# INTERNATIONAL HEALTH NEWS

*William R. Ware, PhD - Editor*

**NUMBER 268** **JUNE 2016** **25th YEAR**

## SIGNS OF PROGRESS AND GROUNDS FOR HOPE

While readers have no doubt noticed that IHN tends to emphasize problems in medicine and what one might do because of them, it is refreshing be able to report signs of progress. In Vermont it looks like the legislation to force labeling of all GMO containing foods will survive in spite of intense pressure from lobbyists. Big Food and Big Agriculture are panicking over this and have no trouble visualizing the impact outside of this state. On the GMO front we are also seeing a movement among major processed food producers to eliminate GMOs, at least in some products, presumably with the hope of a marketing advantage. Clearly, awareness of public concern and public disbelief in official pronouncements regarding safety are having an impact, and the industry is well aware of the marketing potential of such moves, having learned much from the low-fat, low cholesterol movement and now from the recommendations regarding low-salt. While in the case of marketing low-fat products they were innocently following flawed science, pseudoscience in fact, what is now happening is somewhat different, although GMO advocates and the pesticide-herbicide industry would of course deny this with loud shouting about no scientific proof, having learned much from Big Tobacco.

We are also seeing a movement to reduce public exposure to endocrine disrupters such as bis-phenol (BPH). A major US producer of canned food has announce phasing out BPH coated cans by sometime in 2017 and if this is used in marketing it will put great pressure on other companies. However, there are grounds for concern that the replacement coating will be just as bad or worse and the *BPH-Free* label will just be a sick joke on the defenseless consumer. This type of coating is particularly bad because the food is heated in the cans to kill all pathogenic and other organisms and at the same time increasing the rate that chemicals leach out of the coating. Food packaged in glass jars is obviously preferable and going “all glass” as a replacement for plastic in the kitchen is becoming popular.

Organic foods are becoming much more readily available and the trend appears to be rapidly accelerating. Again, this is a marketing tool, but in this case that is both good and important. In Canada, Costco is rapidly increasing its offerings of organic foods and even the major grocery chains that supply the demand for junk food now are starting to carry organics and “wild” foods

such as fish and berries. Specialty stores are springing up to supply the demand for both local and organic food, an example in Canada being Farm Boy. When one can't find an organic version of a non-perishable in the grocery store, frequently Amazon has it, even coffee beans.

Naturally, there is the risk of fraudulent claims. In fact it is totally predictable, but hopefully there will be an increasing number of watchdogs, some with high-tech labs, and it will be very bad for both image and business to get caught. In fact, one component of this optimistic view of the changes that are taking place is the social media, where news of consumer deception and fraud potentially can spread like wildfire. Surely companies know they are being watched as never before. For example, if the new can-coatings are also dangerous, it will be hard to suppress this information in the new age of communication.

Finally, in Canada there is currently a movement gathering momentum which involves stopping the widespread practice of routinely giving nursing home residents antipsychotic drugs in the absence of psychotic indications, allegedly to control aggressive behavior. Early results from phasing out these drugs have been highly positive and include a big decrease in falls and broken bones. Concern regarding overwhelming overmedication may eventually lead to considerable improvements in quality of life in these institutions. Perhaps by 2050 or the next century even the profound deficiency in vitamin D will be addressed. The cost would be negligible.

***IMPORTANT NOTICE***
***An updated index to IHN from FEBRUARY 2011 to MAY 2016 is now available on the website.***
***www.yourhealthbase.com/archives/issueindex2016.pdf***

Wishing you and your family good health,

***William R. Ware, PhD, Editor***

**Highlights**

# MEDIUM CHAIN TRIGLYCERIDES FOR DECLINING MEMORY, FOGGINESS, CONFUSION, AND MENTAL SLOWNESS

In alternative medicine, case reports and anecdotal evidence, while held in contempt by devotees to so-called Evidence-Based Medicine, are in fact very important and were the traditional path to the development of many treatments. I would like to share with readers this anecdotal report.

A gentleman of about 70 years of age had been experiencing various problems suggesting a progressive decline in brain function such as pre-Alzheimer's. He decided to try medium chain triglyceride oil, i.e. MCT oil. Here is what he wrote to your editor. What he describes occurred over a couple of weeks.

> *My memory has improved by 50%. The fogginess, confusion and slowness have completely disappeared. Things seem so clear; I can read so much faster, the pages used to seem foggy, almost like looking through a box while trying to read. Driving is far more comfortable, I am more alert and my responses faster.*
>
> *I am up to 1 and ½ tablespoons, one dose in yogurt for breakfast and one late afternoon 4-5. Bowels can handle this easily and I feel absolutely 20 years younger. I listen to books on Audible, and have increased the readers speed because it seemed to be slow.*
>
> *Bottom line – I feel great.*

The benefits have now persisted for several months. This individual is a self-employed professional doing difficult and demanding work that requires critical and thoughtful attention to details. The growing mental problems were thus very distressing and beginning to impair his performance of the activities of his vocation. It is important that mainstream medicine has no intervention that would produce the above-described improvement. The Mayo Clinic website states that there are no approved drugs for non-Alzheimer's memory or cognitive problems. It is not surprising that they state under alternative treatments that no supplement has shown benefit in a clinical trial. The Mayo Clinic would want data consistent with Evidence-Based Medicine. A 2013 paper in the *British Journal of Psychiatry* states clearly in a systematic review "There was no replicated evidence that any intervention was effective (for mild cognitive impairment)," and "the strongest evidence was that cholinesterase inhibitors did not reduce incident dementia." Here they are talking about preventing mild cognitive impairment from progressing to Alzheimer's disease. The drug mentioned is used for Alzheimer's patients with debatable clinically significant benefits, such as bringing about significant regression or stopping progression.[1] However, in the past this drug has been given to patients with mild cognitive impairment. Thus aside from lifestyle and dietary advice and perhaps non-drug psychiatric therapy, all apparently of limited effectiveness, the individual with mild cognitive impairment is left to drift into dementia. An attitude of

inevitability seems appropriate if one ignores what are called medium chain triglycerides (MCTs).

Readers will recall that several times the subject of coconut oil—MCT oil has been discussed in IHN in the context of Alzheimer's disease (AD), where it is used as an alternative natural therapy with many reports of success (see the September, 2012 and December 2014 issues). In fact, this body of favorable anecdotal evidence has motivated a real clinical trial which is being carried out at a university in Florida. Even before the trial ends, this is a huge victory for alternative medicine. Thus the above anecdotal report of benefit in mild cognitive impairment is not surprising. By reversing its symptomatic presentation this alternative approach may delay progression to advanced AD, perhaps permanently since the exact same approach reverses but probably does not cure this dreaded disease. It is noteworthy that, according to many reports in the media starting in 2012, Big Pharma has all but given up trying to develop drugs for mild cognitive impairment or AD.

The coconut/MCT oil approach to mental decline and AD has great biological plausibility. The ketones the body makes from MCTs solve the problem of impaired brain cell glucose metabolism, also called Type 3 diabetes, and they do this by not needing insulin for passage into the brain cells where they provide an alternate fuel. Clinical studies of MCTs with memory or cognition as endpoints are few in number and mostly enrolled very few subjects, thus providing limited but positive information.[2] Also, not all studies included a genetic test for ApoE 4 which appears if present to diminish the impact of MCTs on mental issues. In addition, about half the studies used just one MCT which is approved as a medicinal food by the FDA (Axona). A study using natural MCTs had only two subjects finish, one negative for ApoE4. This one individual with mild cognitive impairment benefited.[3] This is really just like a case history. A recent study from Japan used the synthetic single MCT and found for mildly affected AD patients an improved cognitive function and reduction of the increase in AD severity was observed. Fifteen patients in the study were ApoE4 negative.[4]

The anecdotal data gathered by Dr. Marry Newport MD does not appear to have been published in a journal but is on the internet at http://www.coconutketones.com with the link at "2012 Chart of Responses" for the summary of results. For 184 anecdotal reports provided by caregivers of patients with AD or milder memory impairments given MCTs, 91% reported improvement in general, 59% for memory/cognition, 42% for social/behavior/mood, 35% for speech/verbal skills, 21% for physical symptoms and 24% reported resumption of lost activities. These are absolute benefits and the percentages are large. The link also provides a table giving the details of improvements seen. Note that this set of data apparently includes cognitive impairment without AD. Thus again the anecdotal report presented above is not surprising. Those interested in this intervention await the results of the clinical trial motivated by this and other data collected by Dr. Newport. For more on Dr. Newport's role in promoting MCTs, see the September 2012 IHN issue and her book *Alzheimer's Disease. What If There Was A Cure?*

Coconut oil is solid room temperature, but when mixed with MCT oil yields a liquid which is convenient for dosing. Dr. Newport recommends a 4:3 mixture with more MCT oil than coconut oil. Given the variation in these oils, 1:1 is probably also satisfactory. Both are readily available at most health food stores, and organic coconut oil is also available on the internet, including Amazon. The use of a mixture provides a wider variety of individual MCTs which may have advantages not yet explored in detail. Coconut oil has a much larger proportion of an important MCT than the commercial MCT oil, but the MCT composition of commercial oils available in health food stores or online may be variable. The above mixture is easily prepared at home. Merely warm the coconut oil until liquid and prepare the mixture with a measuring cup and store it in a glass bottle, even a screw cap wine bottle. These oils have a long safe-storage lifetime.
Another source of MCTs is coconut oil ice cream which is made from coconut milk and is rich in coconut oil. The milk can have up to 10-15 grams of fat (oil) in two ounces. While these “ice creams” come in traditional flavors, they also may contain grated coconut which adds to the MCT content. The down side is some added sugar, but the importance of this depends on ones total dietary intake of sugar which may be small. This product is useful in providing MCTs while satisfying the craving for something sweet.

Dr. Mary Newport has recently published a new book on coconut oil (and MCT oil), *The Coconut oil and Low-carb Solution for Alzheimer’s, Parkinson’s and other Diseases*. Low-carb diets also increase the use of ketones as fuel. This is an important book because it also discusses a number of other brain-related problems that appear favorably impacted by adding coconut oil or MCT oil to one’s diet. The apparent reason that this therapy is not specific to AD for which it was first indicated is that it addresses the problem of the decline in the ability of the brain to utilize glucose in the metabolic process that produces energy rather than targeting specific suspected disease factors. The benefits reported to Dr. Newport support the hypothesis that for the brain-related diseases mentioned below, impaired energy production and perhaps concomitant cell death is a common factor. Dr. Newport discusses the benefits of MCTs in non-Alzheimer’s dementia, Parkinson’s disease, amyotrophic lateral sclerosis (Lou Gehrig’s disease), and multiple sclerosis. For all of these she has collected case histories of significant if not dramatic improvements achieved by daily intake of MCTs. The results for Parkinson’s disease were especially impressive.

One does not in general expect side effects from increasing the fraction of energy derived from ketones since very low-carb diets accomplish this as does fasting. According to Dr. Newport, some individuals experience indigestion or sudden diarrhea on starting MCTs, which she attributes to taking too large initial amounts. The simple solution is to work up to the desired or effective dose. Doses found effective range from 1—3 tablespoons per day to several times that amount spread over the day. A popular way to take these oils is in a smoothie or mixed with yoghurt or with other food.

Dr. Newport’s new book is highly recommended. It includes a discussion of ketogenic diets and MCTs to overcome insulin resistance, recipes for cooking with coconut oil, a discussion of disorders that may respond to ketones, caregiver’s accounts and personal

accounts, and finally, a well-documented discussion of the underlying science. The book is an excellent companion to her earlier book *Alzheimer's Disease. What If There Was a Cure?*

In view of the above, the need for larger clinical trials of MCT oil or coconut oil or both for mild cognitive impairment and other brain related diseases is clear and seemingly urgent. However, this is a natural product which cannot be patented, larger studies are expensive, and using a natural product for the intervention is not attractive to many researchers who are wedded to the standard patent drug paradigm which with successful trials leads to a prescription drug.

## ANOTHER KETONE SOLUTION TO TYPE 3 DIABETES AND ALZHEIMER'S DISEASE

Ingested MCTs are converted into what are called ketone bodies (three simple ketones) which circulate, pass the blood brain barrier, and provide alternative fuel for the brain cells without the intervention of insulin. However, there is a limit as to the blood levels one can achieve through either ketogenic diets or MCTs from either coconut oil or MCT oil or both. A synthetic ketogenic agent which is metabolized into a ketone body has been made and tested for safety and the conversion to the principal ketone body beta-hydroxybuterate (BHB) studied. It meets FDA standards for "generally recognized as safe and results in much higher blood ketone body levels that can be achieved by coconut oil or MCT oil. A recent study by Mary Newport and other researchers examined the use of this synesthetic compound they call for short *ketone ester*.[5] In this investigation, one patient was studied, a 63-year-old male who had showed initial symptoms of cognitive problems in 2001 and by 2006 was considered to have Alzheimer's disease (AD) with a dramatically diminished quality of life and many of the recognized impairments of AD. MCT oil plus coconut oil was tried, produced significant improvement in a number of AD associated parameters and during the two years of treatment his MRI remained stable, i.e. the disease did not show any evidence of progression. Subsequently, he was enrolled in a drug study and suffered dramatic regression and dropped out of the study.

On April 29, 2010 he was started on ketone ester. What followed was dramatic:

- At 3 hours: Improvement was seen in that he was doing things he had not done for months.
- Morning, second day: Spontaneously dressed himself which he had not been doing.
- Day 3: The dose was increased. This resulted in subsequent days by initiation and completion of activities which had not been observed for months such as showering, shaving, brushing teeth, successfully ordering from a menu, and putting away dishes from the dishwasher.

- At 6 to 8 weeks: Memory retrieval improved. Spontaneously discussed events that had occurred up to a week earlier. Performing more complex tasks such as vacuuming, washing dishes by hand and yard work.

If a new pharmaceutical produced the above results, is would be heralded worldwide as a revolutionary achievement and the drug would be rushed to market, probably at a high price if the current behavior of the industry is any indication. Instead, the 2015 paper appears to be ignored.

In the study, the ketone body produced was measured in the blood for three doses and found to be dose dependent. At all doses, the maximum concentration was reached in about an hour and the ketone body from the maximum dose had a half-life of around 3.5 hours.

As Dr. Newport points out in her new book, this ketone ester is not now on the market. First, it is currently expensive to make. In addition, as of the writing of her book, no funding had come forward for human clinical trials in spite of the fact that the chemical is patented. This is of course tragic since it appears that while MCTs can produce dramatic effects, they are still somewhat limited, especially in advanced AD. Here we have a simple organic molecule that may produce truly sensational results in a health problem of gigantic proportions, but probably using ketone bodies as a therapy does not appeal to mainstream medicine and one sensational anecdotal result cuts little ice with the evidence-based medicine community. At least the protectors of public health have not yet found a way to prevent the consumption of coconut oil and MCT oil. Incidentally, a patent has been applied for the compound used in this study and related compounds. A head-to-head comparison trial against Axona,[6] a prescription MCT, would be of interest. The ultimate active metabolite in these compounds appears to be the same, beta-hydroxybutyrate.

**BOTTOM LINE**
Alternative approaches to memory problems and mild cognitive impairment exist and appear to work, which is in sharp contrast to prescription drugs sometimes used therapeutically. Even Amazon now sells coconut oil and MCT oil, including organic. Hopefully the new ketone esters will soon become available.

## FALSE HOPE FROM HOPE-3 STUDY

On April 2 the latest placebo-controlled primary prevention trial for a statin was published in the *New England Journal of Medicine*. It was the lead story on the NBC Evening News in the US. The statin Crestor has been shown effective and safe for individuals at intermediate risk of cardiovascular disease. This trial, called HOPE-3 was a large international effort comprising over 12,000 subjects in 21 countries.[7] Treatment involved low dose Crestor (10 mg). The two primary endpoints were death from cardiovascular causes, nonfatal heart attack and nonfatal stroke and the second primary endpoint had added revascularization (balloon angioplasty or bypass surgery),

heart failure and resuscitated cardiac arrest, i.e. it included soft endpoints. The mean age was 66 years and 46% of the subjects were female. Follow-up was 5.6 years. Intermediate risk was defined as an *annual* risk of 1% or greater for a major cardiovascular event, i.e. a 10-year risk of 10%. Subjects had to have one or more risk factors such as elevated waist-to-hip ratio, current smoking, low HDL cholesterol, early diabetes or impaired glucose metabolism, family history of heart disease, early kidney dysfunction or hypertension. Almost half had two risk factors and a quarter had 3. There was a wide range of race and ethnic groups with white representing only 20% and black 2%.

The absolute risk reductions for the first and second primary endpoints were 1.1% and 1.3% (98.9% and 98.7%) did not benefit from the treatment). For all-cause mortality and cardiovascular mortality an absolute risk reduction of 0.3% was found for both (99.7% no benefit). For heart attack and stroke, they were 0.4% and 0.5%, respectively. These results are just what has been seen in previous primary prevention studies and meta-analyses including studies involving intermediate risk subjects. This was even pointed out on April 3rd on CNN by the well-known cardiologist Dr. Eric Topol, director of the Scripts Translational Science Institute. Even in the HOPE-3 paper the authors give the number needed to treat for the first primary outcome as 91 which implies an absolute risk of 1.1% over the period of the trial, the same number given above derived from their Table 2 or even from the numbers given in the abstract. Furthermore, the absolute benefits were smaller than reported for approximately the same LDL lowering in as the latest Cholesterol Treatment Trialists' Collaboration meta-analysis which included stratification for intermediate risk.[8]

There are some aspects of HOPE-3 that merit additional comment.

- If one uses the online calculator based on the data accumulated by the Multiethnic Atherosclerosis Study (MESA) and inputs the mean population values which apply to the study cohort, two risk factors among diabetes, smoking and family history rather than one are needed to get a 10-year risk above 10% for Caucasian, Chinese or Hispanic men, whereas this was insufficient for women in these ethnic groups.
- For both the first and second primary outcomes, the absolute risk reduction for women was 0.65% and 0.79% (99.3% and 99.2% no benefit) and what is more important, was not statistically significant when hazard ratios were calculated. These results are buried in the supplemental information which must be downloaded separately once one finds the link. The abstract and the text do not deal with the gender factor. Thus this study provided no acceptable evidence for this statin treatment having benefit for women. Naturally this did not make the evening news NBC in the US.
- If relative risk reduction is used to judge the efficacy, the results compare with other similar studies and are in the range of 25%.
- The authors not only provided absolute results even in the abstract, but used these numbers to calculate and present numbers needed to treat to prevent

one event for the two primary endpoints. In the past this practice has been rare and it is nice to see it now being done more frequently.

Thus, as with all the comparable studies, most treated individuals do not benefit. Since this was low dose for Crestor, and the study found low rates of side effects, the argument can be made that the benefits outweigh the risks although with 21 countries and a very large number of participating physicians, the side effect results may not be reliable. For primary prevention studies using statins, in general the risks are viewed by critics as under-estimated and as discussed in IHN (JUL 15) the enhanced risk of diabetes now appears to be considerable, providing critics with a reason to question the therapy with benefits that are so small. In fact, contrary to the conventional wisdom, the risk now appears to exceed the benefit for this class of drug.

For those who say, this is just not good enough when results show 97-99% of treated individuals do not benefit, what should we do? Mainstream medicine recommends diet modification and exercise, but it is well known that patients prefer a pill and that non-pharmaceutical interventions frequently have poor adherence or outright resistance on the part of patients. It is interesting that the senior investigator for HOPE-3 also was in the same position with a large and important study called INTERHEART which obtained data allowing one to judge the power of combined non-drug factors in influencing heart attack risk.[9] In this study 52 countries were involved, and the design was case-control i.e. find cases and match them with controls to judge the benefits and risks. The investigators identified 8 factors when present that either increased or decreased heart attack risk; current smoking, diabetes, hypertension, abdominal obesity, psychosocial stress, fruit and vegetable intake, exercise, alcohol and the ApoB/ApoA1 ratio, the latter having to do with blood lipids associated with cholesterol particle size and associated atherosclerosis risk. This Apo ratio turns out to be a stronger predictor of CHD events than ratios using HDL, total cholesterol or LDL. Unfortunately, this ratio is not measured in routine practice.

The essential feature of grouping factors is multiplication of risk reductions measured as odds of a heart attack in the presence vs. the absence of the risk. Odds ratios represent the odds that an outcome will occur given a particular exposure, e.g. smoking, compared to the odds of the outcome occurring in as the absence of the exposure. These are assumed to be operating more or less independently (Note: If the odds represent an increased risk. then 1/(odds ratio) gives the odds ratio for the benefit of not having the factor. For example if smoking increases the risk of a heart attack by a factor of 2.9, then the corresponding odds decrease if an individual does not smoke compared to the risk for non-smokers, is 0.34.

In the table below, an illustration is provided based on the INTERHEART data where the initial change involves either smoking or not smoking followed by the presence or absence of other harmful risk factors or beneficial factors. As on goes down each column more factors come into play and the cumulative risk of a heart attack is dramatically reduced. For example, stopping smoking makes the odds of a heart attack 0.34 vs. 1.0, the reference for the calculation. In the INTERHEART paper the authors

show in Figure 3 on the right hand side just such a calculation where they start with no smoking and eating fruits and vegetables and then add exercise and alcohol. The table below uses the same calculation but provides a more extensive view.

**TABLE**. Cumulative effects of multiple additions of factors associated with risk of heart attack.[9]

| ACTION | ODDS | CUMULATIVE ODDS | | | | |
|---|---|---|---|---|---|---|
| Non-smoking | 0.34 | 0.34 | 0.34 | 0.34 | | 0.34 |
| No diabetes | 0.32 | 0.11 | | | | 0.11 |
| No abdominal obesity | 0.45 | 0.05 | 0.15 | | | 0.05 |
| No psychosocial issues | 0.40 | 0.019 | | | | |
| Fruits and vegetables | 0.70 | 0.013 | 0.11 | 0.23 | 0.7 | |
| Exercise | 0.72 | 0.009 | 0.02 | 0.17 | 0.5 | 0.04 |
| Alcohol in moderation | 0.79 | 0.007 | 0.01 | 0.13 | 0.4 | |

The odds column represents the reduced odds of having a heart attack compared to 1.0 as the reference. For smoking, diabetes, abdominal obesity and psychosocial issues, the comparison with no vs. yes. For fruits and vegetables it is optimum vs. low intake. For exercise it is active vs. little. For alcohol, the comparison is one to two drinks per day vs. abstinence. Thus in the first row the risk reduction for not smoking expressed as the odds of a heart attack is 0.34 vs. 1.0 for smoker. In the cumulative odds columns, the additive effect is calculated. For example, not having diabetes and not smoking gives 0.34. X 0.32 = 0.11. Add a low risk hip to ratio which is the measure of abdominal obesity and 0.34 X 0.32 X 0.45 = 0.05, so that the risk is now only 5% of that for the obese diabetic who smokes. It is assumed that each factor is acting independently with no synergism. It should be noted that this table is based on odds ratios, not absolute risk reductions. However, when the odds ratios are very small, they imply large absolute risk reductions.

These numbers had their origin in a study involving diverse populations and both genders. Thus they are intended to illustrate a point but for any individual the actual numbers will vary. However, they illustrate the potential of multiple factors in reducing heart attack risk. The INTERHEART study makes the point that these risk factors together account for almost all the risk that can be attributed to the populations studied, what they call the population attributable risk, which indicates the number or proportion of cases that would not occur in a population if the factor were absent or a beneficial factor present. Accounting for almost all attributable risk also implies that no major factor has been omitted. This justifies the importance given to very low risk achieved by the presence of multiple factors. In the table, only the Apo ratio and hypertension are ignored and these are not major factors. The implication is also that by having all 7 factors highly favorable for low risk of a heart attack, the level of atherosclerotic plaque and thus coronary calcification would be low.

One can of course argue that the benefit of giving up a bad action or habit such as smoking will not be instantaneous or even take one back to the non-smoker risk, so this

represents the maximum benefit that could be obtained. Nevertheless, a recent study found that when never, past and current smokers without known coronary artery disease were compared the risk of major adverse cardiovascular events which started out being the same for just quit and current smokers, began to diverge after 2 years and by 6 years was the same for quitters as never smokers.[10] This was in spite of higher baseline coronary plaque in the past-smokers than the never-smokers. The study found that over about 3 years mean follow-up, an odds ratio of about 0.5 for major cardiac events in the comparison of smokers who quit or were never smokers, which is comparable to the value in the above table derived from the INTERHEART study. This odds ratio was equivalent to about a 5% absolute risk reduction. Unfortunately the same issue has not been studied with diabetes since the Newcastle Diet cure has only become known recently and is not yet recognized by mainstream medicine. Thus these INTERHEART results only provide an indication of actions that are suggested by looking at the association of risk factors and prevalence, not on data where beneficial actions were undertaken and after a number of years, the achieved level of risk measured. Nevertheless INTERHEART also alerts one to changes that are in a bad direction and are to be avoided if at all possible. For example, someone who takes up smoking, gets diabetes and abdominal fat, starts to experience severe psychosocial stress, abandons a healthy diet for junk food, stops exercising and abstains from alcohol must surely be increasing their risk of a heart attack dramatically although it may take some time for the risk to maximize. The joker in this deck is atherosclerosis and if one starts with zero coronary plaque and thus a very low risk of heart attack and after a number of years has a moderate or high level due to allowing all the risk factors to blossom, stopping dangerous actions will probably not significantly reverse the plaque burden. However, even small reductions of plaque burden can be accompanied by larger changes in the nature of the plaque in the context of rupture.

Let's assume a hypothetical situation that someone was a diabetic smoker with a "beer belly" and under severe psychological stress. These factors carry the highest odds that if absent, bode well for not having a heart attack, 0.02 vs. 1.0. Then assume steps are taken to "reform" and the individual ends up after a few years with these factors being optimum including the elimination of type 2 diabetes. The new odds are unknown, but assume they are now 0.7 for each. Then the cumulative odds become 0.24 vs. 1.0 if the changes had not taken place.

There is an online calculator based on this study which will provide the user with an assessment of heart attack risk (https://rome.phri.ca/interheartriskscore). The calculator yields a score for each question related to a factor, and the results allow one to see the weights being given on the basis of the study data and see where one stands according to this study with regard to heart attack risk. Unfortunately, 5- or 10-year risks are not calculated. Instead, risk was simply described as very low to very high.

## MAJOR FACTORS AFFECTING LONGEVITY

Dealing with the risk of cardiovascular disease must be a part of any longevity program, simply because it is a leading cause of death. The INTERHEART results discussed above provide an important component in the design of such a program. However, one most also deal with the other major chronic diseases, three of which are diabetes, cancer and cognitive decline with eventual dementia. Getting rid of prediabetes or diabetes is not only important for heart disease risk but for longevity in general and can be accomplished for many with the Newcastle Diet followed by continued weigh control. For some, bariatric surgery is the answer, again if weight loss is maintained. As discussed in IHN, for cancer the natural product called Salvestrols offers a unique route to prevention. For cognitive decline and dementia problems, as also discussed in IHN (MAY 14, SEP 13, JUL 12) and in this issue, the use of coconut oil and medium chain triglyceride oils may provide an answer for some, at least adding years of modest to good quality of life. Like Salvestrols, the action of these medium chain triglycerides has compelling biological plausibility. In fact, there is now a clinical trial underway in Florida testing this intervention for Alzheimer's disease, motivated by impressive case histories and strong biological plausibility. Thus there are grounds for optimism and hope, and they do not involve filling prescriptions. The INTERHEART focused on heart disease but the factors they examined have widespread importance in other chronic diseases which contribute significantly to mortality.

The reason such as a multifactorial approach to longevity suggested above is not being widely embraced is simply that many want a simple solution like pills, even for weight loss. In fact the elderly population in swimming in pills and false hope, but the prognosis is mostly downhill. If you visit the common rooms in a nursing home you will perhaps wonder at the actual benefits of taking 10-15 different drugs a day. However, don't forget that the calm atmosphere is frequently induced with antipsychotic or similar drugs.

Non-pharmaceutical approaches for longevity will for the foreseeable future face an uphill battle. The absence of regulatory (e.g. FDA) approval based on extremely expensive sets of trials generally results in the verdict of "not evidence based" and MCT oil, coconut oil and Salvestrols are not going to become approved solutions to Alzheimer's disease and cancer in the foreseeable future. Most individuals are doomed to listen to false promises generating hope while taking more or less ineffective drugs.

**BOTTOM LINE**

The quest for longevity combined with a good quality of life must take into account preventing, curing or arresting the common chronic diseases. Contrary to the conventional wisdom, it now appears possible to accomplish this with reasonable hope of success for cardiovascular disease, cancer, diabetes and cognitive impairment without the use of prescription drugs.

Reference List

(1) Cooper C, Li R, Lyketsos C, Livingston G. Treatment for mild cognitive impairment: systematic review. *Br J Psychiatry* 2013 September;203(3):255-64.
(2) Fernando WM, Martins IJ, Goozee KG, Brennan CS, Jayasena V, Martins RN. The role of dietary coconut for the prevention and treatment of Alzheimer's disease: potential mechanisms of action. *Br J Nutr* 2015 July 14;114(1):1-14.
(3) Rebello CJ, Keller JN, Liu AG, Johnson WD, Greenway FL. Pilot feasibility and safety study examining the effect of medium chain triglyceride supplementation in subjects with mild cognitive impairment: A randomized controlled trial. *BBA Clin* 2015 June;3:123-5.
(4) Ohnuma T, Toda A, Kimoto A et al. Benefits of use, and tolerance of, medium-chain triglyceride medical food in the management of Japanese patients with Alzheimer's disease: a prospective, open-label pilot study. *Clin Interv Aging* 2016;11:29-36.
(5) Newport MT, Van Itallie TB, Kashiwaya Y, King MT, Veech RL. A new way to produce hyperketonemia: use of ketone ester in a case of Alzheimer's disease. *Alzheimers Dement* 2015 January;11(1):99-103.
(6) Henderson ST, Vogel JL, Barr LJ, Garvin F, Jones JJ, Costantini LC. Study of the ketogenic agent AC-1202 in mild to moderate Alzheimer's disease: a randomized, double-blind, placebo-controlled, multicenter trial. *Nutr Metab (Lond)* 2009;6:31.
(7) Yusuf S, Bosch J, Dagenais G et al. Cholesterol Lowering in Intermediate-Risk Persons without Cardiovascular Disease. *N Engl J Med* 2016 April 2.
(8) Fulcher J, O'Connell R, Voysey M et al. Efficacy and safety of LDL-lowering therapy among men and women: meta-analysis of individual data from 174,000 participants in 27 randomised trials. *Lancet* 2015 April 11;385(9976):1397-405.
(9) Yusuf S, Hawken S, Ounpuu S et al. Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): case-control study. *Lancet* 2004 September 11;364(9438):937-52.
(10) Nakanishi R, Berman DS, Budoff MJ et al. Current but not past smoking increases the risk of cardiac events: insights from coronary computed tomographic angiography. *Eur Heart J* 2015 May 1;36(17):1031-40.

## FREE subscription

**http://www.yourhealthbase.com/subscribe.htm**

**Editor: William R. Ware, PhD**

INTERNATIONAL HEALTH NEWS is published 10 times a year by
Hans R. Larsen MSc ChE, 1320 Point Street, Victoria, BC, Canada, V8S 1A5
E-mail: editor@yourhealthbase.com World Wide Web: http://www.yourhealthbase.com

ISSN 1203-1933 

INTERNATIONAL HEALTH NEWS does not provide medical advice. Do not attempt self-diagnosis or self-medication based on our reports. Please consult your healthcare provider if you are interested in following up on the information presented.