ Oestrogen in excess, and particularly when ingested by infants, can increase the risk of breast cancer and prostate cancer, along with reducing sperm counts and causing feminisation of males.

TOBACCO SMOKING

Smoking is the most important *avoidable* risk factor for cancers of the mouth, larynx, pharynx, throat, stomach, lung, liver, pancreas, kidney, ureter, bladder and cervix.⁽²⁹⁾ Tobacco accounts for 20–30% of all cancers and between 25–30% of all cancer deaths.

So widespread in Australia is concern about smoking that little need be said here. It accounts for about 80% of lung cancers, while *passive* smoking can be significant in asthma, bronchitis, heart disease and lung cancer. An early report found that a person who is a non-smoker and has lived with just one smoker during childhood and adolescence, has double the risk of lung cancer.

The risk of cancer is even passed from a smoking mother to her baby. A University of Minnesota study⁽³⁰⁾ found that a nicotine-derived chemical that is a powerful car-

cinogen and unique to tobacco is present in the urine of babies whose mothers smoked during pregnancy. The President of the AMA was quoted in the press as saying that this is the first hard evidence that a baby is exposed to cancer-causing chemicals as a result of the mother smoking.

COOKING IN THE KITCHEN

According to a CSIRO researcher, there is now strong evidence that cooking produces a significant proportion of the carcinogens in our diet.⁽³¹⁾ The damage usually occurs at temperatures in excess of 150(C (boiling point is 100(C) and/or when food browns. Common examples are:

Polycyclic aromatic hydrocarbons (PAHs) are produced during charcoal barbecuing of fatty foods or where meat is otherwise cooked over an open flame or smoked. The common PAH, **benzo(a)pyrene**, is carcinogenic and can be present at high levels in barbecued sausages and steak.

Frying, barbecuing, grilling and broiling induce the formation of chemicals called *heterocyclic amines* which are potentially carcinogenic and mutagenic (damage genes).⁽¹⁹⁾ Levels of HAs can be minimised by shorter cooking time and keeping the temperature below 150(C).

The browning of carbohydrate-rich foods such as toast or cakes. This has a weak effect. It would be wise to toast lightly rather than 'burn it to a cinder'.

Cooking oil heated to a high temperature, as is typical in deep-frying. This causes oxidation of fat, producing aldehydes, some of which are extremely toxic.

CANCER-CAUSING CHEMICALS

Vast numbers of natural and unnatural chemicals are toxic and potentially capable of causing can-

cer. Consequently, there is currently a great emphasis on minimising our exposure to polluting chemicals and pesticides. Yet researchers at the University of California claim that this is not a significant problem.⁽³²⁾

They say that 99.99% of the pesticides we eat are produced by the plant itself and are natural, the remaining 0.01% being man-made agricultural pesticides. Nevertheless, as much as half of these natural pesticides that have been tested caused cancer in rodents. This is attributed to the fact that the chemicals are tested at the *maximum tolerated dose*, an extremely high level, but this does not mean that they are carcinogenic at the trace levels consumed by humans. Rather this is a worst-case risk assessment. Although many synthetic pesticides have been linked to cancer – 16 organochlorines to breast cancer alone – we simply do not know exactly what danger they pose.

However, a CSIRO researcher thinks the danger of all man-made pesticides is considerable⁽³¹⁾ because:

The adverse effects of some of these chemicals at high intakes have been clearly shown.

Some accumulate in our bodies to dangerously toxic levels.

All toxic chemicals are increasing the burden of gene-damaging agents that are already challenging our health.

A good example of gross danger is from **dioxin**, a by-product of pesticide manufacture, which is linked to cancers at the stunningly low concentration of 2.1 parts per quintillion (one quintillion = one million million million).

In 1989 the US Natural Resources Defence Council (NRDC) alleged that some 5,500–6,200 children may develop cancer later in life from exposure to just eight pesticides during their preschool

years.⁽³³⁾

One of the most carcinogenic *natural* chemicals is *aflatoxin* which is sometimes found in mouldy peanuts. Because it is so strongly carcinogenic, government food inspectors test peanuts for it regularly.

Much milder is the carcinogenic tendency with cured meats. Ham, bacon, corned beef, red frankfurter sausages, hot dogs, salami, etc, are cured with sodium nitrite, some of which converts in the stomach to carcinogenic nitrosamines.

The chlorine added to town water supplies for disinfection has its problems. Traces convert to chloroform which is carcinogenic. Long, hot showers also produce traces of chloroform. The solution is simple. Drink purified water, fit a shower filter and keep the bathroom windows wide open during showering, with exhaust fan on if available.

Some medical drugs have turned out to be carcinogenic. One of the best known is *diethylstilboestrol* (DES), a synthetic oestrogen. In the 1970s, six Australian girls developed vaginal cancer as a result of their mothers taking this drug, and numerous cases resulted in the US. The cancer took 10 to 20 years to develop.

The household pollution that results from an *unflued* heater burning oil, gas or coal can double the risk of cancer of the voice box, according to a German cancer expert.

Certain chemicals, including some medications, indirectly contribute to skin cancer. The more common ones are listed in Chapter 13.

Asbestos has long been known to cause a very nasty cancer, mesothelioma, which takes, on average, 37 years to develop. Fibreglass may be in a similar category. In 1994 the US FDA listed fibreglass as a likely carcinogen for lung cancer. As with asbestos, there

are fibres so fine – less than 3 microns – that they can enter the tiny air sacs of the lungs and remain there indefinitely. This does not necessarily signify danger for people living in homes where there is fibreglass insulation in the roof, but it would be wise to close any air gaps in the ceiling and periodically check the condition of the fibreglass.

MAN-MADE RADIATION

In 1982 the incidence of brain tumours per 100,000 people was 6.4 cases for males and 4.0 for females, according to the West Australian Cancer Registry.⁽³⁴⁾ Ten years later the levels had risen to 9.6 for males and 6.5 for females, paralleling the rapid rise in the use of mobile phones.

In another study⁽³⁵⁾ the incidence of lymphoma in mice doubled after exposure to radiation equivalent to two half-hour mobile phone calls daily for 18 months.

Research shows that nearly three-quarters of the energy from the antenna of a mobile is absorbed by the head. This radiation is the same kind of energy that microwave ovens use to cook food and is thought to create hot spots in the brain.

X-rays are well established as a cause of cancer, even diagnostic use being risky. An Australian radiologist wrote in 1996⁽³⁶⁾: “Patients are developing cancer from radiological tests of unproven and sometimes unlikely benefit.” The radiologist estimated that about 270 Australians die each year from cancers caused by diagnostic tests involving radiation.

Even the electromagnetic radiation emitted by power lines and household appliances may contribute slightly carcinogenic effects. For details of safe distances – which are often easy to achieve – see Chapter 12.

DOES STRESS MATTER?

The brain controls every aspect of bodily function and chemistry and can influence the progress of disease. Stress, in turn, affects the brain, so there is a clear connection between stress and disease.

How much we are affected by stress depends on the type of stress, personality and attitude, which determine how a person copes with stress and how long the stress persists – whether temporary or prolonged.

There is good evidence that stress can compromise the immune system, which is very important in cancer because the immune system produces various cells, particularly *natural killer cells*, which destroy many types of cancer cells.

Long-term stress, such as ongoing unresolved grief, causes depression of the immune system. Studies have found that cancer patients are more likely to have experienced major life stresses in the period before their diagnosis than are people without cancer. Among 41 women who were subsequently diagnosed with breast cancer, the incidence of extremely stressful life events was three times higher than among women with no malignancy.⁽³⁷⁾

Among patients who already had cancer, those who experienced high levels of stress were more likely to relapse or die than those with little stress.

However, other studies have found no such relationship, and the studies overall have led the author of this report, Sydney psychologist Sarah Edelman, to conclude that we do not yet know for sure the degree to which stress affects the development of cancer.

Attitudes can have powerful effects. A detailed study of 2,000 people with depression showed a twofold increase in cancer over a 17-year period. When a person becomes unemployed, separates from a partner, etc, the resulting

depression compromises the immune system, and if this is long term it can be dangerous, depending on how it is handled.⁽³⁸⁾

Deep, ongoing resentment eats away at inner harmony and can contribute to cancer. Harboring anger, spite, fear or resentment can be destructive in the long term.

Early research at Kings College Hospital in London found that a major predictor of breast cancer is suppression of feelings. Women who rarely lost their tempers had a significantly increased risk of breast cancer.

Some people with cancer become obsessed with it and tend to talk of nothing but cancer. Eventually a cancer identity becomes established at a subconscious level. Healing is then going to be much more difficult.

When a doctor says, "You have X months to live," this 'pointing of the bone' can have a very powerful effect on the person's beliefs and they often die on cue.

Fortunately, attitudes and beliefs can be changed, and there are also ways of improving a person's capability for handling stress. These will be discussed later in this chapter.

How Cancer Begins

The mystery of how normal cells become cancer cells is gradually being solved. It is to do with genetic damage – not so much whether we inherit a particular gene, but whether the genes that we have inherited become damaged.

The vital component that is damaged is DNA, the chemical blueprint in genes. The form of damage is oxidation and a major cause of that damage is reactive oxygen (technically referred to as 'reactive oxygen species' or, more commonly, 'free radicals'). Free radicals are electrically-charged molecules which pass their charges on to other molecules and cause a

chain reaction of damage. It appears that oxygen free radicals tend to initiate the reactions and then other molecules are turned into free radicals.

In healthy living cells, reactive oxygen species are formed continuously during the process of respiration in the cells.⁽³⁹⁾

Although the body is well equipped to repair genetic (DNA) damage, the repair processes are usually less than 100% efficient. Despite even extensive repair, oxidised DNA is usually abundant in human tissues. Significantly, damaged DNA is particularly abundant in tumours. Studies have found that the damage rate may be up to 10 modifications in each cell every day, so the damage accumulates with age.

The CSIRO Division of Human Nutrition believes⁽³¹⁾ that this increase in genetic damage with age is due to the cumulative effects of free radical damage and dietary and environmental chemicals that damage genes. The great differences between individuals in susceptibility to all illnesses could be due to differences in true heredity and/or to lifestyle factors.

Cancer is fundamentally an oxidative process and many types of cancers depend on the conversion of particular molecules in the cells or carcinogenic chemicals to oxidised forms. The oxidation is caused largely by *free radicals*. Interestingly, both chemotherapy and radiotherapy that are used to treat cancer cause more oxidation.

The vital question is, what causes free radicals to form? It must be pointed out that the immune system routinely uses free radicals to destroy foreign invaders, so they are a normal part of a healthy body. When free radicals cause genetic damage and disease, it is because they are in vastly excessive numbers. So the real question is, why the excess?

Ionising radiation is a pure

source of reactive oxygen species, while tobacco smoke has been found to increase the DNA damage by 35–50%.⁽³⁹⁾ Other well-known causes include: many polluting chemicals including the hydrocarbons from petroleum; many pesticides; the chlorine in town water supplies; iron in excess of the body's needs; amines and nitrates.

The inclusion in this 'bad' list of the essential nutrient, iron, is rather surprising, yet the effects of excess iron are so significant that the increased incidence of testicular cancer this century has been attributed to the increasing iron content of the Western diet.

The next vital question is, can our bodies defend themselves against oxidative damage by excessive free radicals?

The answer is yes. The body is, in fact, equipped with very powerful defences against free radical damage and this is largely through *antioxidants*, which are consumed in the diet or made within the body, and *enzymes*.

The key antioxidants in the diet are the carotenoids, vitamin A which we make from a carotenoid, vitamin C, vitamin E and the trace minerals selenium and zinc. The prominent enzymes that destroy free radicals are called *superoxide dismutase*, *glutathione peroxidase* and *catalase*. Other defenders include hormones (particularly melatonin) and a host of other natural compounds such as those included in grape seeds and skins and in the herb Ginkgo biloba.

Vitamin E has been extensively researched and there is strong evidence that it is beneficial at much higher intakes than the current Recommended Daily Allowances.⁽⁴⁰⁾ Vitamin E is especially required to protect unsaturated fats against oxidation. The least amount found to inhibit oxidation of fat is 40 IU/day, with 60 IU/day the minimum to enhance immune response.

Up to 800 IU/day has been found to be beneficial. The researchers suggest an intake of 135–150 IU/day. To obtain this amount from food, we would need to consume daily almost a kilogram of almonds, or 150 grams of soya oil, or 55 grams of wheatgerm oil, each of which would be a harmful quantity of food.

The minerals copper, zinc and selenium form an intricate relationship to destroy free radicals.⁽⁴¹⁾ Superoxide radicals are reduced to hydrogen peroxide by superoxide dismutase enzymes in the presence of copper and zinc co-factors. The hydrogen peroxide is then reduced to water by the selenium-containing glutathione peroxidase enzyme. On the other hand, excess of these trace elements can be toxic, so a fine balance is required.

DEFENCE AGAINST FOOD TOXINS

We are well equipped to defend ourselves against natural and man-made toxins in food. The CSIRO⁽³¹⁾ lists our defences as:

Our senses warn us of the unpleasant or offensive smell and taste of toxic chemicals (except where toxic chemicals are manufactured to be odourless and tasteless).

The first tissue to come into contact with toxic chemicals, the lining of the digestive tract, is continually being shed.

Antioxidants and enzymes in the gut and liver detoxify chemicals.

As a last line of defence, bodily cells are capable of repairing moderate genetic damage, as mentioned above.

Antioxidants from the diet protect against free radical damage.

Specific foods, such as garlic, have powerful anti-cancer properties.

There is plenty that we can do to minimise exposure to man-made chemicals and radiation. Various measures of avoidance were

spelled out in Chapters 11 and 12.

Making Ourselves Relatively Safe From Cancer

In the light of what has been said so far, the option is plainly available to each of us to reduce greatly the risks of developing cancer. It's a matter of minimising exposure to carcinogenic substances and influences and taking positive steps to strengthen our defences. Chapters 11 and 12 gave the appropriate guidance in relation to chemicals and radiation. What follows now is about diet and other forms of protection. The starting point is antioxidant defences, and these depend on what we eat, particularly an abundance of fresh vegetables and fruits.

FRESH VEGETABLES AND FRUITS

Numerous studies have shown that a diet rich in vegetables and fruit is associated with a decreased risk of cancer.⁽⁴²⁾ The benefits are particularly evident for citrus fruits, carrots, leafy green vegetables, cruciferous (cabbage family) and leek vegetables (garlic, onions, etc).

The review of these studies revealed that a great number of plant constituents that were originally thought to be non-nutrients are actually cancer preventatives. They include carotenoids, flavones, phyto-oestrogens, terpenes, plant sterols, saponins, sulphides, glucosinolates, protease inhibitors and phenolic acids. Certain substances in fermented foods are also protective.

The anti-cancer effects of these substances appear to be limited to the early stages of the development of cancer, so it is important to start prevention as early in life as possible.

A high consumption of cruciferous (or Brassica) vegetables is strongly protective. These include cabbage, cauliflower, broc-

coli, Brussels sprouts and kale. The most consistent benefit was for lung, stomach, colon and rectal cancers, and a weaker effect was found for prostatic, endometrial and ovarian cancers.⁽⁴³⁾

While researchers have found it difficult to determine which constituents of fruit and vegetables provide protection, they have observed that the carotenoids, which are powerful antioxidants, have very positive effects. One of them, lycopene, which colours tomatoes and watermelon red, has been specifically implicated in preventing cancers of the prostate and gastrointestinal tract.⁽⁴⁴⁾

Flavonoids occur ubiquitously in plants, some being strongly antioxidant and inhibiting tumour development at various stages. For the technically minded, there are over 4,000 different flavonoids, categorised into flavonols, flavones, catechins, flavanones, anthocyanidins and isoflavonoids. The well-known quercetin is a flavonol that is strongly antioxidant. Some researchers believe that the flavonoids are largely responsible for the protection against cancer provided by fruits and vegetables.

Yet another class of anti-cancer constituents is monoterpenes, found in the oils of citrus and other plants. An example is limonene, which occurs in the peel of oranges and other citrus [not that eating peel would be a Natural Health recommendation].

In addition to whole vegetables and fruits, consuming the juices of vegetables dramatically increases the supply of their anti-cancer nutrients. The vegetables to use would be those that are commonly referred to as green, yellow and red (of the 'reds', beetroot in particular). A good start would be the carrot-and-chlorophyll juice referred to in Chapter 15, and the juices of other vegetables mentioned in this section could be included.

Giving its seal of approval to fresh fruits and vegetables, the World Health Organisation is urging people to eat more of these foods in order to prevent cancer.

ADEQUATE FIBRE

If the diet is entirely plant-based, every food consumed – except juices and extracted oils – will contain its natural fibre content, and fibre intake should be adequate or close to it.

The soft fibre in fruits and vegetables has an important role in the intestine, as does the tougher insoluble fibre in the bran of grains. A study of wheat bran as a source of fibre found that it led to a 40% lower incidence of colon tumours compared to a diet containing cellulose only.(45) The use of whole grains rather than foods based on white flour and white rice is an important protection against certain cancers. Adequate fibre prevents constipation and protects against bowel cancer.(21)

VEGETARIAN DIET

The research quoted above, which shows that vegetarian diets almost halve the risk of cancer, makes it clear that adopting vegetarian eating is a significant step towards reducing the risk of cancer.

This means replacing the protein in flesh foods with plant proteins, namely, legumes, nuts and seeds. In addition, small quantities of free-range eggs and dairy products would be tolerable.

The key requirement for protein is that there is neither too much nor too little. A nice balance is approximately 100 grams daily of protein-rich food. (This is not the amount of pure protein, it is the amount of protein-rich food served on the plate.) If flesh food is to be included, the better kind is deep-sea fish containing the valuable omega-3 fats.

EAT LOW-ISH FAT

To avoid the dangers of cancer, heart disease, diabetes and other diseases associated with the high 40% fat content of the typical modern diet, it is necessary to get the fat level down to 20% or even 15% of total calories. With some life-threatening illnesses, a level of 10% (as demonstrated by Nathan Pritikin with heart disease) has been observed to enable recovery. On the other hand, it is important to have some fat, as it is an essential nutrient and carries fat-soluble vitamins.

Whatever fat is eaten, it is critical that it is fresh and not rancid. Rancid fat is oxidised and is a major contributor to a number of degenerative conditions.

The major sources of fat in the Western diet are fatty cuts of meat, butter, margarine, cooking oils and whole-milk dairy products. Nuts and seeds (sunflower, sesame, pepitas, linseed) are high in good quality fat and are not usually eaten in excessive quantities. As demonstrated in the great Lifestyle Heart Trial, conducted by Dr Dean Ornish of the University of California, to achieve low-fat, the diet needs to be vegetarian (or very close to it). It would comprise mainly fresh fruits and vegetables, whole grains and legumes such as soya beans, lentils, kidney beans, chick peas, lima beans and so on. Small amounts of eggs and dairy products would be tolerable. This is the way of eating spelled out in the Dietary Guidelines in Chapter 7.

To be Continued next Newsletter.

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Continued from page 2

that personality leads one to become an alcoholic or drug addict. This is the foundation from which the 'psychological' treatment modality derives, leading to an emphasis on 'talk therapy'. This is perhaps the major factor in the failure of most conventional drug treatment programs.

It is not personality that causes addiction, but rather that personality changes as a result of addictive physical disease. Thus personality is damaged because of brain damage and not the other way around.

Recent studies have revealed that alcoholics have been found to have a genetic mutation to certain enzymes converting acetaldehyde - a by-product of alcohol - and some neurotransmitters, serotonin and dopamine, to tetrahydroisoquinoline (THIQ), which is an opiate like substance. THIQ sensitizes a person to alcohol, increasing its tolerance and addiction.(1)

Another Fin tyrosine kinase mutation has also been found to sensitize people to alcohol (2), although this has recently been disputed. (3)

Although genetic influences on alcoholism is indisputable, it fails to explain other addictions to different drugs. Nor does this information helps to generate a practical rehabilitation program for addicts. Addicts, as well as people suffering depression and anxiety attacks, have been found to suffer from insulin resistance (hypoglycemia) and a treatment program including the hypoglycemic diet should be more effective.

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Publicity Officer

The Association is looking for a person with a computer and internet access who is willing to become our Publicity Officer (PO). The aim is to advertise our meetings in local Newspapers. It is not an arduous task as the PO should contact the editors of these local newspaper and ask them to put our ads in their "Community Events". This can be done by just sending emails to the editors on the PO's data base, advising them of our meetings.

The PO is free to think of other means to publicize the activities of our Association. He/she will be working in close cooperation with the Editor, Jur Plesman.

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BEQUEST TO THE HYPOGLYCEMIC HEALTH ASSOCIATION OF AUSTRALIA

If you would like to include a bequest to the Hypoglycemic Health Association of Australia in your will, the following options will guide you in its wording.

Option 1: I devise the sum of \$..... to the Hypoglycemic Health Association of Australia for the general purposes OR for the specific purpose of such purpose being consistent with the aims and objectives of the Hypoglycemic Health Association of Australia.

Option 2: (for a proportional bequest) I give the Hypoglycemic Health Association of Australia for its general purposes or the specific purpose of per cent of my estate .

The gift you make to the Hypoglycemic Health Association of Australia will be an enduring record of you.

THE HYPOGLYCEMIC HEALTH ASSOCIATION

P.O. BOX 830, KOGARAH NSW 1485

MEMBERSHIP APPLICATION

PLEASE PRINT

Surname: _____

First Name: _____

Address: _____

Town/City: _____ **Postcode:** _____

Phone: _____ **Age:** _____

| | | | |
|------------------------|----------------|--------------------------|-------------------------|
| Membership | | <i>Please Tick</i> ✓ | |
| \$22.00 pa | | | |
| Pensioners \$16.50 | RENEWAL | <input type="checkbox"/> | Occupation _____ |
| (incl GST) | NEW | <input type="checkbox"/> | _____ |
| Life Membership | MEMBER | <input type="checkbox"/> | |
| \$200 | | | |

Do you have hypoglycemia? YES/NO Does a family member has hypoglycemia? YES/NO

My Email Address:

2004 MEETING DATES ON FIRST SATURDAYS OF MARCH - JUNE - SEPTEMBER - DECEMBER