Preventive Cardiology Today

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no relationships to disclose
Dr. Paul Dudley White and Former President Dwight D. Eisenhower,
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Pub Med Citations by title: Cardiovascular Disease Prevention

Results by year

n=21

1955

n=7,844

2014
COCATS 4 Task Force 2: Training in Preventive Cardiovascular Medicine

Sidney C. Smith, Jr, MD, FACC, Chair
Vera Bittner, MD, FACC
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Published in final edited form as: 

ACCF/AHA/ACP 2009 Competence and Training Statement: A Curriculum on Prevention of Cardiovascular Disease:

A Report of the American College of Cardiology Foundation/American Heart Association/American College of Physicians Task Force on Competence and Training (Writing Committee to Develop a Competence and Training Statement on Prevention of Cardiovascular Disease)
Challenges
Not So Simple:

- < 1% of American adults follow healthful eating plan
- Only 32% of American adults have a normal body mass index
- > 30% have not reached target levels for cholesterol and blood pressure
- 0.1% middle aged adults meet all 7 health metrics (Heart SCORE)
Ideal Cardiovascular Health: prevalence

Circulation 2011; 123:850-857
From “Wall-e” Disney Pixar Studios
The United States has the most advanced medical technology and resources in the world. It is estimated that 50,000 Americans do not have health insurance.
TAKE 2X DAILY
...OR ONE A DAY
...OR, Y'KNOW,
WHENEVER YOU
REMEMBER TO.
Polypharmacy (≥5 meds) relative to Age: NHANES 1999-2012

Kantor et al. JAMA 2015; 314:1818
Opportunities
Affordable Care Act
March 23, 2010

- ACA is the first U.S. law to attempt comprehensive reform touching nearly every aspect of our health system.
- Insurance coverage for nearly 95% of US Citizens and other legal residents:
  - Expansion of Medicaid
  - Insurance Exchanges for purchase of insurance
  - Elimination of coverage exclusions for pre-existing conditions
  - Closure of the Medicare Part D Prescription Drug Donut Hole
  - Expansion of coverage for certain preventive services
- System reforms/health system innovation:
  - Accountable care organizations
  - Patient-centered medical homes
  - Patient-centered Outcomes Research Institute
Indeed, even patients with chronic illness might spend only a few hours a year with a doctor or nurse, but they spend 5000 waking hours each year engaged in everything else — including deciding whether to take prescribed medications or follow other medical advice, deciding what to eat and drink and whether to smoke, and making other choices about activities that can profoundly affect their health.
• 85% of the Americans have a smart phone
• Dynamic 2 way communication via any mobile device
• Instructional videos and written materials
• Ability to upload exercise diary, body weights and other information
• Appointment reminders/medication reminders
AHA Scientific Statement

Current Science on Consumer Use of Mobile Health for Cardiovascular Disease Prevention
A Scientific Statement From the American Heart Association

Lora E. Burke, PhD, MPH, FAHA, Chair; Jun Ma, MD, PhD, FAHA;
Kristen M.J. Azar, MSN/MPH, BSN, RN; Gary G. Bennett, PhD; Eric D. Peterson, MD;
Yaguang Zheng, PhD, MSN, RN; William Riley, PhD; Janna Stephens, BSN, PhD(c), RN;
Svati H. Shah, MD, MHS; Brian Suffoletto, MD, MS; Tanya N. Turan, MD, FAHA;
Bonnie Spring, PhD, FAHA; Julia Steinberger, MD, MS, FAHA; Charlene C. Quinn, PhD, RN;
on behalf of the American Heart Association Publications Committee of the Council on Epidemiology
and Prevention, Behavior Change Committee of the Council on Cardiometabolic Health, Council
on Cardiovascular and Stroke Nursing, Council on Functional Genomics and Translational Biology,
Council on Quality of Care and Outcomes Research, and Stroke Council

Circulation 2015; 132: 1157-1213
There’s an App for That!

ASCVD Risk Estimator
By American College of Cardiology
Open iTunes to buy and download apps.

Description
The ASCVD Risk Estimator is published jointly by the American College of Cardiology (ACC) and the American Heart Association (AHA) to help health care providers and patients estimate 10-year and lifetime risks for atherosclerotic cardiovascular disease (ASCVD) using the Pooled Cohort Equations and lifetime risk prediction tools. This app is

American College of Cardiology Web Site • ASCVD Risk Estimator Support

What’s New in Version 1.1
Minor UI Improvements

Fix to an expandable menu page to resolve issue that may occur upon rapid click/scroll as well as maintain

Screenshots

ASCVD Risk Estimator*

10-Year ASCVD Risk
19.4% calculated risk
3.6% risk with optimal risk factors

Lifetime ASCVD Risk
69% calculated risk
5% risk with optimal risk factors

Recommendation Based On Calculator:

Based on the data entered (assuming no clinical ASCVD and LDL-C 70-189 mg/dL):
- Gender: Male
- Age: 55
- Race: White/Other
- Total Cholesterol: 150
Table 8. Number of Apps Found in the iTunes and Google Play Stores

<table>
<thead>
<tr>
<th>Category</th>
<th>Apple Store</th>
<th>Android</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight loss</td>
<td>3881</td>
<td>250</td>
</tr>
<tr>
<td>Physical activity/exercise</td>
<td>72/6312</td>
<td>120/120</td>
</tr>
<tr>
<td>Smoking</td>
<td>732</td>
<td>250</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>1175</td>
<td>180</td>
</tr>
<tr>
<td>Hypertension/blood pressure</td>
<td>214/588</td>
<td>250/250</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>265</td>
<td>120</td>
</tr>
<tr>
<td>Medication adherence</td>
<td>38</td>
<td>250</td>
</tr>
</tbody>
</table>

The search on these terms was conducted in April 2015.
## Accuracy of Pedometer Devices

### Figure 2. Device Outcomes for the 1500 Step Trials

<table>
<thead>
<tr>
<th>Device</th>
<th>No. of Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Galaxy S4 Moves App</td>
<td>28</td>
</tr>
<tr>
<td>iPhone 5s Moves App</td>
<td>28</td>
</tr>
<tr>
<td>iPhone 5s Health Mate App</td>
<td>27</td>
</tr>
<tr>
<td>iPhone 5s Fitbit App</td>
<td>27</td>
</tr>
<tr>
<td>Nike Fuelband</td>
<td>28</td>
</tr>
<tr>
<td>Jawbone UP24</td>
<td>28</td>
</tr>
<tr>
<td>Fitbit Flex</td>
<td>28</td>
</tr>
<tr>
<td>Fitbit One</td>
<td>26</td>
</tr>
<tr>
<td>Fitbit Zip</td>
<td>27</td>
</tr>
<tr>
<td>Digi-Walker SW-200</td>
<td>28</td>
</tr>
</tbody>
</table>

Case MA, et al. JAMA 2015; 313: 625-626
A Primary Care Nurse-Delivered Walking Intervention in Older Adults: PACE (Pedometer Accelerometer Consultation Evaluation)-Lift Cluster Randomised Controlled Trial

Tess Harris¹*, Sally M. Kerry², Christina R. Victor³, Ulf Ekelund⁴,⁵, Alison Woodcock⁶, Steve Iliffe⁷, Peter H. Whincup¹, Carole Beighton⁸, Michael Ussher¹, Elizabeth S. Limb¹, Lee David⁹, Debbie Brewin⁹, Fredrika Adams¹, Annabelle Rogers¹, Derek G. Cook¹

¹Department of Primary Care, University of Oxford, Oxford, UK; ²Department of Clinical Epidemiology and Biostatistics, McMaster University, Hamilton, ON, Canada; ³Division of Preventive Medicine and Epidemiology, University of Pennsylvania, Philadelphia, PA, USA; ⁴Division of Research, Kaiser Permanente, Oakland, CA, USA; ⁵Department of Epidemiology, University of California, San Francisco, CA, USA; ⁶School of Sport Sciences, University of the West of England, Bristol, UK; ⁷Department of Primary Care, University of Cambridge, Cambridge, UK; ⁸School of Sport and Public Health, University of Manchester, Manchester, UK; ⁹Consultant Physician, University of Oxford, Oxford, UK.
Mission: to build healthier lives, free of cardiovascular disease and stroke
AHA and Google Life Sciences are investing $50 million over roughly five years to create a single team of specialists from a variety of fields. Together, the team will aim to understand, reverse and prevent coronary heart disease. - AHA Website (blog.heart.org) Nov 8, 2015.
Oath of Hippocrates
(modern version)

I swear to fulfill, to the best of my ability and judgment, this covenant:

I will respect the hard-won scientific gains of those physicians in whose steps I walk, and gladly share such knowledge as is mine with those who are to follow.

I will apply, for the benefit of the sick, all measures which are required, avoiding those twin traps of overtreatment and therapeutic nihilism.

I will remember that there is art to medicine as well as science, and that warmth, sympathy, and understanding may outweigh the surgeon's knife or the chemist's drug.

I will not be ashamed to say "I know not," nor will I fail to call in my colleagues when the skills of another are needed for a patient's recovery.

I will respect the privacy of my patients, for their problems are not disclosed to me that the world may know. Most especially must I tread with care in matters of life and death. If it is given me to save a life, all thanks. But it may also be within my power to take a life; this awesome responsibility must be faced with great humbleness and awareness of my own frailty. Above all, I must not play at God.

I will remember that I do not treat a fever chart, a cancerous growth, but a sick human being, whose illness may affect the person's family and economic stability. My responsibility includes these related problems, if I am to care adequately for the sick.

I will prevent disease whenever I can, for prevention is preferable to cure.

I will remember that I remain a member of society, with special obligations to all my fellow human beings, those sound of mind and body as well as the infirm.

If I do not violate this oath, may I enjoy life and art, respected while I live and remembered with affection thereafter. May I always act so as to preserve the finest traditions of my calling and may I long experience the joy of healing those who seek my help.
We as physicians, nurses, health care providers and scientists have a moral, ethical and professional obligation to prevent cardiovascular disease to the best of our ability,

Whether it be one-on-one with an individual patient, through public health, advocacy or scientific discovery

Preventive cardiology today will shape the world of tomorrow