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## AS WE SEE IT

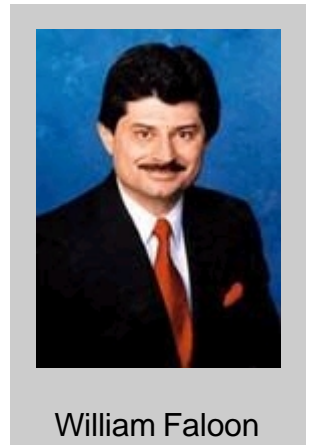
### The First Therapy Shown To Slow Progression of Parkinson's Disease

It's hard to believe that 20 years has past since we introduced a Japanese drug called coenzyme Q10 to the American public. Soon after our 1983 publication, supplement companies began selling CoQ10 and the FDA aggressively sought to ban it.

An epic coQ10 war raged on for 11 years. During the darkest hours of battle, it appeared that Americans would have to do without this life-saving supplement. Large quantities of coQ10 were seized and destroyed as the FDA executed raids throughout the United States. Those responsible for selling coQ10 faced prison for selling what the FDA proclaimed to be an "unapproved drug." The objective of the FDA's draconian actions was to keep coenzyme Q10 out of the bodies of Americans.

Life Extension was on the front lines during those turbulent years, fighting the FDA in the Courts and before Congress. We knew that coenzyme Q10 was required by aging humans to prevent degenerative disease. Therefore, rescuing coQ10 supplements became a critical part of our mission to keep Life Extension Foundation members alive at any cost.

The FDA attacks were relentless. They detained our entire inventory of coQ10 twice and threatened us with long prison sentences. We succeeded in winning back our coQ10 on both occasions, while managing to avoid prison.



William Faloon



#### CoQ10 and the brain

Initial human studies showed that coQ10 improved cardiac output, which was the basis for Japanese doctors prescribing coQ10 to heart disease patients.<sup>1-11</sup> Looking at coQ10's mechanism of action, however, we thought it might be even more effective in fighting neurological disorders.

Our rationale was that heart cells have a high energy demand that require coQ10 to maintain cardiac mitochondrial function. The brain too, has a high metabolic energy demand. It therefore appeared that coenzyme Q10 might also protect against neurodegenerative disorders.

We pointed out that Parkinson's disease patients suffer mitochondrial impairment<sup>12,13,14</sup> that causes cells in the substantia nigra region of the brain to malfunction and die. The result is a shortage of the neurotransmitter dopamine, the hallmark biochemical characteristic of Parkinson's disease. One study revealed that coQ10 levels in Parkinson's patients were 35% lower than age-matched controls.<sup>15</sup>

What was not known up until now is that very high doses of coenzyme Q10 are required to treat Parkinson's disease.

#### CoQ10 slows Parkinson's progression

There are drugs (such as L-dopa) that alleviate symptoms of Parkinson's disease, but none are believed to slow the underlying disease process. A new study found evidence that coQ10 may help stop the specific brain cell death that causes Parkinson's.<sup>16</sup>

In this new report, 80 Parkinson's patients consumed varying potencies of coenzyme Q10 or placebo for up to 16 months. When the study ended, the patients consuming the highest potency of coQ10 showed a 44% reduction in the decline of motor skills, movement and mental function compared to the placebo group. Those receiving high-dose coQ10 also demonstrated an improved ability to perform daily living tasks.

The dose required to induce this dramatic affect was 1200 mg a day, a far higher amount than had ever been administered to humans in the past. coQ10 did not improve symptoms the way current Parkinson's drugs do. Instead, coQ10 slowed the progression of the disease, something that Parkinson's drugs don't do.

Independent analysts stated that these results were "tremendously encouraging," but cautioned that more studies should be done to confirm these effects. While Life Extension encourages more studies, it would appear that those with Parkinson's disease should consider supplementing with 1200 mg of coQ10 a day. We are preparing an in-depth article on this subject for the next issue of Life Extension magazine.

The absurdity of telling Parkinson's patients to wait

Parkinson's disease is a progressive degenerative brain disorder that has no cure. Patients suffer increasing debilitating complications as the disease progresses. Currently therapies only mitigate the agonizing symptoms-they do not slow the rate of deterioration.

For the first time in history, a published human study has shown that the progression of the disease can be slowed by 44%. Yet every doctor interviewed by the media about this study suggests that Parkinson's patients avoid coenzyme Q10 until more studies are completed.

While this is the first human study using coQ10 to treat Parkinson's disease, it was based on a large body of previous research indicating a molecular basis for the efficacy of coQ10. For instance, a study published in the Proceedings of the National Academy of Sciences<sup>17</sup> concluded that:

**"CoQ10 can exert neuroprotective effects that might be useful in the treatment of neurodegenerative diseases."**

A report published in the Annals of Neurology<sup>18</sup> indicated that coQ10 might be effective in both the prevention and treatment of Parkinson's disease. The conclusion of this study was:

**"The causes of Parkinson's disease are unknown. Evidence suggests that mitochondrial dysfunction and oxygen free radicals may be involved in its pathogenesis. The dual function of coQ10 as a constituent of the mitochondrial electron transport chain and a potent antioxidant suggest that it has the potential to slow the progression of Parkinson's disease."**

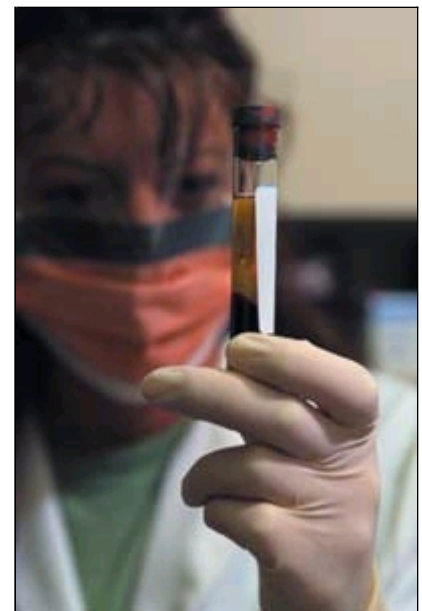
So when the so-called "experts" say that more studies are needed before Parkinson's patients supplement with high-dose coQ10, they appear to be unaware of a substantial body of evidence that already helps confirm the impressive findings of the current study.<sup>19</sup>

Remember, coQ10 does not reverse Parkinson's disease-it only slows the progression. So those patients who choose to wait for "official endorsement" may deteriorate to the point where their quality of life cannot get any worse.

The Life Extension Foundation is dedicated to tearing down these archaic walls of bureaucratic ignorance that are so pervasive in the government and medical community. Based on the findings of studies to date, the medical profession should recommend that all Parkinson's patients supplement with coQ10. For those who cannot afford it, the government could benefit by providing coQ10 through Medicare, since future healthcare savings would be greater than what the supplement would cost.

It is interesting to note that back when the FDA began seizing coQ10 supplements, the typical potencies were only 10 to 30 mg per capsule. In government-prepared court filings, Judges were told that these products posed an imminent danger to the health of the public, thus justifying the need to summarily seize and destroy the coQ10 supplements. Life Extension vigorously argued that there was no risk to people supplementing with coQ10, and our scientific position did prevail at the time.

The fact that these Parkinson's patients safely consumed 1200 mg a day of coQ10 for 16 months without encountering serious side effects vindicates our hard fought victories (and exposes how far the FDA will go to fabricate the truth). There was never a shred of evidence that coQ10 was toxic, but that did not stop the government from filing sworn affidavits to the contrary.



A new study found evidence that CoQ10 may help stop the specific brain cell death that causes

This latest study on coQ10 and Parkinson's disease was funded by a Federal agency called the National Institute of Neurological Disorders and Stroke. It is ironic that another agency under the same Department of Health and Human Services (the FDA) made such a concerted effort to ban coQ10.

New England Journal of Medicine says drug trials are flawed

The FDA bases its authority to seize supplements like coQ10 on the premise that they have not undergone the rigorous clinical studies that are mandated for prescription drugs.

A new study in the New England Journal of Medicine<sup>20</sup> exposes the charade of FDA-mandated clinical studies. It turns out that since pharmaceutical companies pay for the testing of their own drugs, they then control how the studies are designed and how the findings are handled.

A survey of 108 medical schools reveals serious conflicts of interest between scientists attempting to conduct legitimate clinical trials and the drug companies whose only interest is producing data that will result in their drug gaining FDA approval. The medical schools feel almost powerless when faced with the economic clout of the drug companies. In essence, the drug companies say, Do the study our way, or we will take our research grants elsewhere. Since drug company research contracts are a major source of funding, this poses a serious economic threat to these Universities.

### A SENSIBLE APPROACH

Parkinson's patients don't have the option of waiting for mainstream medicine to reach a consensus about coenzyme Q10. There are, however, sensible approaches that Parkinson's patients can follow to reduce any possible risk of taking high-dose coenzyme Q10.

For example, many healthy Life Extension members have been taking 300 mg a day and higher of coenzyme Q10 without encountering adverse effects. A Parkinson's patient may consider starting at 300 mg a day and then increasing to 600 mg two weeks later.

After taking 600 mg a day of coenzyme Q10 for two weeks, a Parkinson's patient may want to increase the dose to 900 mg a day, and then two weeks later, increase to 1200 mg a day.

For maximum absorption into the bloodstream, always take coenzyme Q10 supplements with the fattiest meal of the day. Notify your doctors that you are taking this high dose of coenzyme Q10 so that they can monitor the effects of other drugs you are taking. It should be noted that while this cautious approach is prudent, Parkinson's patients participating in the most recent study were started at 1200 mg a day of coQ10, with no significant side effects.

Scientists worry their lack of control could threaten the integrity of research<sup>21</sup> and the safety of the volunteers participating. Among other things, pharmaceutical companies have sponsored research that found a drug didn't work or was dangerous, then suppressed the results.

This New England *Journal of Medicine* study<sup>20</sup> shows that today's drug approval process is of very questionable integrity, since the clinical data FDA-reviewers rely upon to determine whether to approve a new drug is far from reliable. These FDA-mandated clinical trials do cost lots of money, however, so Americans can be assured they will continue to pay very high drug prices.

### Looming health care cost crisis

The Life Extension Foundation launched a public relations campaign in the 1980s to warn of an impending healthcare cost catastrophe based on the inflated prices Americans pay for their prescription drugs. The grim findings from a new study reveal that this problem may be worse than what we predicted.

According to this new report, future retirees should expect to cover substantially more, if not all of the costs of their health care not covered by Medicare. The reason is that employers are increasingly reducing retirement medical benefits. The report states that few workers today are getting ready for this significant change and some may have to consider putting off retirement.

By 2031, companies are expected to pay less than 10% of total medical expenses for retirees. This dire projection is based on healthcare cutback actions already taken. This report was authored by Watson Wyatt Worldwide, a human resources consulting firm that works with employers.

A major flaw in this report is that it suggests that Medicare should assume a greater burden of retiree healthcare costs. This report fails, however, to recognize that Medicare is projected to run out of money in year 2029 or as early as 2016 under less favorable economic conditions.<sup>22</sup> Since this report states that employers are not able to provide for retirees' health care costs, and we know that Medicare's trust fund is woefully inadequate, it is clear that there will be virtually no money available to fund retiree health care.

Remember, this report assumes that Medicare will be solvent, but that employers' insurance plans will be inadequate. Medicare's own projections, however, show that it



will be insolvent. That means that senior citizens, whose health care costs are by far the highest per capita of any age group, will have virtually no coverage.

Don't expect politicians to address this issue until the crisis hits. As such, enlightened Americans should aggressively participate in the proposed libertarian-based health care reforms long advocated by The Life Extension Foundation. As difficult as these free market concepts are to accept by certain consumer groups, it is critical to wear "regulation" out of the practice of medicine. Based on the way American medicine is currently regulated, it has become an inefficient and quasi-socialistic system that is as doomed to economic collapse as was the former USSR.

Life Extension members should be reassured that they are taking steps to protect their health today, so as to reduce the risk of relying on a bankrupt healthcare system in the not too distant future.

Sharing your greater sense of security

Knowledge is the key to personally avoiding or mitigating the effects of institutional ineptitude and instability. As a Life Extension member, you should be comforted in belonging to an organization that has consistently predicted future scientific and political events, and has never wavered in its unorthodox positions.

You can share your sense of security by encouraging people you know to join the Life Extension Foundation. When looking for unique gifts this holiday season, please consider ordering gift memberships for those people who you would like to live a longer and more productive life.

Every time you purchase a Life Extension product, you help support an organization with a proven track record of protecting its members against the adverse effects of today's deteriorating healthcare system.

Foundation members have a lot to look forward to in the upcoming year. A number of discoveries have recently been made in Life Extension-funded research laboratories. These findings will be revealed in future issues of this publication as soon as scientific peer-review is completed.

For longer life,

William Faloon

Precaution: Some reports indicate that coenzyme Q10 may reduce the efficacy of drugs like warfarin (blood thinner), and increase the half-life of others, such as enalapril (an old-line anti-hypertensive). The evidence for interactions with warfarin (Coumadin) and enalapril is skimpy and is not based on any kind of controlled study.

There are simple medical tests that can enable a physician to modulate the dosing of a drug like Coumadin or enalapril in the presence of high doses of coenzyme Q10. For instance, if an old-line anti-hypertensive drug like enalapril (Vasotec) is prescribed, it may be possible to take a lower dose of enalapril since coenzyme Q10 may prolong its effects in the body. Regular blood pressure monitoring can determine the optimal dose of enalapril.

Some reports indicate that coenzyme Q10 may reduce the anti-coagulant efficacy of Coumadin. In this case, all a physician has to do is evaluate the weekly or bi-weekly coagulation blood tests (Prothrombin and INR) and increase the dose of Coumadin if coenzyme Q10 is blunting Coumadin's anti-coagulant effect. Those who are prescribed Coumadin have these blood coagulation tests done frequently because the dose of Coumadin often has to be adjusted to reflect changes occurring in the patients body.

It should be pointed out that tens of thousands of Life Extension Foundation members have been taking coenzyme Q10 supplements over the past twenty years. There have been no reports of problems amongst Coumadin users. A physician who regularly prescribed Coumadin and coenzyme Q10 stated that he did not have to adjust the dose of Coumadin when adding up to 300 mg a day of coenzyme Q10. The only reason this issue is being raised now is that Parkinson's patients may be taking 1200 mg a day of coenzyme Q10. If these Parkinson's patients are taking Coumadin or enalapril, they should alert their physician in case the dose of Coumadin or enalapril has to be adjusted.

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