Silent Spring Revisited:

Living in a toxic world

27 pages

A public lecture given by Robert Anderson PhD

at the request of the New Zealand Vegetarian Society

www.vegetarian.org.nz/content/

Sadly, Bob died in December 2008. In the previous decade, he had given lectures by public request on a range of scientific, environmental, health and social justice issues throughout New Zealand and under the auspices of several groups including Physicians and Scientists for Global Responsibility (PSGR), now Physicians and Scientists for Global Responsibility (PSGR), and the Theosophical Society NZ.

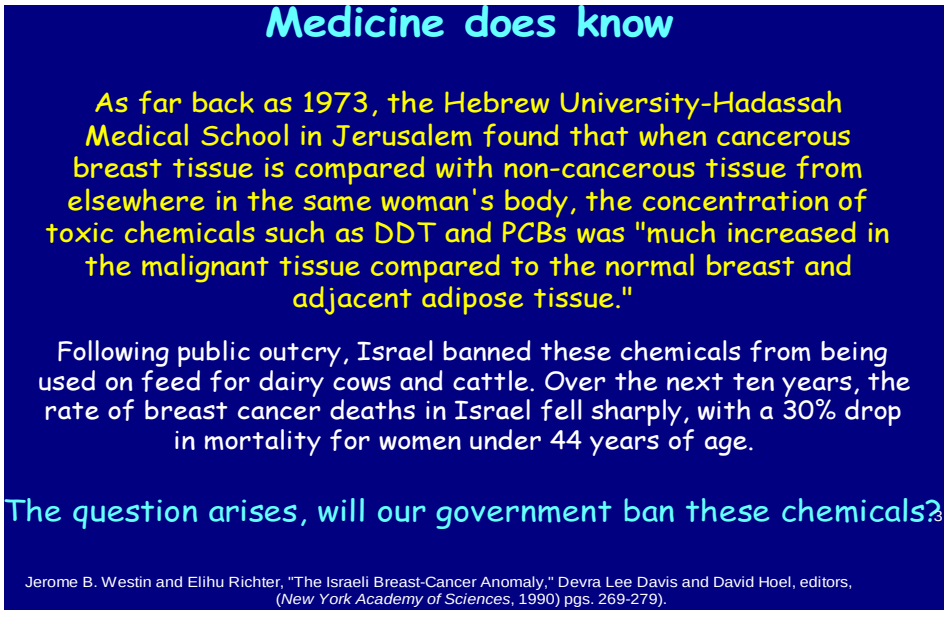
I first want to talk about two women who, for me, are nothing short of heroines. You may already know the name, Rachel Carson. The other name you may not know, Dr Theo Colborn. Both were scientists and incredibly far-sighted. Both wrote seminal books and both were vilified and ignored.

Rachel Carson (1907-1964) was best known as the author of *Silent Spring*. At the time of her one hundredth birthday, the most concrete proof of her book's relevance is that in the previous five years it had sold 150,000 copies. Not bad for a book that was over 40 years old.

Theo Colborn PhD, is President of The Endocrine Disruption Exchange and Professor Emeritus at the University of Florida, Gainesville. She has been awarded the Blue Planet Prize (2000), the Norwegian Rachel Carson Prize (1999), the Society of Toxicology and Environmental Chemistry's Rachel Carson Award (2003), and Time Magazine's Environmental Heroes Award (2007).

Humankind now faces the full consequences of ignoring the warnings that these scientists gave us.

We have threatened the fertility of humankind and our survival as a species. Male sperm counts have dropped 50% in recent decades, while women are suffering dramatic increases in hormone–related cancers, endometriosis and other food and chemical induced disorders.

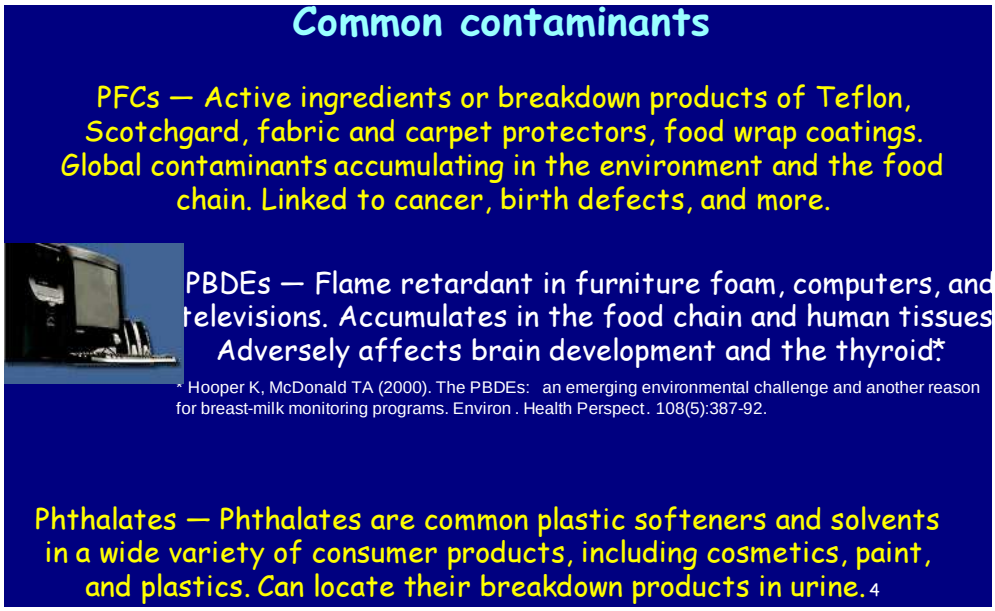


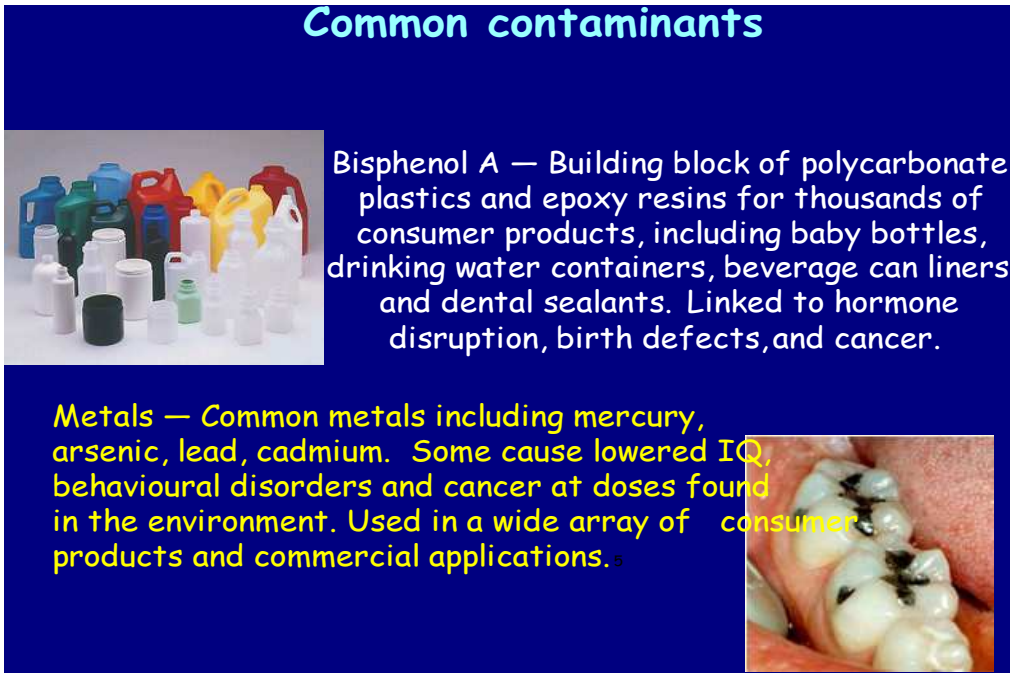
Hollywood has picked up on this. 'The Children of Men' is based on the novel by P D James of the same title. Set in 2027, it is 18 years since the last baby was born.

Half a century ago, Rachel Carson's book, *Silent Spring*, warned the world that man-made chemicals were taking a deadly toll on nature and wildlife.

Thirty years later, Dr Colborn wrote of the worsening situation, that the effects were devastating the human immune system. She also shocked the scientific world by showing that the concentrations to do so were almost *un*measurably small. We are talking here of *parts per trillion*. "Just the smell of the stuff" is almost sufficient to seriously disrupt our hormonal pathways. Parts per trillion is about three drops in an Olympic swimming pool.

Let me illustrate some common contaminants for you.





Early life exposure heightens concerns over health risks

- EPA studies show that children from birth to age two are 10 times more sensitive to carcinogens than are adults (EPA 2005.)
- A study found that children may be up to 164 times more sensitive than adults to neurotoxic organophosphate pesticides. (Furlong et al. 2006.)
- Research demonstrated that chemicals can confer toxicity four generations after exposure by forcing permanent, heritable changes in gene expression that change the body's ability to excrete toxic chemicals. (Anway et al. 2005.)

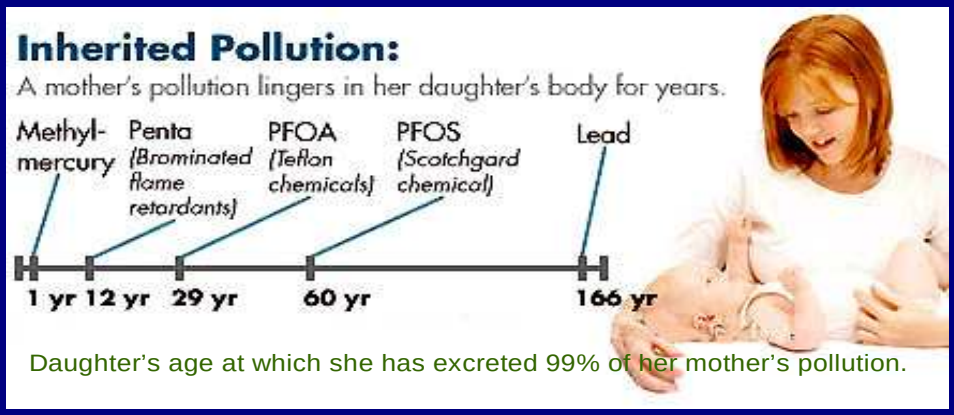
Even in the face of this growing evidence of health risks from chemicals, particularly for children, governments are reluctant to act.[6]

Healthy survival in our modern world is becoming more and more difficult. Truth has been overwhelmed by fiction in the world of health. Not only must we navigate processed foods, but also contend with the growing presence of industrial and agricultural toxins. This is particularly difficult for parents as advertising of the worst food items is, more often than not, aimed directly at children from the TV Screen. Increasingly, there is research demonstrating the dangers we face.

One startling study was the "Mother Daughter Study" carried out by the EWG (Environmental Working Group) in Washington. Tests commissioned by the EWG on four mothers and their daughters found that each of the eight women's blood or urine was contaminated with an average of 35 chemicals, including flame retardants, plasticisers, and stain-proof coatings. These chemicals are found in furniture, cosmetics, fabrics, and other consumer goods … and they have never been tested for safety.

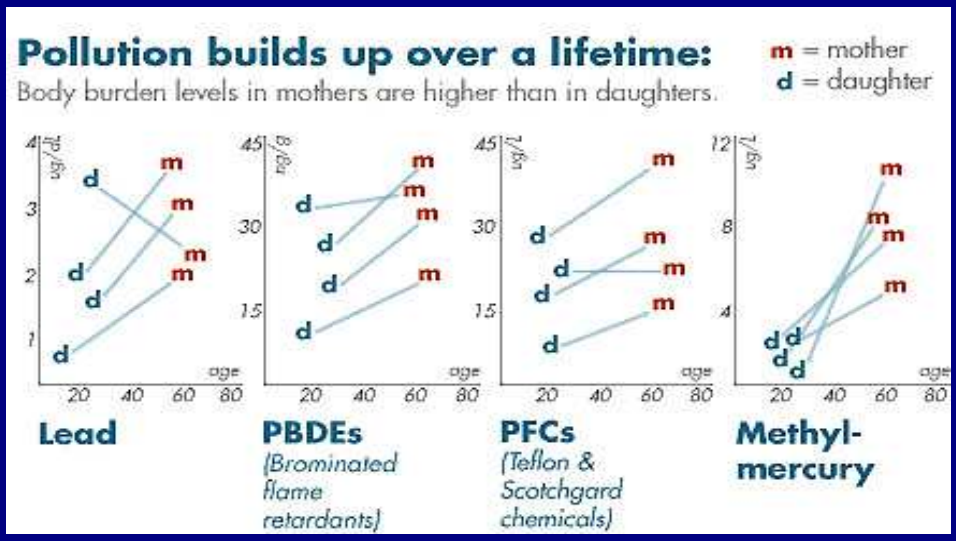
These and many other chemicals are building up in the bodies of mothers today and we are seeing the legacy of this build up. It is instructive to look at this body burden.

The Mother-Daughter relationship



The estimated age by which a daughter will purge 99% of the inherited pollution found in the study ranges from one day for phthalate plasticisers, to one year for mercury, to between adolescence and 60 years for common flame retardantchemicals, to longer than a lifetime, 166 years, for lead.[7]

How pollution builds over a lifetime



All four daughters tested had more chemicals in common with their mothers than with a group of 16 other women who were tested. In three of four daughters, this difference was statistically significant.[8]

EWG's tests found disturbing trends about pollutants that can pass through a mother's placenta or breast milk into her daughter's body. The study showed unexpected links between mothers and daughters, not just in looks, or genetics, but in burdens of industrial pollution. This common ground between mother and daughter suggests the long-lasting influence of both the pollution inherited by daughter from mother, and the common exposures they share throughout each daughter's childhood.

A substantial portion of the chemical burden inherited at birth by the daughters in this study will last decades; some a lifetime. In turn, the daughters can pass on to their children some of the same molecules of industrial chemicals that they inherited from their mothers. Let's look at the findings.

RESULTS OF THE MOTHER-DAUGHTER STUDY

The mothers and daughters in this study join 64 other people tested in six EWG bio-monitoring programmes conducted between 2000 and 2006, including a study published in July 2005 of 10 newborn babies with an average of 200 industrial pollutants, pesticides, and other chemicals in each child (EWG 2005.)

In total, EWG bio-monitoring found 455 different pollutants, pesticides, and industrial chemicals in the bodies or cord blood of 72 different people. By any measure, this is an alarming number of contaminants — a burden of pollution that is made even more serious by the lack of health studies for their individual or combined toxic effects.[9]

These results were shocking. Let's revise some of the areas where the pollution begins. For example, household dust plays an important role here.

The risk of PBDEs in dust

Scientists have long suspected that dust plays a major role in people's uptake of polybrominated diphenyl ether (PBDE) flame retardants.

New research suggests that the PBDEs used as flame retardants in consumer goods such as couches are escaping from these products and attaching themselves to people's clothes. Children are at particularly high risk of taking up these chemicals from house dust. All are suspected endocrine disrupters

Recent research links the PBDE concentrations found in people with the persistent, bio-accumulative, and toxic (PBT) contaminants in dust from their homes. The findings show that children could be exposed to levels that put them at risk of developing neurological problems.[10]
(DOI: 10.1021/es0620282.)

Are we being unduly alarmist? Should we really worry about these toxic chemicals?

Why should we worry about toxic chemicals?

- The EPA has reported that toxic chemicals found in the home are, on the average, three times more likely to cause cancer than outdoor airborne pollutants.

- The Consumer Product Safety Commission connects 150 chemicals commonly found in our homes to allergies, birth defects, cancer and psychological disorders.

- The National Institute of Occupational Safety and Health analyzed 2,983 chemicals used in personal care products and 884 were found to be toxic - some even caused mutagenic changes. [11]

Just to clarify, what exactly are these "toxic chemicals? Where do they occur?

What Are Toxic Chemicals?

Toxic chemicals are present throughout the environment in varying concentrations in air, soil, water, plants, and animals.

The consequences of exposure to toxic chemicals can vary widely depending on the type of chemical, the amount, and the length of time, as well as the health and nutritional status of the individual.

With some exposures, even at low levels over a period of time, the effects on health may not be apparent for years. Many of the elements can be deadly in large amounts and many cause cancer.[12]

In essence, what we are doing is conducting a huge experiment with ourselves as unwitting laboratory rats. There is little wonder that cancer and other disease rates are escalating worldwide.

We're conducting a massive toxicological trial

Since 1950, at least 80,000 new chemical compounds have been invented and dispersed into our environment. Only a fraction of these have been tested for human toxicity. We are, by default, conducting a massive clinical toxicology trial, and our children and their children are the experimental laboratory animals. [Source: Herbert L. Needleman, M.D., Philip J. Landrigan, M.D., Raising Children Toxin Free.]

50% of all illness is due to poor indoor air quality and three groups are primarily affected by indoor chemical concentrations because they spend more time indoors and their immune systems are weaker. These are: infants, elderly people, and chronically ill people. [13] [Source: 1988 EPA, 5-year study.]

How can we go about avoiding these chemicals?

Most of us have less choice when it comes to where we live and work. Nevertheless, we should seek alternatives to jobs that expose us unnecessarily to pesticides and industrial toxins. Especially as the dramatic increase in cancer is now all too evident.

So how can we avoid or minimize the risks?

In 1901, cancer was rare: 1 in 8000 people got cancer.

The cancer rate today has risen to 1 in 3 and is continuing to increase.

Cancer-causing products in the average home include:

Baby Powder Talc [Johnson & Johnson]
Tartar Control Toothpaste
Hair Conditioners/Dyes
Ajax Cleanser
Lysol Disinfectant
[The National Cancer Prevention Coalition.]

Just by reducing (not even eliminating) environmental carcinogens alone, the US could save at least 50,000 lives taken by cancer annually.

How many would NZ save?

[Source: Dr. Lee Davis, former advisor to the Secretary of Health.]

We also have to consider personal care products, many of which contain a surprising range of suspect ingredients. Check this out.

Women who use make-up on a daily basis can absorb 2 Kg of chemicals into their bodies each year. Many of the compounds present in make-up have been linked to side effects ranging from skin irritation to cancer.

One class of cosmetic chemicals which could be dangerous are parabens. Traces have been found in breast tumour samples. Another chemical, sodium lauryl sulfate, causes skin irritation.

Many women use more than 20 different beauty products a day many of which now contain nanomaterials. The effects of these multiple combinations and nanomaterials is largely unknown. 16 Telegraph.co.uk June 22, 2007

Nanomaterials are increasingly being used in cosmetics

What do women absorb from cosmetic products?

All of the following should be looked at with care

Most labels on products require a magnifying glass!

Hairspray aerosols
Furniture polish
Window cleaners
Air fresheners
Shaving creams
Laundry detergents
Nail polish remover
Insect repellent
Hair gel and mousse

[Source: Healthy Homes in a Toxic World.]

We do not keep adequate statistics in NZ, but a US study found women who work in the home have a 54% higher death rate from cancer than women who work outside of the home. [Source: 17- year EPA study.] 16

Most of the labels on products are printed in so small a font that they are unreadable. Deliberate or not, this certainly adds to the shopping burden.

There are also many products we use in the home that can be measured as dangerous.

Labels that say the following should be removed from your home:

"Do not induce vomiting."

"Corrosive - rinse from skin immediately."

"Harmful or fatal if swallowed."

"Call physician immediately."

"Warning!" - May mean that as little as 1 teaspoon of product can harm or kill adult.

"Danger!" - Means that as little as 5 drops can harm or kill an adult.

Warning labels on containers refer only to toxic hazards from ingestion. However, only 10% of health problems from chemicals are caused by ingestion; 90% are caused by the inhalation of vapours and absorption of particles. 17

Another hazard is the use of nanotechnology in cosmetics and other products. Fortunately, most suppliers will usually "advertise" the fact on labels. Cosmetics in NZ have to label 'nano' content. See the Environmental Protection Authority website www.epa.govt.nz/.

Reading labels carefully will often indicate the level of risk. I carry a magnifying glass with me when I go shopping.

What do the statistics show us?

Asthma, once very rare, is now extremely common. The asthma rate has tripled in the last 20 years with nearly 30 million Americans currently afflicted. NZ asthma cases are also soaring. [Source: US Consumer Federation, 1997.]

- In one decade, there has been a 42% increase in asthma (29% for men, 82% for women). The higher rate for women is believed to be due to women's longer exposure times to household chemicals. [Source: CDC.]
- Asthma deaths in children and young people in the US increased
- by a dramatic 118% between 1980 and 1993.

[Source: Environmental Health Threats to Children, EPA 175-F-96-001, September 1996.]

- Today, children have chemical exposures from birth that their parents did not have until they were adults. Because children are exposed to toxins earlier than adults, they have more time to develop environmentally triggered diseases, with long latency periods, such as cancer. 18

[Source: Environmental Policy and Children's Health, Future of Children, Summer/Fall 1995;5(2):34-52.]

The chemicals we are talking about today are better stored outside the home in a locked shed.

Looking at statistics we see an alarming trend developing. As more toxic chemicals have been introduced into our environment over the last 30 years, the level of toxins stored in fat tissues in our bodies has risen. Bio-accumulation studies have shown that some toxins are stored for life. Greater and greater amounts are being stored at younger and younger ages.

One study showed that in the fat of 100% of the people tested 1,4-Dichlorobenzene was common. 1,4-Dichlorobenzene is a chemical found in most household deodorizers and room fresheners.

So what of the future?

Diseases that used to occur later in life are now appearing at younger ages. Diseases that used to be rare are more frequent. For example:

- There has been a 28% increase in childhood cancer since the addition of pesticides into household products.
- There is an increased risk of leukaemia in children where parents have used pesticides in the home or garden before the child's birth. 19

[Source: Journal of the National Cancer Institute.]

The conclusion? We have to become more vigilant as the chemical burden increases.

So much for the chemical dangers. What about food and the additives that we now consume?

Food and their additives - are they safe?

Aside from GE and irradiated foods, which have never been tested for safety, our foods are now "messed" with to an extraordinary degree. Why?

- To increase shelf life
- To increase profits
- To aid transportation

There is also a worldwide campaign for the control of the food supply to rest in the hands of a few giant corporations. 20

Today, our food comes to the supermarket almost completely altered and devoid of much of its original nutritional qualities.

Many modern diseases are caused by "Metabolic Disruptors" found in everyday foods and groceries ...

Diet drinks?

The aspartame that's used to sweeten it increases lymphomas, leukaemia and brain tumours in rats - even in small doses.

Monosodium glutamate (MSG)

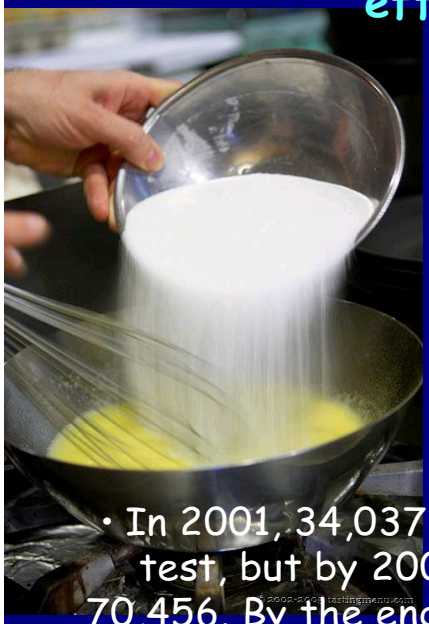
MSG is used as a flavour enhancer in many packaged foods. According to Dr Russell Blaylock, a neurosurgeon, there is a link between sudden cardiac death, particularly in athletes, and excitotoxic damage caused by food additives like MSG and artificial sweeteners.

Sodium Nitrite

Sodium nitrite is used as a preservativeand colouring agent in processed meats and smoked fish. Studies have found a link between consuming cured meats and nitrite, and cancer in humans. 21

Giant food corporations are not slow to sacrifice human health for profit. For example, several chemicals added to our food disrupt our metabolic pathways.

Looking at sugar, milk and aspartame effects on your health



Some Health Tips and how we can improve the situation

- Diabetes presents a serious health challenge for New Zealand.
- In 2001, 34,037 NZers with diabetes had an annual test, but by 2005 this had more than doubled to 70,456. By the end of 2006, the goalwas to have over 85,000 people enrolled for regular check ups. 22

www.beehive.govt.nz/ViewDocument.aspx?DocumentID=26375

It is worth looking in a little more detail at milk, sugar and the substitutes available.
As we have seen, diabetes is a growing epidemic in NZ.

There are basically two forms of Diabetes

TYPE 1

People who do not make insulin (or very little) have Type 1 diabetes. Because their immune system has destroyed their pancreas, they have stopped making insulin, and their body is unable to use glucose for energy.

TYPE 2

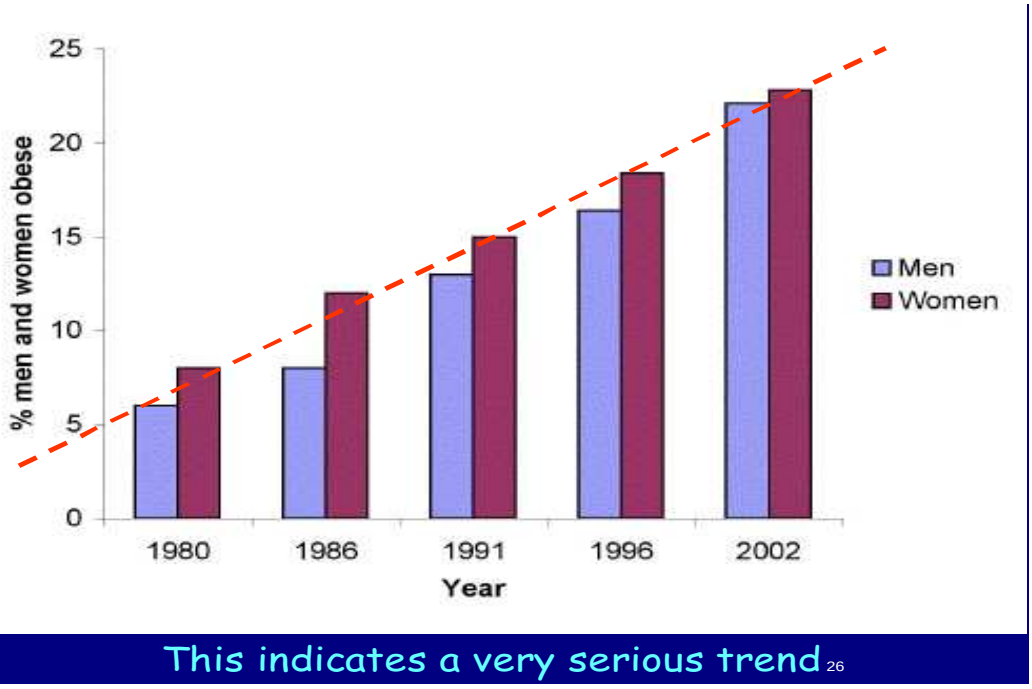
People with Type 2 diabetes are still making insulin but the production is sluggish or their body is resistant to insulin. Becoming overweight is almost always the cause of the body becoming resistant to insulin and can trigger Type 2 diabetes, even in young people. 23

The precursor to this disease is frequently being overweight and obesity is a growing problem in most Western countries.

...and obesity is becoming a serious problem.

What is the effect of our sugar intake? Obesity is at tipping point.

If we look at the results they are frightening.

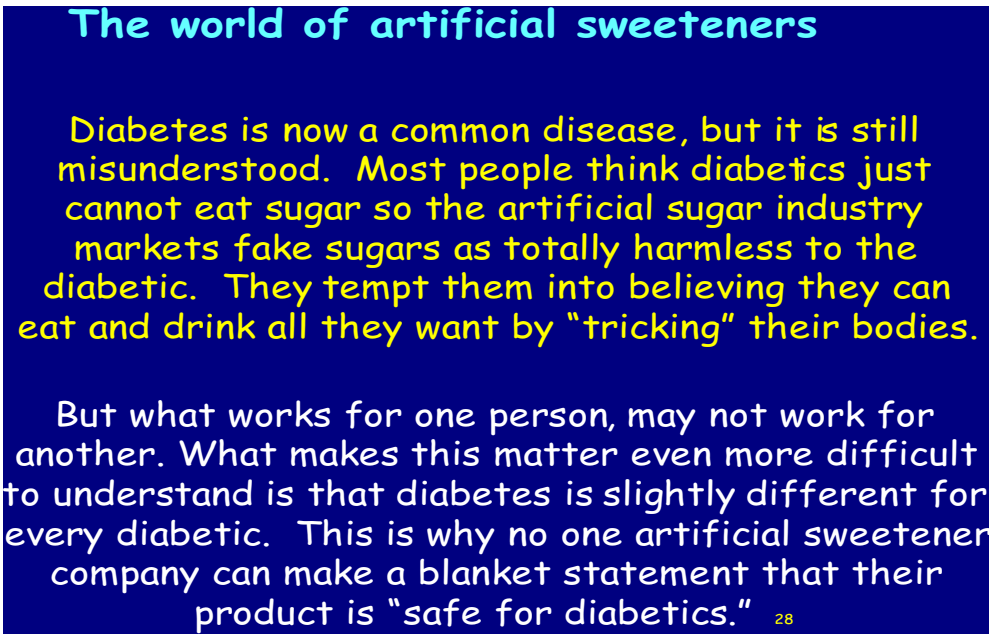


Apart from making us fat, what are the other effects of obesity?

The average New Zealander consumes as astonishing 1.5 kg of sugar each week. Why is that a problem? Sugar raises insulin levels. This inhibits the release of growth hormones, which in turn depresses the immune system. This is not something we want if we are to avoid disease.

Cancer patients would have a major improvement in their condition if they avoided sugar. By starving the cancer's growth, their immune system can better fight the disease.

What can we do to reduce these problems? Obviously, we have to very radically cut down our sugar intake, *but*, be warned, the sugar replacement industry can be a veritable minefield. Let us have a look at artificial sweeteners recommended for diabetics and the public.



From all the reports, most are highly suspect for diabetics and ordinary public.

Alternative Solutions

First a warning:

One of the most common alternatives advocated for sugar is ASPARTAME.

Also known as EQUAL, NUTRASWEET and SPOONFUL. This is available free in almost every Café.

SPLENDA is another dubious chemical sweetener. 29

Aspartame is a dipeptide with a notorious history. Let us look at some of the side effects.

Aspartame side effects

There are over 92 different health side effects associated with aspartame consumption. How can one chemical create such chaos?

Aspartame has three components: 50% phenylalanine, 40% aspartic acid and 10% methanol (wood alcohol). In the body, meths breaks down into formaldehyde (embalming fluid) and formic acid.

In the European Common Market, aspartame is banned for all children's products. Why not in New Zealand? Because Monsanto - which owned the NutraSweet Company manufacturing aspartame - pays off the FDA, the AMA, the US Diabetic Associations, politicians and virtually anyone who gets in the way, and in other countries, too. The Canadian Broadcasting Corporation caught them red-handed trying to bribe Canadian doctors at Health Canada.30

NB As the patent for aspartame was running out, Monsanto sold its interests in aspartame. It now markets Neotame; aspartame with 3-dimethylbutyl added (a chemical the Environmental Protection Agency lists as hazardous). The US Food and Drug Administration approved it in 2002 and it is approved for use in Australia and New Zealand. The claim is that, in addition to being far sweeter than aspartame, neotame is heat stable, meaning it can be used in baked goods.

Depending on how it is used, neotame is from 7,000 to 13,000 times as sweet as sugar. It is 30 times sweeter than its cousin, aspartame, so only a tiny amount is needed. Since the FDA does not require labels to include ingredients that comprise less than one percent of the product, it is possible that neotame could be used in foods without having to be listed on the label. Currently, neotame is not available direct to consumers. It is being used in food products, often blended with other synthetic sweeteners.

It is doubtful if the Australia New Zealand Food Authority or Food Standards ANZ will ever agree with these findings. The truth is that no real independent research is ever undertaken. It is all paid for by the industry. What makes this so sad is that we DO have far safer alternatives available to us and, furthermore, other added health benefits.

We DO have a far safer alternative

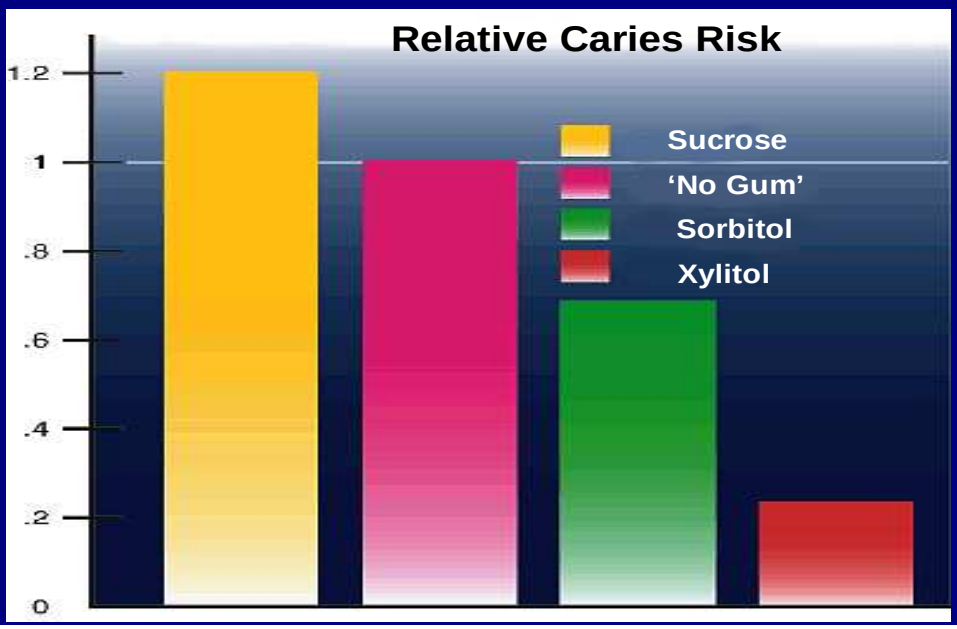
"The dangers of aspartame poisoning have been a well guarded secret since the 1980s. The research and history of aspartame is conclusive as a cause of illness and toxic reactions. Aspartame is a dangerous chemical food additive, and its use during pregnancy and by children is one of the greatest modern tragedies of all."
Dr Janet Starr Hull

XYLITOL is not only safer, but also has added health benefits. These benefits are largely unknown to the public

- Xylitol is effective in preventing dental decay.
- Clinical trials have also shown that xylitol-based chewing gum can reduce ear infections and glue ear. 31

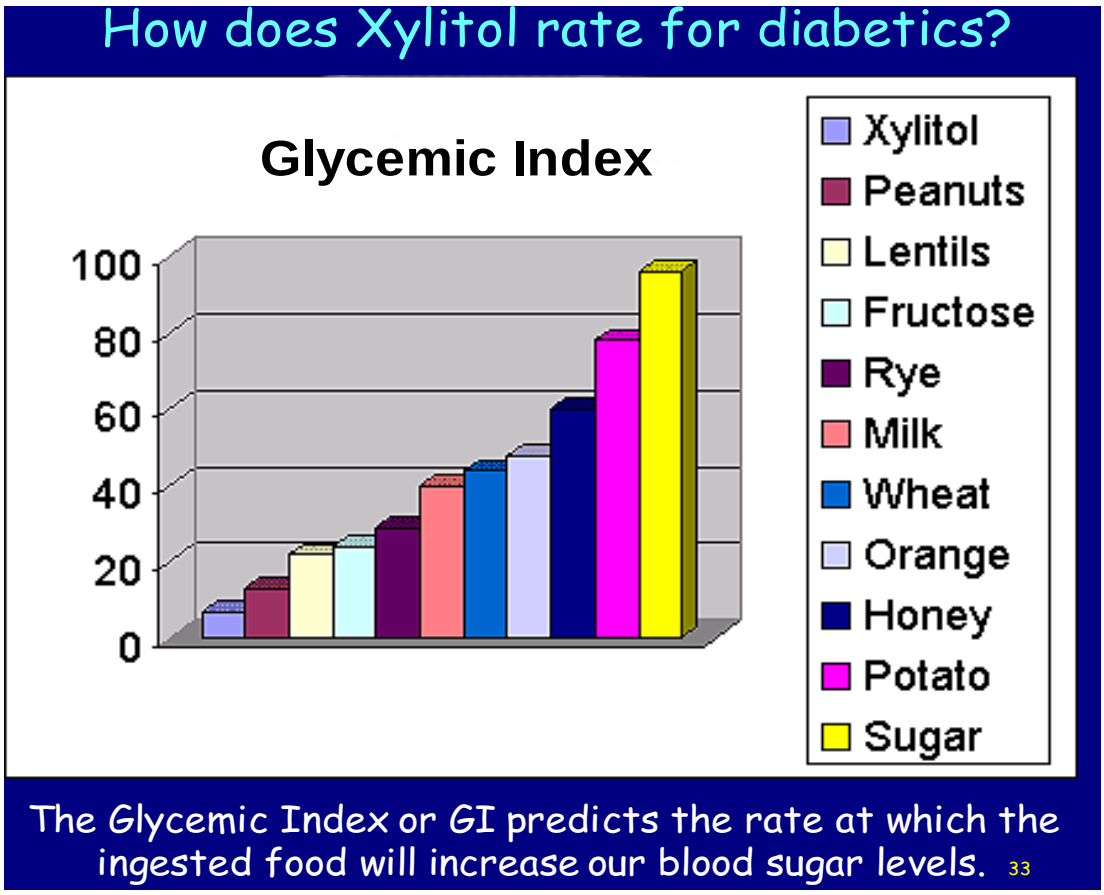
Industry does endeavour to conceal xylitol as the obvious and far safer option. Let me show you some remarkable statistics.

The graph below shows the relative risk of dental caries using Xylitol gum 32



Why poison our water supply with fluoride when we could use this gum? Such a programme has been tried successfully in two European towns. Unfortunately, Annette King assures me she prefers to fluoridate ... with all its attendant health risks.

So what advantages are there for diabetics using xylitol?



Obviously, xylitol is the substitute of choice here. So why does the Diabetic Society openly recommend only aspartame? Because that has an even more notorious history.

Rumsfeld, as he reportedly put it, made sure it got "approval" by going to the highest level in the White House.

So …

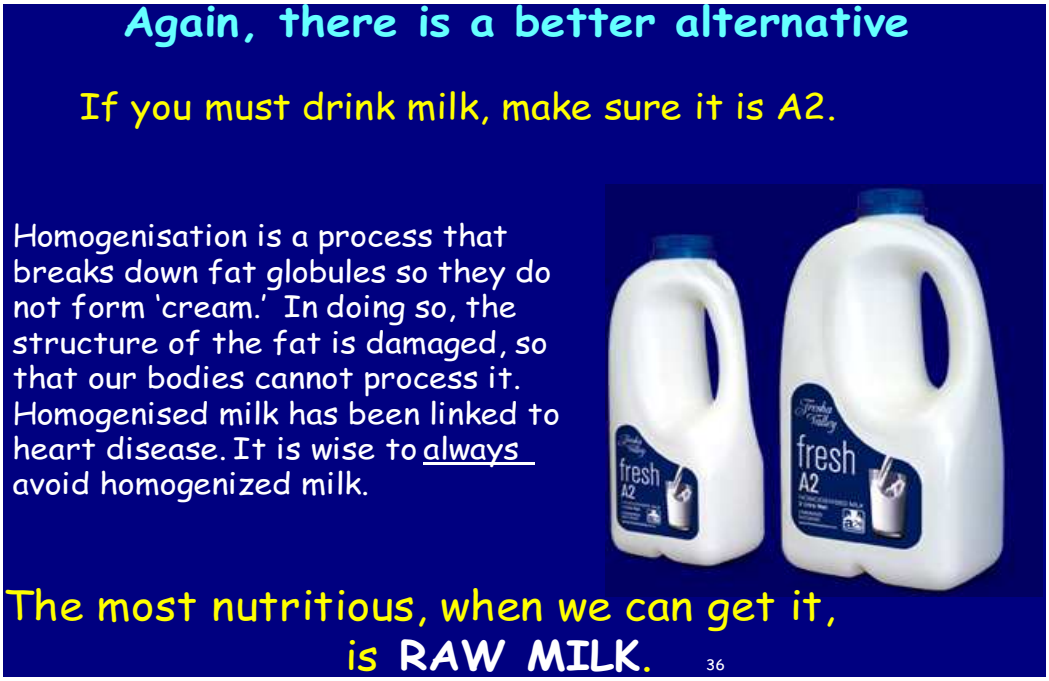
Ok, so much for aspartame, what about milk? We are inundated with TV and media adverts to drink more milk.

Cow's milk is the 'perfect food' for baby calves, but many doctors agree it is NOT healthy for humans.

Dr Frank Oski is Director of Paediatrics at Johns Hopkins School of Medicine and head of the Johns Hopkins Children's Centre. He is the author of 19 textbooks and has written 290 medical manuscripts.

He stated: "The drinking of cow's milk has been linked to iron-deficiency anaemia in infants; it has been named as the cause of cramps and diarrhoea in much of the world's population, and the cause of multiple forms of allergy as well; and the possibility has been raised that it may play a central role in the origins of arteriosclerosis and heart attacks." 35

Like diabetes, we have a growing array of multiple forms of child allergies. Again, there is a better alternative.



NB If you can get *organic* A2 milk, you can avoid the contaminants we have been talking about.

In some ways, it is a pity government regulates raw milk. A great deal of research has shown raw milk to be the most nutritious and medicinal form of milk available. There are also many references to its curative properties. It is available in parts of NZ.

Let us have a look at another common problem: food colourings. Mothers are increasingly noticing that these dyes are having harmful effects. Children's sweets are generally full of them.

My experience has left me convinced this is one of the reasons for children's inability to concentrate in kindy or later in the classroom. And I do not feel Prozac or Ritalin is the answer for the vast majority of cases. Today, there are a dreadful number of youngsters on powerful drugs to calm them. In the US today, about *four million children* are on Ritalin, compared to one million in 1990. Use has doubled every four to seven years since 1970. Its use has also increased in NZ.

How can we tell exactly what children are exposed to? Most of these products are hidden behind what is known as the E-codes.

Food Additives - the magic "E" Numbers

E-320 - Butylated Hydroxyanisole (BHA) increases hyperactivity in affected children. Asthmatics can react badly. Be cautious if you suffer from allergies. May not be suitable for babies

E-131 Patent Blue - Asthmatics react badly. Take care if you are sensitive to Aspirin. Be cautious if you suffer from allergies

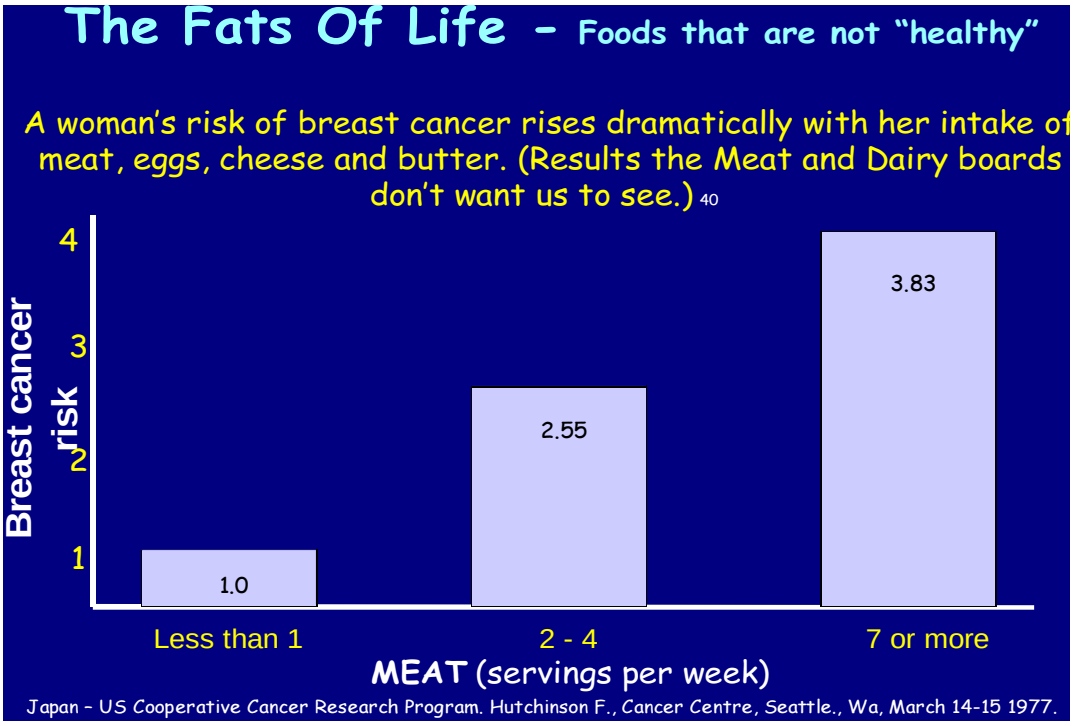
E-142 Acid Brilliant Green - Cancer forming.

133 Brilliant Blue - May increase hyperactivity in affected children

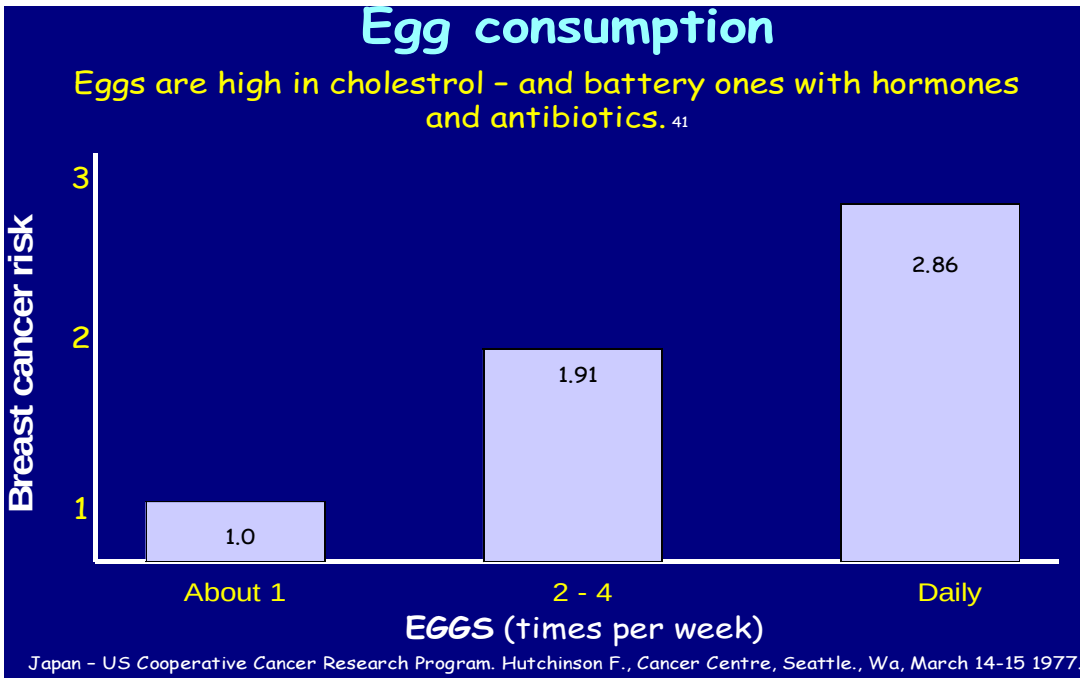
155 Brown - Increases hyperactivity in affected children. Asthmatics sometimes react badly. Take care if you are sensitive t Aspirin. Be cautious if you suffer from allergies or intolerances [39]

As well as additives, there are foods that are themselves intrinsically bad for us. Over the last 60 years, there have been unprecedented breakthroughs in our understanding of food options and nutritional science. Even so, there is an enormous gap between what has been discovered and what the public have been told. As a result, thousands of New Zealand men, women and children are suffering unnecessarily.

Briefly, here are some of these hidden findings. Why hidden? Because the research results invariably impinge on the profits of the companies producing these products. For example, animal fats and cholesterol-rich foods are bad news. This is particularly true in the case of breast and other cancers, and heart disease.[i] Let us look at some statistics.

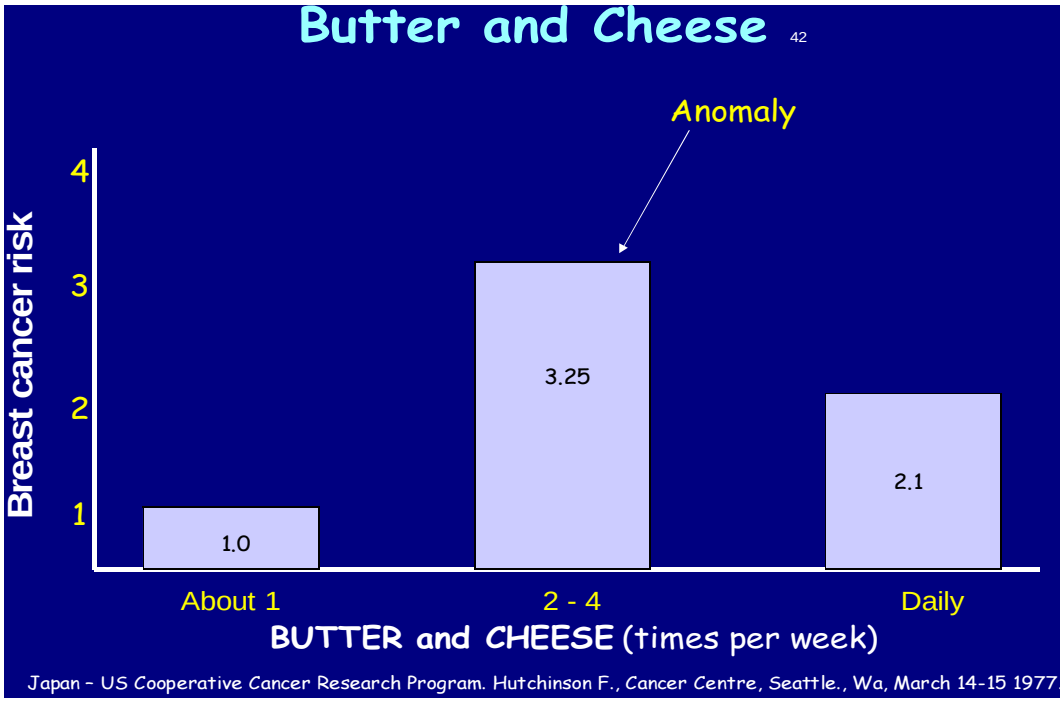


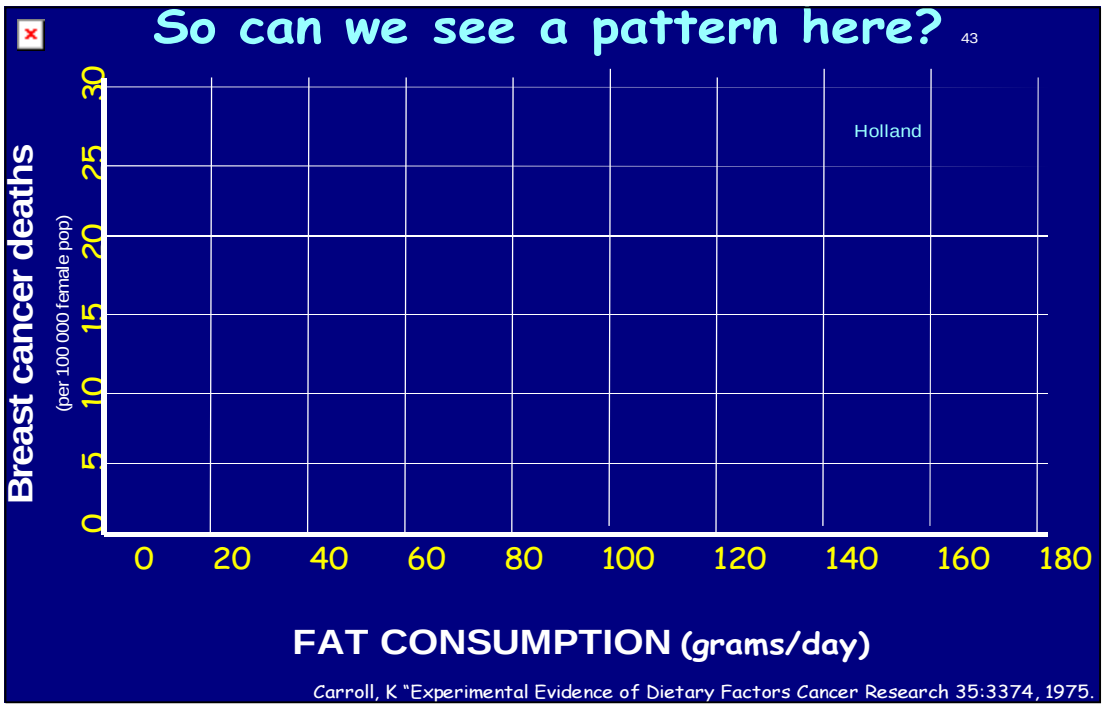
Meat consumption is clearly related to breast cancer risk. Egg consumption may also be closely related to breast cancer.[ii] This may be even more so, bearing in mind the appalling conditions in which factory-farmed chickens live. They are loaded with antibiotics and growth hormones to prevent disease and ensure quick returns.



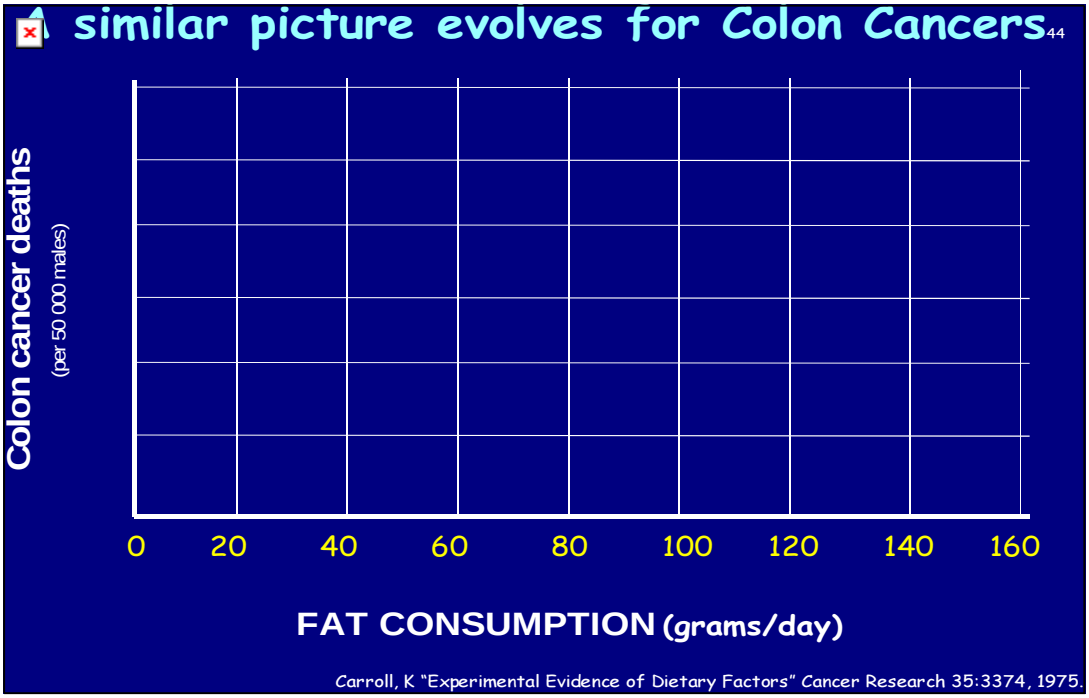
Butter, cheese and other dairy products are a high risk factor. Few doctors ever tell women that the *higher the percentage of fat in her diet the greater the risk of getting the breast cancer*. And this is particularly true of animal fats.

One of the largest studies in medical history was carried out at the National Cancer Research Institute in Tokyo. (The middle column we assume are meat eaters.) This was led by Dr Takeshi Hirayama, who investigated the risk of breast cancer for women according to their intake of meat, eggs, butter and cheese.[iii]

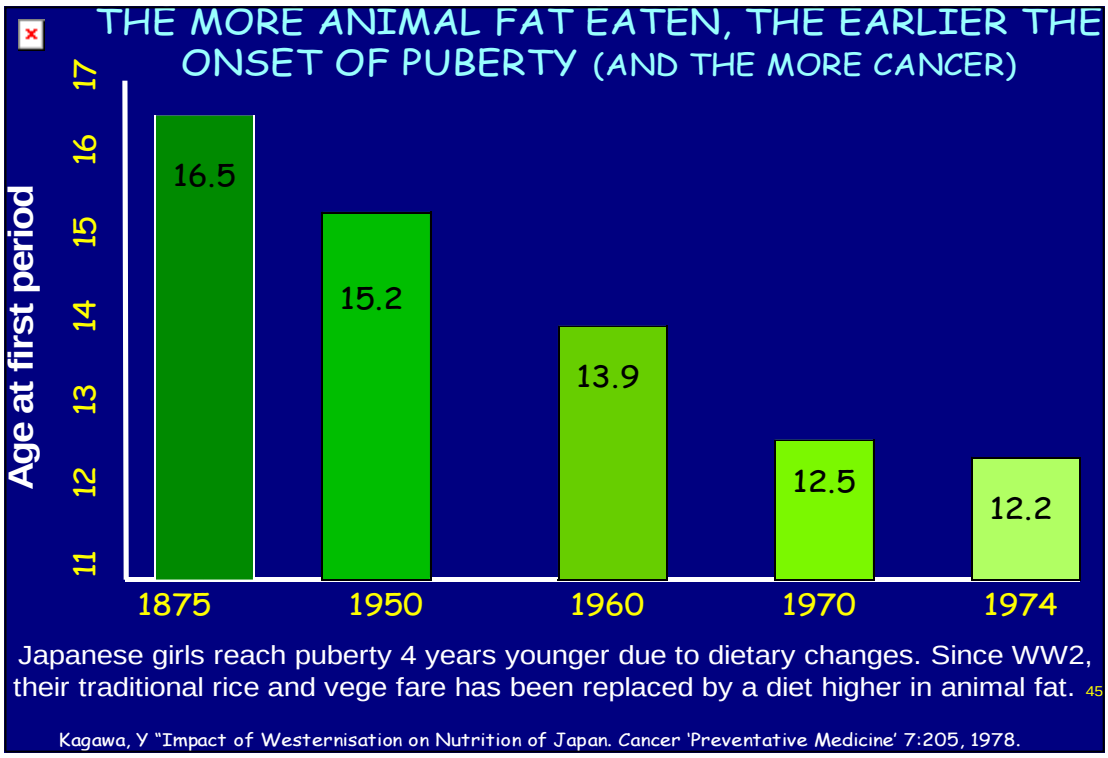




This is an obvious trend: the higher the animal fat and dairy intake, the higher the risk. An exactly similar risk is seen for colon cancer, not something the meat board like to advertise.



Yet another intriguing fact coming out of this research was the effect of the Western diet on women's hormones. This was quickly picked up during the Japanese studies because of the changing diets.



This change would not be so easily detectable in western females.

A further problem, closely related to animal protein intake, is osteoporosis. Many women taking oestrogen to prevent osteoporosis do not know they could accomplish the same thing by simply not eating animal protein. Even the prestigious medical journal, *The Lancet*, called the association of meat-based diets with increasing incidence of osteoporosis "inescapable." [iv]

So what measures can we take to safeguard ourselves? Firstly, let me give you four good reasons for becoming a vegetarian. Better still, a vegetarian who eats organic foods.

- To diminish the real threat of worldwide pandemics such as bird flu
- To avoid the danger of mad cow disease (BSE)
- To stop the gruesome process of factory farming and its attendant cruetly
- To improve the efficiency of world food production

There are many more that should suffice from a common sense point of view alone. What other measures can we take?

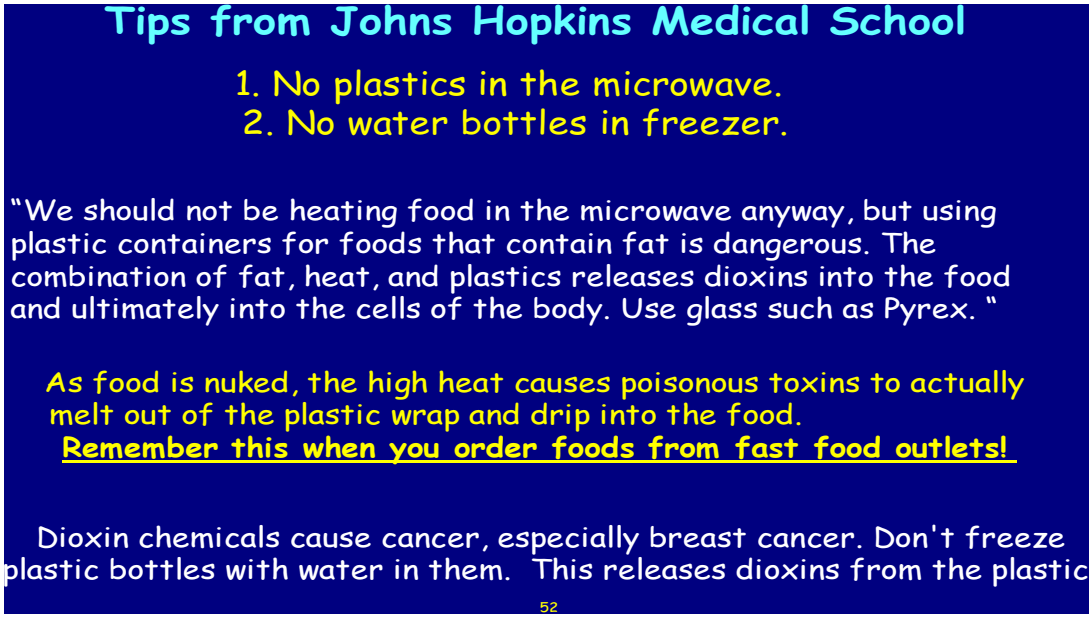
NB *Healthy Options* is no longer in print.

So choosing to eat less or, better still, eating no animal products, ensures at least a good start to health and obviously organic produce is also safer if we wish to avoid toxic sprays. I know the cost is a little higher but what price health? By buying local organic produce you are also making your contribution towards reducing climate change. Or start your own vege patch.

Although the health department has promised to remove all the vaccines containing mercury you need to check this with your doctor. There is old stock containing thimerosal being used. There are other contaminants and additives in vaccines to consider, but that is a whole new topic.

As far as food safety is concerned, you are probably already buying organic produce at the supermarket. But if you cannot always buy organic, you can still dramatically lower your family's exposure to chemicals by choosing spray free items. And start that vege garden.

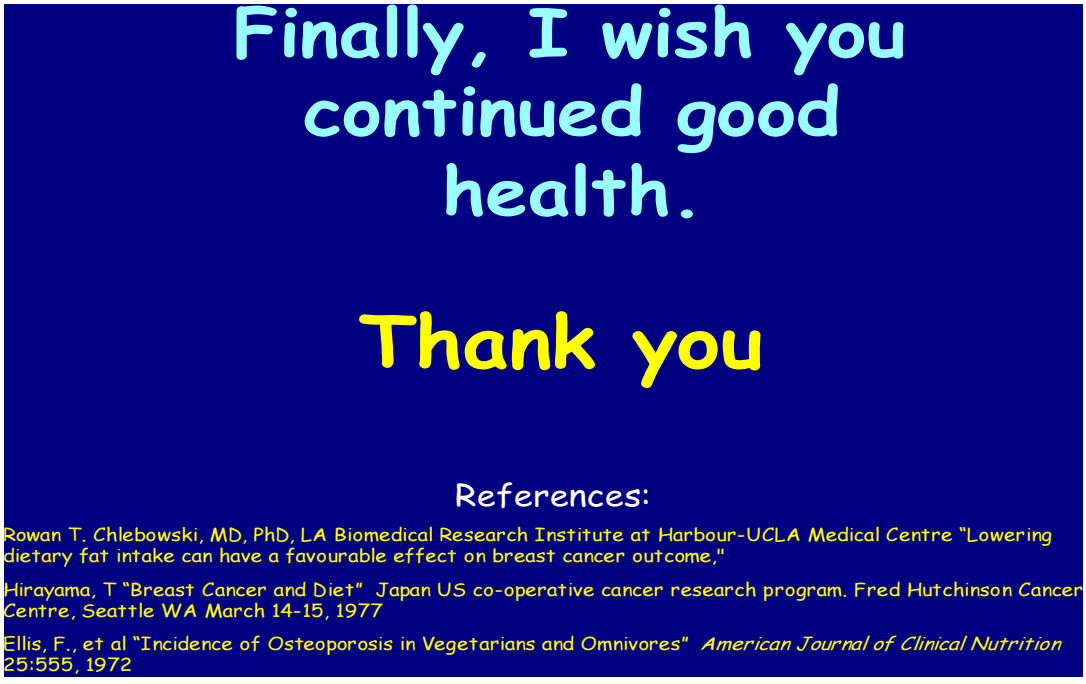
While on the subject, try to avoid cooking with microwaves. If you must use microwave ovens, then please bear in mind the following advice from John Hopkins Medical School.



(NB See the lecture on 'EMR: Electro Magnetic Radiation' by Robert Anderson on this website.)

And just a final tip on this problem...

Pesticides generally work by interfering with vitamin A pathways. Hence adequate vitamin A is one key to maintaining our health. That translates into plenty of fish oil supplements such as cod liver oil. Fortunately, mercury accumulates in the flesh of fish, not the oil, so cod liver oil is relatively safe.



Enquiries for books by Robert Anderson should be made to connectedbooks@clear.net.nz

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FOOTNOTES:

The egg industry published advertising campaigns designed to deny the saturated fat and cholesterol problems associated with eating eggs. As a result of these findings, there was a massive and lengthy court battle in which the presiding judge, Ernest Barnes, concluded that: "There exists a substantial body of competent and reliable scientific evidence that eating eggs increases the risk of heart attacks or Cardiac problems ... This evidence is systematic, consistent, strong and unequivocal."

Colon Cancer: There is not a single population in the world with a high meat intake which does not also have a high colon cancer rate.

Non-corporate Aspartame Research

Italy: "First Experimental Demonstration of the Multipotential Carcinogenic Effects of Aspartame Administered in the Feed to Sprague-Dawley Rats" Researchers: Morando Soffritti, Fiorella Belpoggi, Davide Degli Esposti, Luca Lambertini, Eva Tibaldi, and Anna Rigano
Reference Source: doi:10.1289/ehp.8711 (available at http://dx.doi.org/) Online 17 November 2005

Greece: "The effect of aspartame metabolites on human erythrocyte membrane acetylcholinesterase activity"
Researchers: Stylianos Tsakiris, Aglaia Giannoulia-Karantana, Irene Simintzi, Kleopatra H. Schulpis Reference Source: Department of Experimental Physiology, Medical School, University of Athens, P.O. Box 65257, GR-154 01 Athens, Greece b Institute of Child Health, Research Center, Aghia Sophia Children's Hospital, GR-115 27 Athens, Greece Accepted 19 July 2005

Spain: "Formaldehyde derived from dietary aspartame binds to tissue components in vivo"
Researchers: C. Trocho, R. Pardo, I. Rafecas, J. Virgili, X. Remesar, J.A. Fernandez-Lopez, and M. Alemany Reference Source: Departament de Bioquimica i Biologia Molecular, Facultat de Biologia, Universitat de Barcelona, 08028 Barcelona Spain, May 13, 1998.

Great Britain: Research: "Synergistic interactions between commonly used food additives in a developmental neurotoxicity test"
Researchers: Karen Lau, W. Graham McLean, Dominic P. Williams, and C. Vyvyan Howard
Reference Source: Developmental Toxicopathology Unit, Department of Human Anatomy & Cell Biology, Department of Pharmacology & Therapeutics, University of Liverpool, Sherrington Buildings, Liverpool L69 3GE, UK

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[i] Rowan T. Chlebowski, MD, PhD, LA Biomedical Research Institute at Harbour-UCLA Medical Centre "Lowering dietary fat intake can have a favourable effect on breast cancer outcome,"

[ii] Hirayama, T "Breast Cancer and Diet" Japan US co-operative cancer research program. Fred Hutchinson Cancer Centre, Seattle WA March 14-15, 1977

[iii] Ibid

[iv] Ellis, F., et al "Incidence of Osteoporosis in Vegetarians and Omnivores" *American Journal of Clinical Nutrition* 25:555, 1972