







What's Wrong With Big Pharma?













And What Products Should You Consider Taking To Extend Your Healthspan?

1 Background

When Professor David Sinclair discovered a "cure" for ageing (or more precisely for the metabolic syndrome diseases which are caused by the opening up of the central cellular genetic material which results in coronary disease, cancers and the increasing disability of the central nervous system) the reaction of the major pharmaceutical companies was one of great dismay and well-funded critical action.

A great deal of the money made by the large pharmaceutical companies is due to their monopoly on the medications given to ageing people to prevent or to treat heart disease and coronary diseases, cancers, and nervous system diseases. The discovery of a broad spectrum natural product (such as resveratrol) produced the instant reaction from Big Pharma that Sinclair's discoveries must be wrong and that many researchers should be funded to try to prove that.

But Professor Sinclair was more than a match for that activity. He cooperated with dozens of first class researchers who validated and peer reviewed his work and pronounced it to be valid. In 2004 with Christoph Westphal he then co-founded Sirtris Pharmaceuticals further to develop drugs that were effective against the diseases of ageing.

GlaxoSmithKline (GSK) bought that company for \$720m in 2008. See the Wikipedia entry for Professor David Andrew Sinclair at https://en.wikipedia.org/wiki/David_Andrew_Sinclair and see my four articles about the "Transition to a Longer-Living Society" based on his work

beginning with https://medium.com/@georgetaitedwards/the-transition-to-a-longer-living-society-759f09481f53#.2ahigi7h0

2 The Business of Big Pharma is Making High Profits

The large pharmaceutical companies are in business to make a lot of money. They are not so interested in producing generics where the patent rights have expired or in other substances which may be biologically useful but which cannot be patented. Professor Sinclair is now working for GSK and he has produced many products (he has said he is now up to the fourth generation of STACs, largely due to the \$1 billion of GSK research money he has been given) which are biochemically similar to resveratrol but which may have a specific action within a target set of cells, organs or body locations. Because these products are not found in nature they are patentable and can be sold as a propriety product at a high price to doctors and health services around the world. GSK have every intention of doing that — it's mainly what they are about.

There is a Big Pharma code phrase for useful but unpatentable products. They have "not been properly tested" because since big Pharma cannot make large amounts of money out of them, they have not been and never will be tested by them.

Many of my friends who have consulted their doctors about the remedies below have run into this phrase. Doctors in all Western countries belong to the equivalent of the BMA (British Medical Association) and they will not prescribe any products which have not been tested and will fall back on the standard phrase to justify that behaviour. That's a shame which is turning into a disgrace, and is increasingly a tragedy for many people.

Many of my friends and relatives have died because they have depended upon medical advice. Some of my friends have died of preventable cancers and have had minor heart attacks and/or major operations such as heart bypasses. In my view there should be more emphasis on prevention, which is generally cheap, rather than upon treatments which are usually expensive and not always as successful as they should be.

Doctors will prescribe products which have been tested and proven agreed to be useful for one purpose but will not prescribe these for another. My previous diabetic nurse knew all about how Metformin reduces the risk of metabolic diseases by about 33% (that is it reduces the risks of developing coronary diseases, cancers and CNS diseases by about a third, as is reported in the largest study ever done on this topic "The Cardiff University Study of Diabetic Drugs" — see the Cardiff News report about it at http://www.cardiff.ac.uk/news/view/45575-can-people-with-type-2-diabetes-live-longer). This study produced the interesting result that people with Diabetes Mellitus Type 2 (DMT2) who were taking Metformin were living about 8 years longer than normal people without DMT2 and Metformin — that is why my previous diabetic nurse wanted to take Metformin. Her doctor would not prescribe it because under the NHS it is only available to DMT2 patients.

Why 8 years? Because 75% of deaths are caused by metabolic syndrome diseases. If all of these were cancelled out by medical advances, then life span would increase by about 24 years. Metformin only cancels out about one third of these diseases so produces a life span increase of 8 years (equal to a third of 24).

3 Useful and Cheap Remedies to some of the Ills of Mankind

Many of the big chains of chemists advertise on the internet and sell thousands of allegedly health-improving products. Some of these may even work as advertised, but no-one could possibly take every pill advertised. There is a need to be very selective, for reasons of economy and convenience, and to discrimatingly pick your way through the evidence about available products and select the ones that are good value for money and which the research indicates will definitely work. My selection follows — if you have a different agenda or understanding, please share it, and feel free to follow where your intelligence and priorities take you.

There is a small number of useful products that are capable of dealing with some of the diseases, physical damage, and ills of mankind. These are usually not publicised because they are not particularly profitable. This article lists nine of these extremely helpful products, states why they are useful, refers to the evidence and suggests the reader might like to investigate the evidence and perhaps try out these items. I have no commercial link whatsoever with any of these products mentioned.

3.1 NaPCA

Superficial but painful skin burns caused by contact with boiling water or oil, or by touching a very hot oven tray or the inside of a hot oven, destroy the skin's natural humectant and usually lead to very painful water blisters. If a water-based solution of sodium pyrrolidone carboxylic acid (NaPCA) is immediately sprayed on the burn, the levels of the skin's natural humectant will be restored and the "burned skin" aftermath will disappear. NaPCA is deliquescent — it pulls water out of the air to keep your skin slightly moist.

This restotative action will not happen unless the NaPCA spray is used immediately. Burns will develop as they usually do, if the skin is not sprayed

immediately with NaPCA. If anyone burns themselves and waits for more than a few minutes, NaPCA will not reverse the burn blisters after they have appeared. NaPCA is not a restorative, it is a preventative of further damage in very recently burned skin.

Try keeping some NaPCA spray in your kitchen and see. And see some research such as

http://www.sphinxsai.com/2013/VOL5_NO.4_APRIL/PDFS_VOL5_NO.4/CT=06 (1448-1451)AJ13.pdf

3.2 Xylitol

Xylitol is a "false sugar" infrequently used as a sweetener. It has many interesting properties — see https://en.wikipedia.org/wiki/Xylitol

It reduces dental caries by about a third and helps remineralisation of tooth enamel, reduces middle ear infection, is better for you than any other sugars and is better for diabetics and may reduce osteoporosis (or brittle bone disease) in the elderly. A great list of benefits!

The main thing Xylitol can do is destroy infections entering by mouth. All diseases and viruses use sugar as an energy source to enable them to multiply. Xylitol in your mouth is seized by mouth germs for that purpose but it is not a true sugar — it will not let go of the virus or the disease which has grabbed hold of it — so these potential infections die with the viral or germ equivalent of a "blocked mouth". That's how Xylitol kills some potential mouth infections.

Xylitol destroys cold and flu germs. In the dose required to mildly sweeten morning drinks — 4mg a day in your breakfast tea or coffee — it seems to

prevent colds from developing and stops influenza before it gets a hold.

More than 10,000 elderly people die from influenza every year in Britain. That's entirely preventable with low doses of Xylitol. All germs are either lipophilic — oil-jacketed — or aquaphilic — water loving. Xylitol closes one main door — the entry by mouth — to nearly all aquaphilic germs. It is a pleasant tasting low calorie sugar as far as people are concerned.

Xylitol removes phlegm from the upper respiratory tract. Older people often have respiratory difficulties due to the build up of phlegm which reduces breathing capacity. I think it's great to always breathe easily, even if you may have to blow your nose more often to remove the watery mucus containing some dead germs.

3.3 Butylated HydroToluene (BHT)

BHT operates within the blood. It breaks open the lipid coat of lipophilic viruses, which are then eaten up by the macrophages in the blood. There are many germs which are prevented from breeding in the blood by BHT. AIDS, for example, is probably one of these — see https://www.ncbi.nlm.nih.gov/pubmed/3649561 where the abstract reads

"Abstract

Butylated hydroxytoluene (BHT) is a potent inactivator of lipid-enveloped viruses. The viral envelope structure is physically disturbed by BHT, thereby interfering with viral adsorption to host cells. Since the virus responsible for AIDS (HTLV III) contains a lipid envelope, BHT warrants investigation as a potential antiviral agent against the AIDS virus."

This study was suggested in May 1987. A better example of how Big Pharma ignore cheap products, from they can't make much money, might be difficult to find, excepting their previous attacks on resveratrol itself.

HLTV III stands for Human Leukaemia Type Virus 3.

BHT seems to deactivate the entire range of lipid coated viruses -the Herpes Zoster Viruses such Chickenpox (which is not an inevitable disease of childhood — BHT stops it in its tracks — and Chickenpox can turn into painful shingles and reappears in later life cuasing reddened scaly skin). As the internet comments

"Shingles is an infection caused by the varicella-zoster virus, which is the same virus that causes chickenpox. Even after the chickenpox infection is over, the virus may live in your nervous system for years before reactivating as shingles. Shingles may also be referred to as herpes zoster."

About half of virus diseases are caused by lipid-coated viruses. See http://www.rifeenergymedicine.com/BHT.html which says

"This [BHT] virus suppression is for the great majority of viruses to the point that no clinical symptoms of their presence are observable in infected individuals other than anti-bodies tests. However, no drug company is going to apply for FDA approval to sell BHT as a anti-viral over the counter drug. This is because the patent on BHT has run out. Once one drug company has again gone through all of the same testing that BHT had to go through the first time for use as a food additive, but now as a drug, then any other drug company can sell BHT after FDA approval of the first drug company. There is no big money monopolistic profit in it. So what we have is the FDA's, AMA's, and drug companies dirty secret, that millions of people are suffering and

dying needlessly. It should also be mentioned that the above daily dosage of BHT with vitamin E also slows your aging rate by at least 25 %."

BHT is not popular with some of the oils and fat producers, because it keeps oils fresh, and thus reduces the demand for vegetable and cooking oils. The usual scaremongering massive dosage experiments have indicated one danger of BHT. For example, if any individual takes vast amounts of BHT — say 73 grams per day, or 292 250 mg tablets per day — then, according to the scaling-up of rat experiments, BHT could cause some liver damage.

Paracelsus, the "father of medicine" said (in German) that "The dose makes the poison". Many products which are totally safe in small doses are damaging and sometimes fatal in large enough doses. That fact has been used to attack the usefulness of many health-improving products so that the expensive treatments pushed by big Pharma are used in preference to cheaper, usually safer and more effective solutions.

A balanced view of the benefits and dangers of BHT is at http://www.advance-health.com/bht.html where the large benefits and the "wonky overload" research is summarised, and where that source says:

"A few of the viruses that have a lipid envelope and may be affected by BHT include herpes simplex I, herpes simplex II, herpes zoster, ckytomegalovirus, west nile virus, HIV virus, influenza virus, hepatitis B and C viruses, avian flu influenza virus and the SARS virus. Remember that BHT has not been clinically tested and approved to treat these infections."

In my view BHT is not generally required as a daily supplement, but it is useful to keep a bottle of 100 250mg tablets because if you (or a loved one) are suffering from an attack of one of the many lipid-coated viruses, you can

stop such attacks in its tracks. When my eldest daughter caught chickenpox at school in 1975, I gave her one 250mg tablet of BHT with ice cream (BHT is fat-soluble, so taking it with a fat-containing food helps absorption). The chicken-skin appearance — the sure sign on her chest of the chickenpox infection — disappeared and we took her back to the doctor, who said "I must have misdiagnosed". He hadn't.

3.4 Resveratrol and other AMPK stimulators

There can be no short comments on Resveratrol because there are over 7,000 peer reviewed articles on that substance. It is in the mould which can sometimes be seen on purple grapes and is consequently contained in some red wine in low doses. (Some producers of red wine wash the grapes, which reduces the resveratrol content considerably.) See my four articles about the "Transition to a Longer-Living Society" based upon the work of Professor David Sinclair beginning with:

https://medium.com/@georgetaitedwards/the-transition-to-a-longer-living-society-759f09481f53#.2ahigi7h0 The fourth part of that set of articles contains my recommendation that you should consider taking the RedRedWine sublingual tablet once a day — very cheap and probably very effective. Because sublingual tablets may be absorbed up to 250 times greater than those swallowed, one 1.25mg tablet of resveratrol may be as strong as taking over 310 mg of reseveratrol. That is equivalent to more than than the reseveratrol content of 100 glasses of red wine.

I think Professor David Andrw Sinclair's research is some of the most significant unvestigations into anti-ageing that has ever been done. Small doses of Resveratrol placed under the tongue may have a multiplier effect of up to 250 and that appears to be a very cheap way of avoiding most of the metabolic syndrome diseases (coronary diseases, cancers and central

nervous system diseases) as a person ages. These diseases only constitute 75% of the medical causes of death so the AMPK stimulants such as Resveratrol are not a complete solution to aging but they are the greatest advance in health-span and life-span improvement yet discovered.

The validity of the work done by Professor David Andrew Sinclair, in my opinion, is now beyond reasonable dispute.

3.5 A Vitamin Supplement

In 1934 Clive McCay at Cornell University showed that underfeeding rats caused them to live about 30% longer. See:

https://en.wikipedia.org/wiki/Clive_McCay

The outstanding gerontologist Dr. Roy Lee Walford (June 29 1924- April 27 2004) experimented on mice and managed to double the lifespan of mice by restricting their calories and optimising the vitamins in their food.

Dr. Walford also discovered many decades ago, by running a complex computer program against the American diet, that virtually all US diets are either deficient in vitamins and do not provide even the Recommended Dietary Allowances (RDAs) and that consequently one of the reasons why Americans may over eat is that only a diet high in calories can provide most of the RDAs. Consequently, it may be argued, everyone is either vitamin deficient if they are on a diet providing fewer calories, or are eating too much and getting too many calories perhaps in an attempt to get the minimum essential vitamins.

Walford also specifically criticised the idea of RDAs, which are in his words "only enough to stop you from getting an interesting disease." The daily vitamins in his opinion should be optimal for health and not minimally based on what the average US diet contained (which is how the RDAs were originally established). No diet is likely to contain the levels of vitamins and minerals essential for optimal health, so taking a broad-spectrum vitamin and mineral pill is probably essential.

On the basis of his researches, Walford developed the Calorie Restriction, Optimal Nutrition (CRON) diet, and produced several books related to that subject. The five I have in my library are:

- 1 Maximum Life Span, New York: W.W. Norton & Co, 1983
- 2 The 120-Year Diet, New York: Simon and Schuster, 1986 ISBN 0-671-64904-3.
- 3 (With R. H. Weindruch)The Retardation of Aging and Disease by Dietary Restriction, New York, 1988
- 4 (With his daughter, Lisa Walford)The Anti-Aging Plan, New York: Four Walls Eight Windows, 1994
- 5 Beyond The 120-Year Diet, New York: Four Walls Eight Windows, 2000.

The "Anti-Aging Plan" contains lots of recipes for highly nutritious low calorie meals. If you look at www.walford.com and select The Kitchen then you'll see lots of highly nutritious recipes.

Walford went into Biosphere 2 (a large greenhouse in Arizona which was intended to mimic a sustainable closed environment as a a prelude to, say, the colonisation of Mars) in the expensive interesting experiment to see if a 3.14 acre miniature subset of three of the world's environments could be made continually stable and support the lives of eight people for two years. It couldn't on the basis of the knowledge we then had. See https://en.wikipedia.org/wiki/Biosphere_2

We now think we know how to do that.

Dr. Roy Walford died of ALS or Lou Gehrig's Disease (otherwise known as motor neurone disease or MND) which may have been caused by the restricted diet he was on while in Biosphere 2. It is now believed that a restricted calorie diet appears to speed the development of motor neurone disease.

Anorexics and people on the CRON diets are usually very healthy and the main thing they can suffer from is vitamin deficiency. However the lack of fats in these diets does appear to accelerate the development of various forms of MND.

I think the best high value low cost vitamin pill may be the Life Extension Foundation's two-per-day pills.

3.6 Selenium

Ingested selenium in tiny quantities (in the average diet, it's alleged to be about 60mcg a day — 60 micrograms or *millionths* of a gram) is used by the body's immune system to make glutathione peroxidase. It has been known of decades that nations who naturally consume higher levels of selenium (eg

the Japanese, who eat a lot of fish, which is naturally higher in selenium) are less prone to various forms of cancer than is the case in countries where the consumption of selenium is lower. There is a mountain of evidence (thousands of scholarly articles) about this topic.

See http://www.lifeextension.com/magazine/2012/ss/selenium-protect-against-cancer/page-01

I take Life Extension's 200mcg of three kinds of pleiotropic selenium supplementation a day. This along with a high-fish diet reduces cancer risks enormously. I calculate that at a consumption level of 320mcg of selenium a day, cancer risks are reduced by over 90%. That is an enormous benefit for a trivial expenditure.

The anti-ageing pill provided to all elderly people in Sweden apparently contains a high level of Selenium, according to Roy Walford in his book "Maximum Life Span".

3.7 NMN

Nicotinamide MonoNucleotide (NMN) has the capability of restoring energy production in the black brain (or the Nigrostriatal Nervous System, or NNS). It does this by stimulating the growth of mitochondria in the black brain. Young people may have over a thousand mitochrondia in the cells of the NNS but people over 80 may have less than a couple of hundred. Because the black brain holds one key to life extension (it is the primordial nervous system that determines the emotions and the hormones as well as much of the immune response) a fully functioning NNS is essential to life. Because the nerves in the black brain lose mitochondria and thus cellular energy production, the cells in the NNS die at the estimated rate of 10% every ten

years after one is forty, and death results when the NNS has too few cells. It is essential to restore the cellular capability to increase mitochondria numbers within the NNS. Again, Professor David Andrew Sinclair has demonstrated that high doses of Nicotiamide Riboside can reverse this aspect of ageing. As this Youtube video says "Harvard genetics professor David Sinclair takes his research personally. Through the lens of his own mother's battle with cancer, Dr. Sinclair shares the endless potential of his age-reversing discoveries and the potential future for us all."

See https://www.youtube.com/watch?v=AiCvqnUIe04

After her left lung was removed, the doctors advised David Sinclair that his mother had only about a year to live. He was not having that. He fed her NMN and she lived for 20 years — 19 years beyond the forecast of the good doctors. I know that's only one case, but it is in my view very significant.

NMN has been patented in its most active form as NIAGEN and can be purchased along with Optimised Resveratrol from the Life Extension Foundation or from Amazon.co.uk.

David Sinclair's mother died choking from phlegm in her oesophageal tubes. See Section 3.2 about Xylitol.

3.8 DMAE

Energy generation by the mitochondria within each cell mainly burns milk sugar (or galactose) and produces a yellowish brown amyloid residue known as lipofuscin. The cellular machinery wraps that energy debris against the wall of the cells and when cells divide (e.g muscle cells) after say seven years, the lipofuscin is divided between them.

The lipofuscin problem is in nerve cells which do not divide during life. The nervous system that each person has at birth is virtually identical to the one with which an individual dies. Lipofuscin builds up within the nerve cells during life and clogs up the operation of the nerve cells, by blocking the small communication channels leading out from the cell. This happens because nerve cells consist of a central cell with long axons that reach out to other nerve cells. Lipofuscin is wrapped around cell walls by the cellular machinery and often blocks the entry passage of neurotransmitters up these long axons and produces a cumulative shutdown of parts of the nervous system as the individual ages.

See: https://en.wikipedia.org/wiki/Lipofuscin

DiMethylAminoEthanol acts as a kind of stimulant to the body's normal systems for the disposal of intracellular Lipofuscin. When it does that, the progress of dozens of nervous system diseases and organ diseases are reduced substantially. DMAE must be taken with a broad spectrum vitamin tablet or it could act as a electron chain transfer agent.

DMAE seems to have the capacity to block the deterioration of CNS communication, thus preventing many of the usual CNS diseases. It therefore keeps you a bit brighter, and a bit more mentally energetic, as you age.

There's a lot of DMAE in sardines, but unless you eat a lot of fish, you are almost certainly not acquiring enough DMAE. A supplement containing about 250mg a day is probably optimal.

3.9 Astaxanthin

About 4 years ago my wife, who had already had a right shoulder replacement operation due to arthritis, could not turn over in bed without suffering agony. I decided to research how best to help remedy her condition by studying on the internet all the substances that relieve arthritis.

I discovered that 15mg of Astaxanthin daily completely restored normal joint operations and enabled her to lead a painless life. In my opinion that is an enormous benefit.

Nobody I have met seems to know about that. The suffering and painful joint replacement operations associated with arthritis are completely avoidable and probably quite unnecessary.

Ask your doctor about it if you like — he will probably tell you "It's not been properly tested." But if you (or a loved one) have arthritis you (and her or him) probably do not need to continue to suffer. It's up to you and to them.

4 My Attitude To All This

In my opinion, everyone's health us the responsibility of each of us. If any individual decides to take their doctor's advice and to only take the treatments that doctors prescribe, then that is fine with me.

But I do think it is part of my responsibility to advise my friends and family about how best they could lead happier, healthier and longer lives. All of the above substances improve the healthspan — that is the period of healthy life, particularly the resveratrol and AMPK activators recently discovered by the recent excellent research of Dr. David Andrew Sinclair.

Big Pharma are not evil — they are just trapped in a capitalist system where their obligation to shareholders exceeds their obligation to society. Doctors are also placed in a medical and health system which determines what they can and cannot prescribe. That's just the way it is. Intelligent individuals can look after their own health, and to the extent they can, they probably should.

5 Summary

The eight items listed above may be crucial in the maximisation of the healthspan. What each does is:

- 5.1 NaPCA prevents skin damage due to burns if used immediately.
- 5.2 Xylitol disables water-soluble viruses entering by mouth. 4mg in tea or coffee daily.
- 5.3 BHT destroys lipid-coated viruses. For use when these viruses attack.
- 5.4 Resveratrol and AMPK activators extend life by correcting mistaken genetic expression. One sublingual tablet daily, if you are under the age of 40. Above that age consider using Optimised Resveratrol Plus Naigen (NMN see 4.7).
- 5.5 A vitamin supplement. One tablet twice daily.
- 5.6 Selenium One tablet containing 200mcg in total of three kinds of pleiotropic selenium supplementation once a day.
- 5.7 NMN preserves energy generation in the black brain, which may reverse CNS and brain ageing. See paras 3.4 and note 4.4 above.

- 5.8 DMAE removes most of lipofuscin, thus preserving some CNS cellular communication.
- 5.9 Astaxanthin (15mg a day) cures arthritis. Take it if you have arthritis.

So in summary I take (and my wife takes) 4mg Xylitol in morning tea plus four tablets.

- Optimised resveratrol plus NIAGEN (or NMN)
- A broad-spectrum vitamin supplement
- One 200mg Selenium tablet
- One 250mg DMAE tablet

My wife also takes 15 mg Astaxanthin to prevent any symptoms of her arthritis. And we take the second vitamin tablet later in the day.

Both my wife and I have been diagnosed as having DMT2 and we have been prescribed Metformin tablets (two 500mg for my wife and four 500mg tablets for myself) and we have also been given tablets to reduce my blood pressure and her blood sugar levels. The beneficial effects of Metformin are summarised above.

In addition to the above, I take 15mg Beta Carotene daily to maintain my eyesight. We also fry our foods in virgin coconut oil, because that oil is much safer and more beneficial than any other, see: http://www.advance-health.com/coconut.html

Coconut oil confers the same health benefits as BHT — it destroys the same list of lipid coated viruses — so is preferable, in regular use, to BHT.

6 Conclusions

Nobody knows everything, not even me. It's always the figurative bus you don't see that runs you over. I read obsessively and try to continually learn and improve my understanding through my reading and studying. For the most part, that works for me.

The main thing these supplements do is improve the healthspan, which is the period of heathy life. That is a major benefit and the best outcome of these pills.

If you are young and healthy the only tablet you may wish to consider is sublingual (below the tongue) resveratrol. That's the best value for money.

I do not want the members of my family or my friends suffering needlessly from the slings and arrows of outrageous disabilities as they grow older. I do not want to be less mortal on my own. I want there to be many pockets of people who are leading healthier, longer, happier lives, free from most of the metabolic diseases which are currently the major scourge of older age.

That's my choice — to share what I think I know — with you. But don't take my word for it — check it out yourself. And act however you wish. It's your life. It's your choices. And — this expression has often been used before, but was never as literally true as it is here — it's your funeral.

"Peace be with you in the everlasting now" says one of the characters in Paul Lineberger's (Cordwainer Smith's) Lords of the Instrumentality series. That's what I wish for you all, my dear readers. And be spick as Spock has spoken "Live long and prosper!"

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Health

Vitamins And Supplements

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The major part of my 50-year research has been into the methods of high economic growth in FDR's USA (1938-44), in Japan 1945-75, and in China 1975-now.

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