### Scientific Support for the Adventist Health Message

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Scientific support for many of the principles often referred to as the "Adventist Health Message" has been growing for many decades. Tonight, in the limited time we have, we will examine just a small part of this growing body of data.

However, I believe at the outset it is important to ask the question, "What is the 'Health Message'"? Because we are not always clear in our understandings, it sometimes leads us into troubled water. At the very beginning, I would like to suggest five realities that are pertinent to understanding what we refer to as the "health message":

- 1. It is <u>not</u> just a set of scientifically established health practices that prolong and preserve life.
- 2. It is <u>more profoundly</u> important than its component parts of balanced nutrition, exercise or rest.
- 3. It can <u>do far more</u> than modern science has discovered.
- 4. The "health message", when rightly understood and linked with scripture and the God of Scripture, can <u>bring the dead to life</u>.
- 5. If we confine any part of the health message merely to its scientifically validated facts, we have tragically short-changed our audience of the eternal health benefits that <u>only come from Jesus</u>.

REST: Let's look at the first principle. Many years ago the servant of the Lord wrote:

"Unreasonable hours are destructive to the physical, the mental, and the moral powers. If the brain were given proper periods of rest, the thoughts would be clear and sharp, and business would be expedited." 7T 256

"You are God's workmanship, and with the full sense of your accountability to God you are to treat yourselves aright. Give yourselves proper time to sleep. Those who sleep give nature time to build up and repair the waste of the organism." MM 5

A now classic, and very compelling study of the importance of adequate rest was conducted by Dr. Gregory Belenky, considered today to be one of the world's top experts on the impact of sleep deprivation on cognitive performance. He took adult volunteers and placed small EEG recorders on them 24x7 for two weeks while they stayed in a lovely retreat center that provided great food, plenty of opportunity for rest, socialization,

intellectual challenge and physical activity. He was able to document they were fully rested before the first round of tests.

On the test day, they were awakened at 6:00 AM and at 8:00 AM received both an MRI and a PET scan of their brains. Scanning technology allows hundreds of "slices" of the scanned tissue to be examined, allowing scientists to look at all portions of the brain.

On the screen we see a single "slice" from one subject. Earlier research has demonstrated that the brighter the colors, the greater the blood flow to the brain tissue, something neurophysiologists call "brain activation". You will notice that the frontal lobes (forebrain) show a lot of blood flow by the bright yellow and purple colors.

The same subjects then went back to the retreat center, but in the ensuing week little things were done each night to disturb their sleep (knocks on the door, fire alarms, big barking dogs, phone calls, etc.) By the end of seven days, researchers were able to document that on average, each participant had accumulated an average of five hours of sleep debt. Again they were awakened at 6:00 AM and tested at 8:00 AM.

You do not have to be an expert to see the difference in blood flow now. The frontal lobes took the biggest "hit". This is the area of the brain we use to make all our decisions. Blood flow is essential for optimal cognitive performance.

"Fatigue selectively targets the highest order of cognitive mental functions. Critical thinking becomes impossible." -- Gregory Belenky, MD

These high order mental functions are often referred to as the executive functions. They include discernment, judgement, initiative, creativity and forethought. Each of which is vital to good decision making.

Today there are some very disturbing trends in sleep. Adults sleep 1.5 hours less per day than their grandparents; and teens sleep 2.5 hours less per day than in 1962.

The evidence is clear! When we do not get enough rest, our executive functions are impaired, most significantly attention, complex planning, complex mental operations, and judgement. As a result, our decisions will be suboptimal.

Seventh-day Adventists have long stood firmly against the use of alcohol. Surprisingly, we do not give a second thought to driving when tired. Yet, good studies comparing alcohol intoxication impairment with impairment from sleep deprivation have shown striking parallels between the two conditions. Approximately 16-18 hours of wakefulness in healthy, rested adults produces performance impairments comparable to legal levels of alcohol intoxication (BAC >0.08%).

Today there is increasing evidence that chronic sleep deprivation contributes to many physical ailments such as obesity, type 2 diabetes, metabolic syndrome, cardiovascular disease, certain cancers, depression, and other mental health issues.

Here are a few strategies to fight fatigue:

- Value adequate sleep: ~8-9 hours per night.
- Exercise 30-60 min. every day.
- Learn to control stress.
- Eat properly & drink plenty of water.
- Avoid caffeinated beverages, tobacco, and alcohol.
- Rest a day each week & annual vacation.
- Sleep disorder? Get evaluated.

Remember: Sleep is as important as diet and exercise--only easier!

#### PHYSICAL ACTIVITY

Another part of the "health message" is physical activity or exercise.

"The human body may be compared to nicely adjusted machinery, which needs care to keep it in running order. One part should not be subjected to constant wear and pressure, while another part is rusting from inaction. While the mind is taxed, the muscles also should have their proportion of exercise." S. of T., 1886

"They should go out and exercise every day..." 2T 931

When the causes of death are studied, tobacco is the leading cause; yet close behind is physical inactivity and poor diet.

When death rates were examined by age-grouped men, those who were in the lowest fitness groups had the highest death rates. Notice that those in their 60s who were not fit had almost twice the death rate of the highly fit in their 80s!

When almost 5000 healthy women were followed-up for 5 years, the risk for hypertension was significantly higher in the lowest fitness group.

Similar results were found for type 2 diabetes risk in almost 9000 men who were diabetesfree at baseline. The lowest fitness group had the highest risk.

What is your fitness level? How do you get your exercise? Physical inactivity is the major public health problem of our time--globally.

We often hear the question asked: what is more important, fitness or fatness? It is really irrelevant because the treatment is the same for both: Physical Activity!

What is the most frequent reason given for not exercising? Lack of time!

Cartoon: "What fits your busy schedule better, exercising 30 minutes a day or being dead 24 hours a day?"

Final advice: Walk the dog every day--even if you do not own a dog!

### NUTRITION

Unfortunately, there are some among us who seem to believe that the only part of the health message is diet. I assume you have met a few of those!

As we transition to our last principle, a study published this year looked at the excess disability (beyond what would be expected) and certain lifestyle choices. A huge portion was attributable to low physical activity, but smoking and low fruits and vegetable consumption also contributed significantly.

When healthy behaviors and cardiovascular disease were examined in more than 20,000 men and women, it was found as the number of good health behaviors (on the right) decreased, the mortality from cardiovascular disease increased. Mortality was 5 times higher in the 11-year study in those with 0 good health behaviors. Each poor health practice significantly increases risk.

This slide is from the same study, but looks at cancer risk. Mortality rates from cancer were almost 4 times higher in those with 0 good health habits.

Current scientific dietary recommendations leave little question as to the most healthful way to eat:

- Lower
  - cholesterol and saturated fat intake
  - animal fat intake
- Increase
  - fiber in the diet
  - complex carbohydrates
  - phytochemical and antioxidant intake
- Get adequate
  - amounts of the essential fatty acids
  - Protein, but not too much

Those recommendations are most easily met with a healthful, balanced vegetarian dietary pattern. The literature is replete with support for the advantages of choosing to eat this way:

- Lowers heart disease
- Lowers cancer rates
- Lowers diabetes
- Less obesity
- Less hypertension
- Less dementia
- Less osteoporosis
- Longer life expectancy

Major organizations making dietary recommendations agree: "Use plant foods as the foundation of your meals. ... Eating a variety of grains (especially whole-grains), fruits and vegetables is the basis of healthy eating."

Our church, in *Seventh-day Adventists Believe* agrees: "The diet God ordained in the Garden of Eden--the vegetarian diet--is the ideal, but sometimes we cannot have the ideal. In those circumstances, in any given situation or locale, those who wish to stay in optimum health will eat the best food that they can obtain."

The SDA Working Policy, page 303 "encourages a balanced vegetarian diet" and "encourages the avoidance of flesh foods..." It is important to bear in mind that a vegetarian diet, although the best, is not a test of fellowship. No where is that mandated.

"Grains, fruits, nuts, and vegetables constitute the diet chosen for us by our Creator. These foods, prepared in as simple and natural a manner as possible, are the most healthful and nourishing. They impart a strength, a power of endurance, and a vigor of intellect that are not afforded by a more complex and stimulating diet". MH 296

To help members and the community learn how best to choose this dietary pattern, the General Conference Nutrition Council has prepared *My Vegetarian Plate*. (sample for all)

In all our passion and zeal for what we believe to be inspired wisdom and scientifically supported, we must ever remain humble and patient with those who may not see it as we do. "We don't make the health reform an iron bedstead, cutting people off or stretching them out to fit it. One person cannot be a standard for everybody else. What we want is a little sprinkling of good common sense. Don't be extremists. If you err, it would be better to err on the side of the people than on the side where you cannot reach them." 1SAT 12

In the legal field there is a concept called "willful blindness." It means there can be information we should know or could know but somehow manage not to know. Is ignorance really bliss...?

Could there be a kind of "willful blindness" about health among God's end-time people?

"Many are so devoted to intemperance that they will not change their course of indulging in gluttony under any considerations. They would sooner sacrifice health, and die prematurely, than to restrain their intemperate appetite." CDF 158

Could there be some "willful blindness" in your lifestyle, in my lifestyle? I must answer that on my knees before my Savior. You need to do the same.

### CONCLUSION

What is the health mission of our church? I would like to suggest that if our health message is in any degree separated from the gospel message it will lose its power. If a person attends a health program in one of our churches, understands and applies the principles--they will have gained a few years of life. However, if they did not learn that the power to change comes from Jesus, then the church has failed in its mission to the community. James said works without faith is dead. Science without Jesus is dead as well.

This message is not to be separated from the gospel message. Some of the health promoting effects of the health message have been confirmed by science, but today's most skillful and perceptive scientist cannot bring the dead to life. Jesus is the only life giver, and He is the only health giver.

As we go about the work of true health ministry, we have the privilege of witnessing miracles--the miracle of seeing the dead raised to life:

"To arouse those spiritually dead, to create <u>new tastes</u>, <u>new motives</u>, requires as great an outlay of power as to raise one from physical death. It is indeed giving life to the dead to convert the sinner from the error of his ways; but our Deliverer is able to do this; for He came to destroy the works of the enemy." RH March 12, 1901