

Exercise: A Love/Hate Relationship

When you hear the word “exercise” or the phrase “physical activity”, what comes to your mind? Guilt that you should be doing more? Satisfaction because you’re seldom deterred from meeting your exercise goals? Or does hearing the word exercise faze you at all? I recently read some tweets about exercise that made me smile: “Sit-ups are the best exercise because they include the most lying down.” “The only exercise I’ve done this month is running out of money.” And my favorite, “Gym Instructor: So what’s your favorite machine to use here at the gym? Me: The vending machine”. When it comes to exercise, people tend to love it or hate it.

No matter how you feel about exercise, there is sufficient scientific evidence to support the benefits of exercise. Benefits include, but are not limited to, decreased risks of chronic and metabolic diseases such as diabetes, hypertension and heart disease; enhanced quality and longevity of life; improved sleep; muscle tone, strength and flexibility; enhanced mental alertness; and weight and stress management. With these benefits, why wouldn’t you love exercise?

The Centers for Disease Control and Prevention (CDC) set guidelines for physical activity in 1995 which recommended adults get at least 30 minutes of aerobic exercise “most days of the week”, e.g., five or more days, and do strengthening exercises at least twice a week. In 2008 the guidelines for physical activity were revised to recommend that adults get at least 150 minutes of aerobic exercise per week and strengthening exercises at least twice a week. The 2008 physical activity guidelines were more flexible and achievable because the 150 minutes could be accumulated through a variety of exercises and a combination of frequencies, as long as the “exercise bout” was at least 10 minutes.



A 30-minute walk five times a week; a 30-minute walk three times a week and two 30-minute sessions of swimming; and jogging 15 minutes twice a day, five days a week, would all meet the recommended 150 minutes.

How are Black Adventists doing? We analyzed data reported in the Adventist Health Study-2 (AHS-2) to determine if they met the 1995 and 2008 guidelines for physical activity. We found 10.5% of Black Adventists met the 1995 recommendations and 22.1% met the 2008 recommendations. By comparison, 19.8% Black non-Adventists met the 2008 physical activity guidelines in 2015. In short, when time and frequency were combined, a higher percentage of Black Adventists met the physical activity guidelines than when the guidelines were defined by a specific amount of time, e.g. 30 or more minutes, and a specific number of days per week. The take home message is we need to exercise at least 150 minutes per week to enjoy the benefits of exercise. *Continued on page three.*

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Dear AHS-2 Participant

It is not easy keeping track of a “family” of over 25,000 Black/African American individuals scattered across the U.S. and Canada. But, that’s exactly what we need to do in such a study as the AHS-2. Many results have already been published, and more results are coming. There are so many unanswered questions as to why Black Americans, in general, are plagued disproportionately with higher rates of some preventable diseases, and why we lag behind some other ethnic groups in general over-all health status. To find answers to some of these questions, we need your continued participation in the study.

Important Questions That Perhaps Only AHS-2 Can Answer

“Based on both our research and that of others, it is becoming increasingly clear that a diet that contains mainly fruits, vegetables, legumes and nuts and minimal amounts of processed foods is very healthy. There are questions of whether small amounts of dairy may be beneficial or conversely increase risk, or what level of adverse effects small amounts of added meat may have, whether fish or poultry affect risk one way or the other. These are all important questions that of all the studies, possibly only AHS-2 can answer.” (Gary Fraser, MD, Principal Investigator, Adventist Health Study-2)

Again, there are so many unanswered questions that only you can help us answer. So, please make every effort to stay connected to us. The next time you hear from us, please respond as soon as you can. After you do so, go ahead and give yourself a pat on the back for a job well done, and take pride in the fact that you are not only contributing to the important research underway at Loma Linda University, but you are having an impact on the lives of thousands of people. You are making a difference.



Questions and Answers

My brother passed away two years ago. How come you keep sending him questionnaires?

When dealing with the loss of a loved one, people don’t think about notifying us (the AHS). So, the only way we will find out is by linking our data with that of the National Death Index. Even though we do this every year, there is a lag of two years in the database available. Thus, if someone died in 2015, we won’t find out until perhaps mid-2017.

I want to stay informed and keep in touch with what’s going on with the Adventist Health Study-2. What is the best way to stay in touch?

The AHS-2 website is your 24-hours-a-day, 365-days-a-year open door to what is going on at AHS-2. We plan to put more resources on the website, thus making it an even better resource. If you go to www.ahs2.org, you will be connected to all the latest information about what is happening now at AHS-2, and what is being planned for the future.

I want to give a presentation in my church, community organization or other gathering to report findings of the AHS. Where can I obtain materials for such a presentation?

In the far left-hand column of the AHS home page, click on the “Fact Sheets”. You will be taken to a page that lists fact sheets that contain an overview of the results of all five of the past and current AHS studies, a summary of cancer findings from the first AHS-1, and a presentation of information on the mental and physical quality of life of the AHS-2 participants compared to national statistics.

I have changed my contact information. Where can we provide that information to AHS?



In the far left hand column of the AHS homepage, click on “Contact,” and the email address and toll-free telephone numbers of the AHS-2 are listed.

Thanks again for your continued participation.

Patti Herring, PhD, RN
Professor, Co-investigator AHS-2



Breakfast or Supper? Does it Matter for Body Weight?

It has been a long-held Adventist tradition to prefer two meals rather than three each day, omitting supper or only a light supper (see *Counsels on Diet and Foods*, pages 158 and 173). It is also true that this interesting 150-year-old counsel had more in mind than effects on body weight, which is, however, our focus here. The number of meals per day that are optimal for weight control has been controversial among health professionals with some suggesting benefits for five to six meals per day. Our recent work in AHS-2 has produced clear results that better weight control (on average) will be experienced by those who eat fewer meals, consuming most calories earlier in the day, with a long gap (fast) between the last meal of the day and a good breakfast eaten the next morning. It was also interesting that irrespective of meal patterns, our AHS-2 subjects as a group tended to gain weight with aging year by year but less each year, until at age 60 where there was no change. By contrast, for every year after age 60 on average, weight tended to come off in ever-increasing amounts. But to be clear, we are talking about very small year by year changes that nevertheless add up over the decades. So what is the apparent practical effect of taking a good breakfast with a lengthy late afternoon/night fast as compared to eating more calories later in the day (probably the more common pattern)?

The effect of preferring to eat most calories earlier in the day is to diminish the weight gain before age 60 years, and to increase the natural weight loss after age 60 years. For instance, for a man of height 5 foot 10 inches and weight 176 pounds at age 30 years, who has the more typical meal pattern eating most calories later in the day, it would be expected that he would weigh 192 pounds by age 60 years, then fall to 181 pounds by 80 years. On the



other hand, if he had had a meal pattern of eating most calories earlier in the day during his life, his weight would have only increased to 184 pounds by age 60 years then decreased to 168 pounds by age 80 years.

Remember that AHS-2 is a population study rather than a clinical study and thus spans all beginning weights, and produces results that have been average experiences of the study population. It is true that a few elderly subjects would not want to lose weight at higher rates, but for most, overweight remains a problem in later years. Thus, across a whole population the predicted reductions in body weight would translate to substantial benefits in health experience.

Gary Fraser, MD

Principal Investigator, Adventist Health Study-2



Photo by Jan Lioren

CAULIFLOWER-WALNUT SPICY CRUMBLES

By Jenifer Jesson

Ingredients

3½ cups cauliflower	1 teaspoon cumin
2 cups walnuts	½ teaspoon Braggs®
1 tablespoon chili powder	Liquid Aminos
½ teaspoon garlic powder	

Directions

Pulse all ingredients in a food processor until a crumbly texture is made. Bake at 380 F for 30-40 minutes, turning halfway through.

You can use this in burritos, bowls, tacos, etc. Enjoy!

*Serves: 2, Calories: 827 kcal, Fat: 77.328 g
Sodium: 170 mg, Total dietary fiber: 13.890 g*

Happy 110th Birthday to Julia Bethea

On July 25, 2017 Julia Bethea, an Adventist Health Study participant and super centenarian, turned 110 years old. In fact, up until 108 she lived independently, cooking her meals, working in her garden and “working out” at the Huntsville Hospital Fitness center weekly. Currently, she stays just outside of Huntsville, Alabama, with her daughter, Claudette Moore, along with her sister, Elinor Eakins, who lives next door as her primary caregiver. She credits the church’s lifestyle emphasis with helping her to live an active life decades longer than many Americans live at all.



Bethea, an active Seventh-day Adventist, who credits the health message with her longevity and fitness, was born in Coy, Alabama, on July 25, 1907, the youngest of seven children. She said, “I’ve been an Adventist for 62 years and a vegetarian for over 40 years. I never thought I would live this long, but I’m glad the Lord spared me.”

“I don’t take any prescription medicine, but I do use herbs and things like garlic.”

“I wasn’t always a vegetarian,” Bethea admits. “I used to gobble up anything if it tasted good, but as I learned better, I became a vegan. I keep my head in health books and study Mrs. Ellen G. White’s writings.”

Julia Bethea has long held a strong work ethic: “When I was young, all I knew was how to work,” she explained. “I helped my husband build a house. I laid blocks and mixed cement. I worked until I was 89 in domestic work.”

As Julia noted, she wasn’t always a Seventh-day Adventist, but a chance encounter changed all that: “Years ago my brother-in-law worked at a factory in Detroit, and there was a college student standing there selling *Message* magazines. I think they were 25 cents then. In the back of the magazine was a Bible correspondence course. I sent off for the adult bible course and enrolled my daughter Claudette in the junior lessons. After taking this correspondence course, all my questions were answered and that’s when I found out about Seventh-day Adventists.” The more she read, the more she was convinced it was the right way, and she soon joined the church.

“I wanted to read for myself. Later on, [the late] Elder R. T. Hudson baptized me in an effort in Cleveland. When I came in, my three children came in with their children and their children’s children. And all of that resulted from a young girl selling *Message* magazines. I wish I knew who she was. We bought it just to help her, but she helped us find the Lord and our church.”

Due to her lifestyle influence, her grandson, Curtis Eakins, also became a health enthusiast. Currently, he, along with his wife Paula, are the co-hosts of the lifestyle/cooking telecast called *Abundant Living* aired on 3ABN, as well as the health ministry’s co-directors for the South Central Conference.

What is Bethea’s wish for the future? “Well, my wish is that I will be saved by doing the Lord’s will. But my greatest wish is to see my friends and neighbors in the new earth.”

Early Tuesday morning October 17, 2017, Curtis Eakins called to inform us that his grandmother Julia Bethea died peacefully in her sleep without any pain or drugs. She closed her eyes and went to sleep. Our AHS team lifts the family up in our prayers, and thanks them for sharing her remarkable life with us.

Did You Know...

That your exercise program should incorporate four types of physical activity?

Endurance

- Walking
- Aerobics
- Basketball
- Jogging

Strength

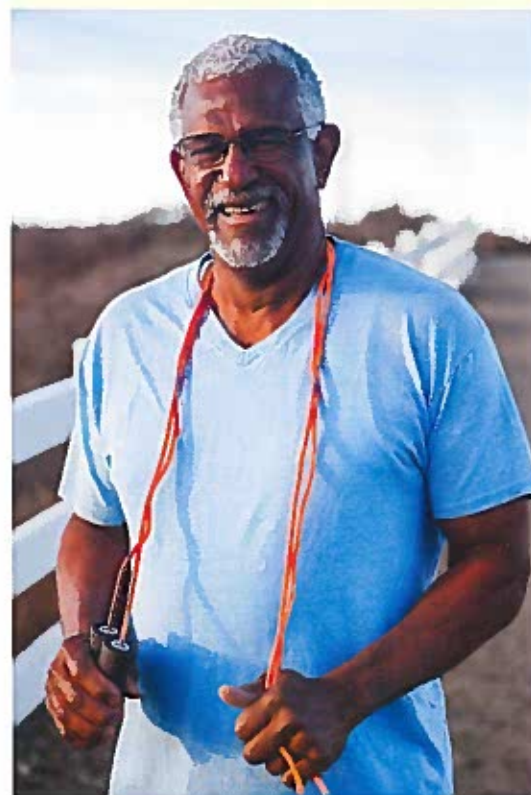
- Push-ups
- Squats
- Weights
- Boot camp

Balance

- Roller skating
- Balance board
- Ice skating
- Tai Chi

Flexibility

- Yoga
- Pilates
- Theraband stretches



Did You Know...

Physical activity reduces the risk of disease.

Physical activity reduces the risk of coronary heart disease and stroke, diabetes, hypertension, various types of cancer, including colon cancer and breast cancer, as well as depression.

Regular physical activity helps to maintain a healthy body.

People who are physically active improve their muscular and cardio-respiratory fitness, have a lower risk of falling and of hip or vertebral fractures.

Physical activity is not the same as sports.

Physical activity is any bodily movement produced by the skeletal muscle that uses energy. This includes sports, exercise and other activities such as playing, walking, household chores and gardening.

150 minutes a week for people 18-64 years old.

Adults aged 18-64 should do at least 150 minutes of moderately intense physical activity each week, or at least 75 minutes of vigorous activity throughout the week, or an equivalent combination of moderate and vigorous activity.

Adults aged 65 and above.

The main recommendations for adults and older adults are the same. In addition, older adults with poor mobility should participate in physical activity three or more days per week to enhance balance and prevent falls.

Supportive environments and communities help people to be physically active.

Urban and environmental policies have huge potential to increase levels of physical activity. These policies should ensure that: walking, cycling and other forms of active transportation are accessible and safe for all; good labor and workplace policies encourage physical activity.



A Dairy Conundrum: Does it Decrease the Risk of Colorectal Cancer?

In the Adventist tradition dairy foods are used by most church members, though with some caution. Five to 10% of Adventists have decided to be vegan and renounce all dairy foods. Even Adventist lacto-ovo vegetarians, on average, consume only 60% as much dairy as non-vegetarian Adventists. In fact, Black Adventists overall also consume only about 60% as much dairy as other Adventists—we think because some have a familial intolerance to lactose, the primary sugar in dairy foods. It causes some mild bowel upset.

Dairy is an animal product and it contains saturated fats, generally thought to be less healthy than unsaturated fats. But it also contains much calcium, and other potentially helpful chemicals such as calcium, lactoferrin and conjugated linolenic acid. There is not space to talk more about these here, but you can see that risk of some diseases with greater dairy consumption could go either way. Here we present results only for risks of colorectal cancers that is cancers of the colon and rectum. These are the third most common cancers in North America.

In AHS-2, we compared study members who were the highest dairy consumers (top 20%) to the lowest (bottom 20%). In a similar fashion, we also compared the highest and lowest calcium consumers, of course adjusting for many other factors. What we found was interesting. The high dairy consumers had about 70% less rectal cancer than the low-consumers, after adjusting for calcium. Most of the rectal cancer effect seemed to come from milk. However, the high calcium consumers had about 45% less colon cancer than the low calcium consumers, but calcium had little evidence of effect on rectal cancer. Calcium supplements and dietary calcium seemed to have broadly similar effects on risk of colorectal cancer.



So, a little dairy may be a reasonable compromise for most people. But stay tuned as in the future (as we publish results in the medical literature) we will share with you the higher risk for another cancer when consuming much dairy. So it is likely that different people may benefit from different advice regarding dairy depending on family history and other risk factors. Life, and the health benefits of diet in particular, is complicated.

Gary Fraser, MD

Principal Investigator, Adventist Health Study-2

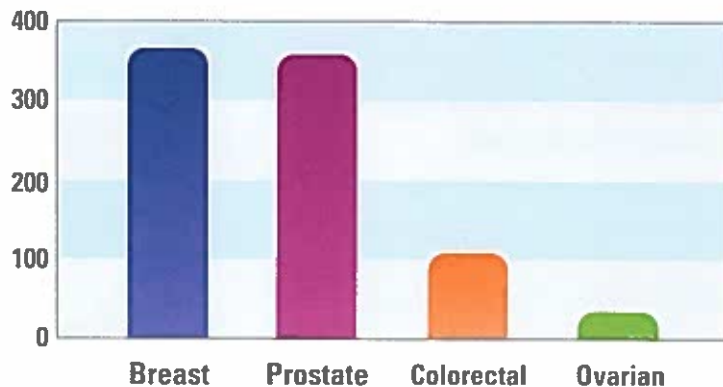
Quality of Life After Cancer

As was mentioned in the previous newsletter, we are doing a study to understand which factors are related to quality of life after cancer diagnosis. This study is focusing on cancers of the breast, prostate, colorectal and ovaries.

We are asking those who have been diagnosed with one of these cancers to join this study and to give us permission to obtain samples of your cancer tissue from the hospital where you had surgery. Among the 159 who have agreed to join the study so far, we have received cancer tissue samples for 53 subjects, 25 from prostate cancer, 18 from breast cancer, eight from colon cancer and two from ovarian cancer. These are small numbers compared to the 861 Blacks in the AHS-2 study that we have learned have been diagnosed with one of these cancers. The figure shows the number of Blacks who have been diagnosed with these cancers to date. As you can see, we have virtually the same number of breast cancers and prostate cancers, but lower numbers of colorectal cancer, and many fewer have been diagnosed with ovarian cancer. With these numbers, we should be able to obtain more tissue samples. We are therefore appealing to those of you who have been diagnosed with one of these cancers, to contact us and express your willingness to be part of this study.

The collected tissues will be used to study specific characteristics of the cancer to find out if the course of disease is different with different types of tumors and also assess whether lifestyle and other factors influence the course of the cancer. In addition, we hope to find out how different types of cancers affect the quality of life after diagnosis.

Type of Cancer Among Black Participants in the AHS-2



Thus, if you have been diagnosed with one of these cancers, we would greatly appreciate if you would volunteer to join this study.

You can contact us by phone at 1-877-558-6201 or email us at ahs2@llu.edu. We will then be happy to give you more information and send you the consent form that you need to sign.

Thank you so much for helping make the AHS-2 a success.

Synnové Knutsen, MD, PhD

Professor, School of Public Health, Co-investigator, Adventist Health Study-2

Exercise: A Love/Hate Relationship - Continued from page one.

If 150 minutes of exercise per week is so beneficial, why not exercise? The barriers to exercise were not the focus of the AHS-2 but other researchers have identified some. What are they? Among some older people there is the perception that exercising is for young people, and they don't consider themselves young; therefore they don't/won't exercise. Others say, "I'm too busy already and can't fit it in." Others identify the costs of gym fees, athletic wear or equipment as a significant barrier. For some, a lack of safety and safe places to walk or exercise is a barrier. Another significant barrier for some Black women is the toll exercise takes on their hairdo. Do any of these barriers sound familiar to you? Considering the benefits of exercising, don't you think it's worth it to find a workaround to these barriers? Love it or hate it, 150 minutes of exercise can be life changing.

Say to yourself, "I can do all things through Christ who strengthens me." *Philippians 4:13*

Nicceta Davis, PT, PhD
Associate Professor, Allied Health

Fitness Barriers and Workarounds

Exercise is for the young people

Think you are not that old! Start an exercise group for your peers.

Lack of time to exercise

Skip a few TV programs and use that time to exercise.

Gym and equipment costs

Find exercises that are free, such as walking or use videos from YouTube®.

Lack of safe places to walk

Walk with a few friends or if alone walk in a shopping mall.

Hairdo ruined

Try natural styles like braids, locks or fros. Not your style, how about a wig?



Soy Bean: True or False Quiz

1. Soy can reduce the risk of prostate cancer in men.
 True False
2. Over 90% of soy produced in the U. S. is genetically modified and the crops are sprayed with the herbicide, Roundup®.
 True False
3. Soybeans are high in phytates, substances that bind minerals and reduce their absorption.
 True False
4. Whole soybeans can be nutritious, while refined soy-derived products like soy protein and soybean oil are not nutritious at all.
 True False
5. Processing soy at a high temperature can denature some of the proteins and reduce their quality.
 True False
6. Soy protein can reduce Total and LDL cholesterol.
 True False
7. The isoflavones found in soy can activate and/or inhibit estrogen receptors in the body, which can disrupt the body's normal function.
 True False
8. Soy can relieve the symptoms of menopause.
 True False
9. Soy can reduce the risk of bone loss in elderly women.
 True False
10. Soy can decrease the risk of breast cancer.
 True False
11. Soy can lower sperm count and semen quality.
 True False
12. In rats, exposure to soy isoflavones in the womb can lead to adverse effects on sexual development in males.
 True False
13. Some people who consume soy experience symptoms of hypothyroidism, including malaise, constipation, sleepiness and thyroid enlargement. These symptoms subside after soy is stopped.
 True False
14. Exposing infants to soy-based baby formula can have harmful effects.
 True False
15. The safest form of soy is fermented soy found in products like natto, miso and tempeh because the phytic acid effect is lessened.
 True False

Answers

Congratulations! You scored 100%. All of your answers are correct. If you answered "true", there are studies to back you up. If you answered "false" there are also studies to back you up. That is why it is so important for you to remain in the Adventist Health Study, so that in time, there will be only one answer to each question— the right answer.

Adventist Health Study 2



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How Can We Say "Thanks!"

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Thank you, to all of our participants who have given us so much since 2002. We can hardly find the words to express our gratitude, but we hope that you will be able to. Answers may be horizontal, vertical, forwards, backwards or diagonal.

- | | | |
|--------------|--------------|---------------|
| THANK YOU | BLESSED | ILLNESS |
| MUCH OBLIGED | PARTICIPANTS | HOSPITAL STAY |
| INDEBTED | TIME | MEDICATION |
| PLEASED | LOYALTY | NEW ADDRESS |
| THANKFUL | SUPPORT | |
| GRATEFUL | SHARING | |
| RESPONSES | DIET | |
| APPRECIATIVE | WEIGHT | |