Adventist Health Ministries
GENERAL CONFERENCE

Seventh-day Adventist Church

LET'S CELEBRATE

EXERCISE

E is for exercise, the energizer of life.

CELEBRATIONS
LIVING LIFE TO THE FULLEST

THE BEST PHYSICAL ACTIVITY

The 2008 Physical Activity Guidelines for Americans encourage a person to accumulate at least 2 ½ hours a week in moderate--intensity physical activity, such as brisk walking. Dr. Kenneth Cooper of Aerobics fame promotes brisk walking rather than running or jogging. Walking appeals to many because it can be done at almost any time or place. It's fun, convenient, inexpensive, and can be enjoyed alone or with friends. It requires no special equipment—just comfortable walking shoes and suitable clothing. Brisk walking results in minimal injuries while exercising most muscles and systems of the body. It stimulates the release of endorphins, which elevate the mood and improve outlook on life.
More than 150 years ago, Ellen G. White said, "Walking, in all cases where it is possible, is the best exercise, because in walking, all the muscles are brought into action."8

SAFE WHILE ACTIVE

Although physical activity has many health benefits, injuries and other adverse events do sometimes occur. The most common injuries affect the musculoskeletal system (bones, joints, muscles, ligaments and tendons). Others problems, such as overheating and

dehydration, may also occur. The good news is that scientific evidence strongly shows that appropriate physical activity is safe for almost everyone and that the health benefits of physical activity far outweigh the risks.

Health Improvement

At age 91, Swarna was still active—playing tennis, lifting weights, and walking. Fifty-one years before, however, at the age of 40, her condition had been very different. Swarna's spine was badly injured during a skiing event, and as the years passed, her back pain intensified. Her physician told her that he couldn't do much to help her because she was "too old." Swarna was later diagnosed with emphysema, a lung disease, and had difficulty breathing. She would never be able to climb stairs again. The doctor offered her no hope of improvement. Swarna, however, had a strong will to recover and decided to try an exercise program offered at a local medical center. For six weeks, she worked out three times a week, two to three hours a day. She lifted weights, walked on the treadmill, rode the stationary bicycle, and did breathing exercises. Even when she was in pain and didn't feel like doing anything, she didn't quit. Eventually, her breathing improved, and her back pain disappeared. She was able to walk reasonable distances—and had energy to spare! Her doctor told her that he had never seen such progress in anyone her age. Swarna attributes her health improvement to exercise.1

BENEFITS OF PHYSICAL EXERCISE

Exercise is a form of physical activity that is planned, structured, repetitive, and performed with the goal of improving health and fitness. So although all exercise is physical activity, not all physical activity is exercise. Regular exercise is not only a preventive measure; it also optimizes health. Studies clearly demonstrate that participating in regular physical activity provides many health benefits. The Physical Activity Guidelines for Americans (PAGA) Advisory Committee, comprising 13 leading experts in the field of exercise science and public health, summarizes the benefits of exercise in the following table: 2

HEALTH BENEFITS ASSOCIATED WITH REGULAR PHYSICAL ACTIVITY

CHILDREN AND ADOLESCENTS
STRONG EVIDENCE
IMPROVED CARDIORESPIRATORY AND MUSCULAR FITNESS
IMPROVED BONE HEALTH
FAVORABLE BODY COMPOSITION
MODERATE EVIDENCE
REDUCED SYMPTOMS OF DEPRESSION

ADULTS AND OLDER ADULTS
STRONG EVIDENCE
LOWER RISK OF EARLY DEATH
LOWER RISK OF CORONARY HEART DISEASE
LOWER RISK OF STROKE
LOWER RISK OF HIGH BLOOD PRESSURE
LOWER RISK OF TYPE 2 DIABETES
LOWER RISK OF COLON CANCER
LOWER RISK OF BREAST CANCER
PREVENTION OF WEIGHT GAIN
WEIGHT LOSS, PARTICULARLY WHEN COMBINED WITH REDUCED CALORIE INTAKE
REDUCED DEPRESSION
BETTER COGNITIVE FUNCTION (FOR OLDER ADULTS)
MODERATE TO STRONG EVIDENCE
BETTER FUNCTIONAL HEALTH (FOR OLDER ADULTS)
MODERATE EVIDENCE
LOWER RISK OF HIP FRACTURE
LOWER RISK OF LUNG CANCER
LOWER RISK OF ENDOMETRIAL CANCER
WEIGHT MAINTENANCE AFTER WEIGHT LOSS
INCREASED BONE DENSITY
IMPROVED SLEEP QUALITY

Studies show that people who are physically active for approximately seven hours a week have a 40% lower risk of dying prematurely than those who are active for fewer than 30 minutes a week. There's a substantially lower risk of premature death when people do 2 ½ hours of at least moderate—intensity aerobic physical activity a week.

CARDIOVASCULAR DISEASE

Heart disease and stroke are two of the leading causes of death worldwide. Studies show that a significant reduction in the risk of cardiovascular disease occurs at activity levels equivalent to 2 ½ a week of moderate—intensity physical activity.

The evidence is strong that greater amounts of physical activity, up to one hour per day, result in further reductions in risk of cardiovascular disease.

THREE TYPES OF PHYSICAL ACTIVITIES:

Physical exercises are generally grouped into three types3 and have different effects on the body:

1. Flexibility exercises, such as stretching, improve the range of motion of muscles and joints.4

2. Aerobic exercises, such as cycling, swimming, walking, skipping rope, rowing, running, hiking, or playing tennis, focus on increasing cardiovascular endurance;5 weight-bearing aerobic exercise, such as walking, climbing, and jogging, also increases bone density.

3. Resistance exercises, such as weight training, increase muscle strength6 and lower or prevent bone loss associated with menopause.7

FOUR LEVELS OF PHYSICAL ACTIVITY

The 2008 PAGA Advisory Committee Report divides the amount of weekly aerobic physical activity for adults into four levels:

01 **Inactive:** no additional activity beyond baseline (basic routine activities)

02 **Low:** some exercise, up to 150 minutes a week

03 **Medium:** exercise 150 to 300 minutes a week

04 **High:** exercise more than 300 minutes a week

These categories provide a rule of thumb for the relationship between the total amount of physical activity and its health benefits. Low amounts of activity provide some benefit, medium amounts provide substantial benefit, and high amounts provide even greater benefit. If a person has not been exercising regularly, it's important to obtain health clearance from a physician before embarking on an exercise program.

PRESENT PHYSICAL ACTIVITY GUIDELINES

The 2008 PAGA Advisory Committee Report recommends that a person accumulate 2 ½ hours a week in various activities. This is applicable worldwide. Examples of aerobic physical activities and intensities are shown in the following table:

MODERATE INTENSITY
Walking briskly (three miles per hour or faster,but not racewalking)
Water aerobics
Bicycling slower than 10 miles per hour
Tennis (doubles)
General gardening
VIGOROUS INTENSITY
Racewalking, jogging, or running
Swimming laps
Tennis (singles)
Bicycling 10 miles per hour or faster
Skipping rope
Heavy gardening (continuous digging or hoeing, with heart rate increases)
Hiking uphill or with a heavy backpack

How do we measure the intensity of our exercise? As a rule of thumb, a person doing moderate-intensity aerobic activity can maintain a comfortable conversation during the activity. A person doing vigorous-intensity activity cannot say more than a few words without pausing for a breath.

Health benefits have not yet been proved for activities such as stretching, warming up, or cooling down, but they are often used in physical activity programs.

PROPER TRAINING CLOTHING

While exercising, one should wear lightweight garments that offer maximum freedom of movement and are appropriate to climatic conditions. When exercising in an urban area, use brightly colored garments and reflector materials for safety.

Exercise generates heat, so it's better to dress in layers that can be removed as soon as one starts perspiring. If it's very cold, consider wearing a face mask or scarf to warm the air before it enters the lungs.

PROPER TRAINING SHOES

Feet bear the weight of the whole body; therefore, it's important that shoes be comfortable, well fitting and supportive. Look for athletic shoes with absorbent cushioning, appropriate arch support, a solid and snug heel cup, flexibility, breathability, and good lacing so you can adjust tightness without pinching your feet.

EXERCISING FAITH

Just as regular aerobic exercise helps us live better, so it is with the exercise of faith. We can trust God to lead our lives according to His loving prescription for health.

He gives power to the weak, and to those who have no might He increases strength. Even the youths shall faint and be weary, and the young men shall utterly fall, but those who wait on the Lord shall renew their strength; they shall mount up with wings like eagles, they shall run and not be weary, they shall walk and not faint (Isa. 40:29-31, NKJV).

OBESITY AND ENERGY BALANCE

Overweight and obesity occur when calories ingested through food and beverages exceed calories used. Research shows that within the space of a year, it's possible to achieve weight stability through 2 ½ to 5 hours per week of walking at a pace of about four miles per hour. Such physical activity is a critical factor in determining whether a person can lose excess body weight and maintain a healthy weight.

For almost everyone, the health benefits of physical activity far outweigh the risk of possible injury or adverse effects. Adults with chronic disabilities should consult their health-care provider about the types and amounts of activity appropriate for them. As long as the activity is within one's ability, it should be safe. In other words, if you want to postpone your funeral, exercise regularly!

1 National Institute on Aging, "An Exercise Story," US National Institutes of Health, accessed April 4, 2012, http://nihseniorhealth.gov/stories/ca_grace.html. 2 US Department of Health and Human Services, 2008 Physical Activity Guidelines for Americans (Washington, DC: US Department of Health and Human Services, 2008), 9-12. 3 US Department of Health and Human Services, Your Guide to Physical Activity And Your Heart (Washington, DC: US Department of Health and Human Services, 2006), accessed April 4, 2012, http://www.nhlbi.nih.gov/health/public/heart/obesity/phy_active.pdf. 4 D. O'Conner, M. Crowe, and W. Spinks, "Effects of Static Stretching on Leg Capacity During Cycling," Turin 46, no. 1 (2005), 52-56, accessed October 5, 2006, from ProQuest database. 5 J. Wilmore and H. Knuttgen, "Aerobic Exercise and Endurance Improving Fitness for Health Benefits," The Physician and Sportsmedicine 31, no. 5 (2003), 45, accessed October 5, 2006, from ProQuest Database.6 N. de Vos, et al., "Optimal Load for Increasing Muscle Power During Explosive Resistance Training in Older Adults," The Journals of Gerontology 60A, no. 5 (2005), 638-47, accessed October 5, 2006, from ProQuest Database.7 "Resistance (Strength) Training Exercise," WebMD, November 10, 2010, accessed April 4, 2012, http://www.webmd.com/a-to-z-guides/resistance-strength-training-exercise-topic-overview. 8 Ellen G. White, The Health Reformer, July 1, 1872. Unsplash Photos.

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