

"their sins shall be visited upon their children and upon their children's children"

Ever wondered about this quotation from the bible and thought it a bit harsh?

Dr Ellen Grant in her book "Sexual Chemistry" published by Mandarin paperbacks, London 1994, brings this prophecy to life, even to death.

Dr Grant, a Scottish obstetrician working with the research body of the Family Planning Assoc. in London over the last 30 odd years has been involved in the 'late effects' of fiddling with our hormones, particularly through the increasing prevalence of the Pill and HRT. None of us are really safe as hormones, sexual, growth, antibiotics etc are fed to the animals we eat and genetic engineering is further complicating the genetic structure of our foods. eg the new McGregor tomato has a fish gene added which could make the tomato dangerous to people allergic to fish. Also our fish supplies have increasing sources of hormones from the effluent in the sea coming from the toilets of women on the Pill and HRT who excrete the hormones in their urine.

What have we done to ourselves and the human race? A good question. Hormones, beside controlling sexual development and function, also help to control growth and muscle building, regulate the digestive system, blood sugar levels, blood pressure and fluid balance. Increased hormones in the blood stream create extra demand for nutrient chemicals, particularly zinc and magnesium. A shortage of essential trace elements, especially Zinc can block hormone production. Our bodies make more essential hormones than just sex hormones so we can really create an imbalance.

ZINC (Zn) is needed in our diet every day. It is not stored in the the body. Zn deficiency is becoming the commonest of all essential nutritional deficiencies. This results in poor growth, dyslexia, learning problems, hyperactivity and food allergies just for a start. It has been found that mothers and fathers of dyslexic children are also low on Zn. Zn is particularly important for sperm production.

Sex hormones also lower levels of body magnesium Ellen Grant states, **"Magnesium deficiency is a main cause of backache, neck ache and joint problems which affect both athletes and the sedentary. Also with zinc deficiency, it is a major cause of osteoporosis."**

MAGNESIUM (Mg) is need for energy transfer. Lack of adequate Mg leads to stockpiling of sodium which causes swelling in the tissues as water is retained, resulting in loss of calcium and potassium. the end result being weakness and fatigue. Lowered calcium makes bones soft. Lowered magnesium makes them thin. An excess of calcium interferes with the absorption of Zn, Mg and Iron. Mg increases bone density. Other essentials for bone include, Zn, Manganese, Potassium and Vitamin D.

Mg is Nature's calmer. Mg deficiency causes anxiety, insomnia and heart irregularities. In females Mg is necessary for implantation of the fertilised ovum. Mg helps in the circulation of blood to the limbs and prevents cramps. Flushing or cold sweats are signs of vascular overactivity, indicating a fall in Zn and Mg levels.

A shortage of essential vitamins and minerals block the body's ability to produce important enzymes. Enzymes speed and control the chemical reactions within the body, which maintain all bodily functions.

The DNA or genetic masterplan of each individual cell can be changed by excessive sexual hormone stimulation. These changes can be repaired provided there is sufficient Zn available. If this repair does not take place, permanent mutations can occur resulting in cell abnormalities causing congenital abnormalities in the developing foetus or cancer from loss of control of the division process.

During the War Dutch studies have shown that women who were starving (mal-nourished) 2 weeks prior to conception were 100 times more likely to have abnormal children. Adequate Zn is important for a 3 - 4 month period prior to conception for men too or subnormal sperm can be produced.

During the pregnancy the increased progesterone levels lower immunity to sustain pregnancy, so the mother is more susceptible to infections including HIV, thrush and cancer as the body is in a state of proliferant growth. Increased Zn and Mg supplies are required to sustain pregnancy. Breast milk is high in Zn for the baby's immune system and the mother needs extra Zn for oestrogen production to produce antibodies for herself and her baby's milk Zn for oestrogen is necessary also to prevent post natal depression. Undescended testes in male babies indicate the mother is Zn deficient .

Dr Ellen Grant trained in Dundee, Scotland in the 1950's. In 1959 as an obstetrician and endocrinologist she began working in the fertility clinic at the University College Hospital, London. In 1961 she joined the new oral contraception trials with the Family Planning Assoc Research body. Her job was to see women at 6 monthly intervals, recording all data and including taking pap smears which she examined in the pathology department.

What she observed over the following decades led her to believe the changes in women's chemical status were having dramatic effects on their lives and progeny. Young girls put on the Pill for painful menses, were appearing a decade or so later with cervical and breast cancers.

All manner of problems she traced back to chemical imbalances caused by excess hormones, treating women successfully by correcting their body chemistry. Pill users and their daughters were more likely to suffer endometriosis and uterine cancer. Fibroid formation was encouraged by excess oestrogen. Ovarian cysts increased because of lack of Zn. Male children presented with testicular and prostate cancer in their twenties.

Dyslexia and learning problems from lack of Zn increased in post-Pill babies. The more active a brain is, the more Zn is used. The areas of the brain most affected by low Zn are short term memory, eye focus and lack of left or right domination. At puberty, post-Pill girls particularly suffered painful menses and mood changes.

Changes in chemical balance increase likelihood of migraines. Headaches are a warning of overactivity in the brain, a change in electrical discharges. The blood vessels in the brain dilate and contract excessively. The enzymes which control these need Zn, Mg and B vitamins. Often extra Mg will clear a headache within half an hour.

Headaches which later become migraines are an indication of the development of arteriosclerosis. Increased hormones thicken the arterial linings. Clots break away causing thrombosis, heart attacks and strokes. Oestrogen increases immunity and the immune response thus creates more allergic reactions and more headaches. Distended, painful veins and leg cramps are also prevalent in women on the Pill, usually solved with extra Mg.

Brain and eye complications increased in Pill users due to thrombosis. Optic neuritis revealed demyelinating of nerves. Pre Pill, MS was equal in both sexes. Now post-Pill women have 4 times more MS

Dr Grant found the Pill interfered with the protein metabolism pathways, turning women off eating meat and making them more likely to become vegetarian. If you are tired it is easier to digest and absorb a carbohydrate meal. She saw many patients in their 20's and 30's eating the same diet of cereal for breakfast, cheese sandwich for lunch and vegetable pasta for tea. Fish and chicken may be once or twice a week. Husbands were delighted when she would prescribe a high protein diet.

A vegetarian diet is low in Zn. Legumes and grains interfere with Zn absorption. Coffee and tea lower Zn and iron levels as do alcohol and food colourings. Cereals remove Zn from the body.

Lack of Zn inhibits protein build-up and stops growth. If Zn is low, protein cannot be absorbed and used from the diet. Meat allows absorption of both Zn and iron from the diet at the same time, however Zn is required for this to take place. A vicious circle. If supplemental Zn and iron are taken at the same time neither will be absorbed.

People who are short in stature are usually low in Zn. Downs Syndrome children have low Zn and poor thyroid production. When given Zn their thyroid becomes normal. Thyroid hormones help to maintain Zn concentrations. Zn is needed for hair protein. Lack of hair protein stops hair growing. Toxic metals are excreted in the hair, so if it stops growing there is an increase in body toxicity.

The Pill interferes with carbohydrate metabolism by raising blood glucose levels. This leads to increased insulin production, stressing the pancreas, leading to exhaustion of the pancreas and adrenals. Diabetes results. Hormone taking affects pancreatic enzymes and insulin production. When there is insufficient Zn there is a lowering of digestive enzymes causing malnutrition. Even when Zn supplies return to normal, it takes 2 years for the pancreas to recover.

Oestrogen increases blood fats and progesterone delays gall bladder emptying, the result is gallstones. After menopause small amounts of oestrogen are made by the adrenals and fatty tissue so fatter people are naturally better off having less loss of oestrogen post menopause.

So in trying to control our own reproductivity has mankind finally wrought the potential for its own destruction? Will we ever learn not to disrupt this wonderful machine of nature's designing. What legacy indeed are we leaving to our children's children of the future.