

## **Fact Sheet**

www.exerciseismedicine.org eim@acsm.org 317-637-9200 American College of Sports Medicine

**CONTACT** 

P.O. Box 1440 Indianapolis, IN 46206-1440

#### THE PROBLEM

Physical inactivity is a fast-growing public health problem and contributes to a variety of chronic diseases and health complications, including obesity, diabetes and cancer. In addition to improving a patient's overall health, increasing physical activity has proven effective in the treatment and prevention of chronic diseases. Even with all the benefits of physical activity, in the United States and many other countries, levels of inactivity are alarming. We are facing what is now referred to as an "inactivity epidemic," with tremendous costs.

- According to the World Health Organization's most recent Global Health Risks data (2004) after high blood
  pressure, tobacco use and high blood glucose, physical inactivity constitutes the 4<sup>th</sup> leading cause of death
  globally, with about 3.3 million attributable deaths per year. More recent evidence (2009) using direct measure,
  rather than survey data shows physical inactivity to be the leading cause of death in the US.
- More than half of adults (56%) do not meet the recommendations for sufficient physical activity in the 2008 Physical Activity Guidelines.
- In a study of older adolescents and adults in the US, participants spent almost eight hours a day in sedentary behaviors, while as much as 36% of adults engaged in no leisure-time physical activity at all.
- A study in 2008 shows that physical inactivity costs the US Health Care System \$330 per person each year, which equals more than \$102 billion dollars annually.
- 40% of US primary care doctors and 36% of US medical students do not meet 2008 federal physical activity
  guidelines. Physically inactive doctors are less likely to provide exercise counseling to patients and provide less
  credible role models for the adoption of healthy behaviors. Not surprisingly, only 34% of US adults report having
  received exercise counseling at their last medical visit.

#### THE BENEFITS:

Many research studies have shown the benefits of regular physical activities. The US Federal Physical Guidelines and many studies show that 150 minutes per week of moderate intensity physical activity is required to achieve these health benefits.

- Research shows that a low level of physical activity exposes a patient to a greater risk of dying than does smoking, obesity, hypertension, or high cholesterol, and for older men, regular physical activity can decrease the risk of death by 40%.
- Active individuals in their 80s have a lower risk of death than inactive individuals in their 60s.
- Regular physical activity can:
  - Reduce mortality and the risk of recurrent breast cancer by approximately 50%.
  - Lower the risk of colon cancer by over 60%.
  - Reduce the risk of developing of Alzheimer's disease by approximately 40%.
  - Reduce the incidence of heart disease and high blood pressure by approximately 40%.
  - Lower the risk of stroke by 27%.
  - Lower the risk of developing type II diabetes by 58%
  - Be twice as effective in treating type II diabetes than the standard insulin prescription and can save \$2250 per person per year when compared to the cost of standard drug treatment.
  - Can decrease depression as effectively as Prozac or behavioral therapy.
- Adults with better muscle strength have a 20% lower risk of mortality (33% lower risk of cancer specific mortality) than adults with low muscle strength.
- A low level of fitness is a bigger risk factor for mortality than mild-moderate obesity. It is better to be fit and overweight than unfit with a lower percentage of body fat.
- Regular physical activity has been shown to lead to higher SAT scores for adolescents.
- In an elementary school setting, regular physical activity can decrease discipline incidents involving violence by 59% and decrease out of school suspensions by 67%.



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### A SOLUTION TO THE GREATEST PUBLIC HEALTH PROBLEM OF THE 21<sup>ST</sup> CENTURY

Exercise is Medicine<sup>®</sup> is an initiative focused on encouraging primary care physicians and other health care providers to include exercise when designing treatment plans for patients. Exercise is Medicine is committed to the belief that exercise and physical activity are integral to the prevention and treatment of chronic disease and should be regularly assessed as part of medical care. Along with the National Physical Activity Plan, Exercise is Medicine strives to make physical activity a "vital sign" that is routinely assessed at every patient interaction with a health care provider.

#### GUIDING PRINCIPLES OF EXERCISE IS MEDICINE

The guiding principles of Exercise is Medicine, a multi-organizational initiative coordinated by the American College of Sports Medicine (ACSM), are designed to improve the health and well-being of our nation through a regular physical activity prescription from doctors and other health care providers, or from a health and fitness professional working with the health care provider. The guiding principles are as follows:

- Exercise and physical activity are important to health and the prevention and treatment of many chronic diseases.
- More should be done to address physical activity and exercise in health care settings.
- Multi-organizational efforts to bring a greater focus on physical activity and exercise in health care settings are to be encouraged.

#### A CRITICAL CALL TO ACTION

Physical inactivity is a fast-growing public health problem and contributes to a variety of chronic diseases and health complications, including obesity, heart disease, diabetes, hypertension, cancer, depression and anxiety, arthritis, and osteoporosis. In addition to improving a patient's overall health, increasing physical activity has proven effective in the treatment and prevention of chronic diseases. Therefore, Exercise is Medicine® calls on each person and all partners dedicated to the idea that exercise truly is medicine to continue to build, support and advocate for physical activity as essential for global health and wellbeing by committing to action. Policy makers are called to change policy to support physical activity as a vital sign for health. Health care providers and fitness professionals are called to integrate exercise into every patient and client interaction. Communities, workplaces and schools are called to promote physical activity as an essential part of health and wellbeing.

Support for the Exercise is Medicine® Global Initiative is Provided By:

Founding Partner









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#### **INACTIVITY EPIDEMIC REFERENCES**

· Low activity increases risk of death.

Physical inactivity: the biggest public health problem of the 21st century Blair SN. Physical inactivity: the biggest public health problem of the 21st century. Br J Sports Med 2009; 43:1-2.

- Prevalence of inactivity in the US according to 2008 PA guidelines Carlson SA, Fulton JE, Galuska DA, Kruger J, Lobelo F, Loustalot FV. Prevalence of self-reported physically active adults - United States, 2007. MMWR; December 5 2008, Vol 57, No 48. - JAMA 2009;301(9):926-927
- Eight hours a day in sedentary behaviors

Amount of time spent in sedentary behaviors in the United States, 2003-2004. Matthews CE, Chen KY, Freedson PS, Buchowski MS, Beech BM, Pate RR, Troiano RP. Am J Epidemiol. 2008 Apr 1:167(7):875-81. Epub 2008 Feb 25.

- \$330 per person per year in health care expenditures dues to inactivity in 2008 Higher Direct Medical Costs Associated with Inactivity. A Team Physician's Challenge By: Michael Pratt, MD, MPH; Caroline A. Macera, PhD; Guijing Wang, PhD Volume: 28, Issue: 10, Published: October 2000, Original Research
- Physical Activity of doctors and medical students Physical activity habits of doctors and medical students influence their counseling practices. Lobelo F, Duperly J, Frank E. Br J Sports Med. 2009 Feb;43(2):89-92.
- Physical Activity Counseling Physician counseling about exercise. Wee CC, McCarthy EP, Davis RB, et al. JAMA1999;282:1583-8.
- US Physical Activity Guidelines.

http://www.health.gov/paguidelines/

US Department of Health and Human Services 2008 Physical Activity Guidelines for Americans.

• Can reduce mortality and the risk of recurrent breast cancer by approximately 50%.

http://jama.ama-assn.org/cgi/content/abstract/293/20/2479

Physical activity and survival after breast cancer diagnosis.

Holmes MD et al. JAMA 2005; 293:2479

A Prospective Study of Cardiorespiratory Fitness and Breast Cancer Mortality Peel JB, Sui X, Adams SA, Hébert JR, Hardin JW, Blair SN. Med Sci Sports Exerc. 2009 Apr;41(4):742-8.

• Can lower the risk of colon cancer by over 60%.

Physical activity and colon cancer: confounding or interaction? Medicine & Science in Sports & Exercise:

June 2002 - Volume 34 - Issue 6 - pp 913-919

• Can reduce the risk of developing of Alzheimer's disease by approximately 40%.

http://www.annals.org/content/144/2/73.abstract

Exercise is associated with reduced risk for incident dementia among persons 65 years of age and older. Larsen EB et al. Annals of Internal Medicine 2006; 144:73-81



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#### **INACTIVITY EPIDEMIC REFERENCES (Continued)**

 Reduces the incidence of high blood pressure and heart disease by approximately 40%. http://www.ncbi.nlm.nih.gov/pubmed/16293717

Cardiorespiratory fitness is an independent predictor of hypertension incidence among initially normotensive healthy women.

Barlow CE et al. Am J Epidemiol 2006; 163:142-50

http://www.ncbi.nlm.nih.gov/pubmed/7934752?dopt=Abstract

Exercise in the prevention of coronary heart disease: today's best buy in public health.

Med Sci Sports Exerc. 1994 Jul;26(7):807-14.

• Lowers the risk of stroke by 27%.

http://www.ncbi.nlm.nih.gov/pubmed/10865274?

itool=EntrezSvstem2.PEntrez.Pubmed.Pubmed ResultsPanel.Pubmed RVDocSum&ordinalpos=8

Physical activity and risk of stroke in women.

JAMA. 2000 Jun 14;283(22):2961-7.

• Reduces the incidence of diabetes by approximately 50%.

http://www.ncbi.nlm.nih.gov/pubmed/10068380

The association between cardiorespiratory fitness and impaired fasting glucose and type 2 diabetes mellitus in men.

Wei M et al. Annals of Internal Medicine, 1999

http://content.nejm.org/cgi/content/short/346/6/393

Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin.

DPP Research Group. New England Journal of Medicine 2002; 346:393-403

The Diabetes Prevention Program Research Group: Within-trial cost-effectiveness of lifestyle intervention or metformin for the primary prevention of type 2 diabetes.

DPP Res Group. Diab Care 2003; 26:2518

• Can decrease depression as effectively as Prozac or behavioral therapy.

http://www.ncbi.nlm.nih.gov/pubmed/15626549

Exercise treatment for depression: efficacy and dose response.

Dunn A et al. American Journal of Preventive Medicine 2005

Muscle strength decreases mortality risk

Association between muscular strength and mortality in men.

Ruiz JR, Sui X, Lobelo F, Morrow JR, Jackson AW, Blair SN. BMJ 2008; 337:a439.

• Better to be fit and fat than unfit with lower percentage of body fat.

Cardiorespiratory fitness and adiposity as mortality predictors in older adults.

Sui X, LaMonte MJ, Laditka JN, Hardin JW, Chase N, Hooker SP, Blair SN.

JAMA. 2007 Dec 5;298(21):2507-16.

Increased SAT scores.

California Dept. of Education Study, December 10, 2002

• Fewer disciplinary incidents and fewer out of school suspensions.

PE 4 Life Woodland Elementary School, Kansas City PSD #33