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# Health & Productivity Management: Working to Improve Health In The Workplace

Presented by:  
Morgan Edwinson  
Preventive Health Programs Lead  
Sandia National Laboratories  
P.O. Box 969, MS 9112  
Livermore, CA 94551-0969

Email:  
[muedwin@sandia.gov](mailto:muedwin@sandia.gov)  
Phone: 925-294-3501  
Fax: 925-294-2658



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## **Morgan Edwinston, M.A.                      Brief Biography**

**Morgan Edwinston has a Master's degree in Interdisciplinary Studies, with a focus Health Sciences. Her undergraduate degree is in Patient Services and Relations.**

**Prior to her tenure at Sandia, Ms. Edwinston taught Health Sciences courses at Universities and Colleges in the San Francisco Bay Area, and worked in the corporate sector developing health promotion and wellness programs for major health insurance companies.**

**Ms. Edwinston was hired to Sandia National Laboratories, at the California site to design and launch their preventive health programs, which includes a full fitness facility, the Life Design Center. Ms. Edwinston specializes in researching current trends in health information and research within multiple disciplines and providing that information to consumers for the benefit of creating positive and healthy lifestyles.**





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# Abstract

Recent research and experience shows that one's environment and relationships play critical roles in determining chosen lifestyles and health behaviors. The workplace is an ideal environment for shifting cultures towards healthy lifestyles because it is a micro-culture where individuals spend most of their week's waking hours, sharing common goals and purpose. This presentation will provide strategies and best practices for:

- Implementing health risk reduction programs in the workplace designed to identify and reduce health risks;
- Providing creative ideas for preventive health programming;
- Fostering healthy culture change in the workplace;
- Gaining leadership buy-in;
- Implementing strategies for program evaluation and cost analysis.

## Key Words:

Health and Productivity Management  
Preventive Health  
Health Risks  
Program Evaluation





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# Why Invest in Preventive Health Programs in the Workplace?

- Workplace programs can reach large segments of the population;
- Workplaces contain a concentrated group of people who share common purpose and culture;
- The infrastructure to communicate with workers is in place;
- Peer social and organizational supports are in place;
- Policies, procedures and practices can be introduced and healthy cultures can be fostered.
- Healthy resilient people have less illnesses and injuries and recover more quickly from illnesses and injuries.
- It makes sense for the Bottom Line



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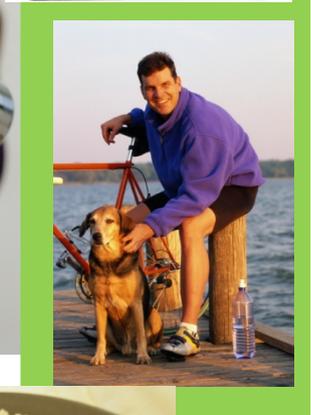


19th Annual Art & Science of Health Promotion Conference "What Works Best in Health Promotion?" \ March 16-19, 2009 -- Moscone Center| San Francisco, CA. Ron Z. Goetzel, Ph.D., Emory University and Thomson Reuters Healthcare

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# The Majority Of Chronic Disease Can Be Prevented Or Better Managed

- The Centers for Disease Control and Prevention (CDC) estimates...
  - **80% of heart disease and stroke**
  - **80% of type 2 diabetes**
  - **40% of cancer**...could be prevented if Americans did three things:
  - ✓ **Quit smoking/tobacco**
  - ✓ **Start eating healthy**
  - ✓ **Get in shape**

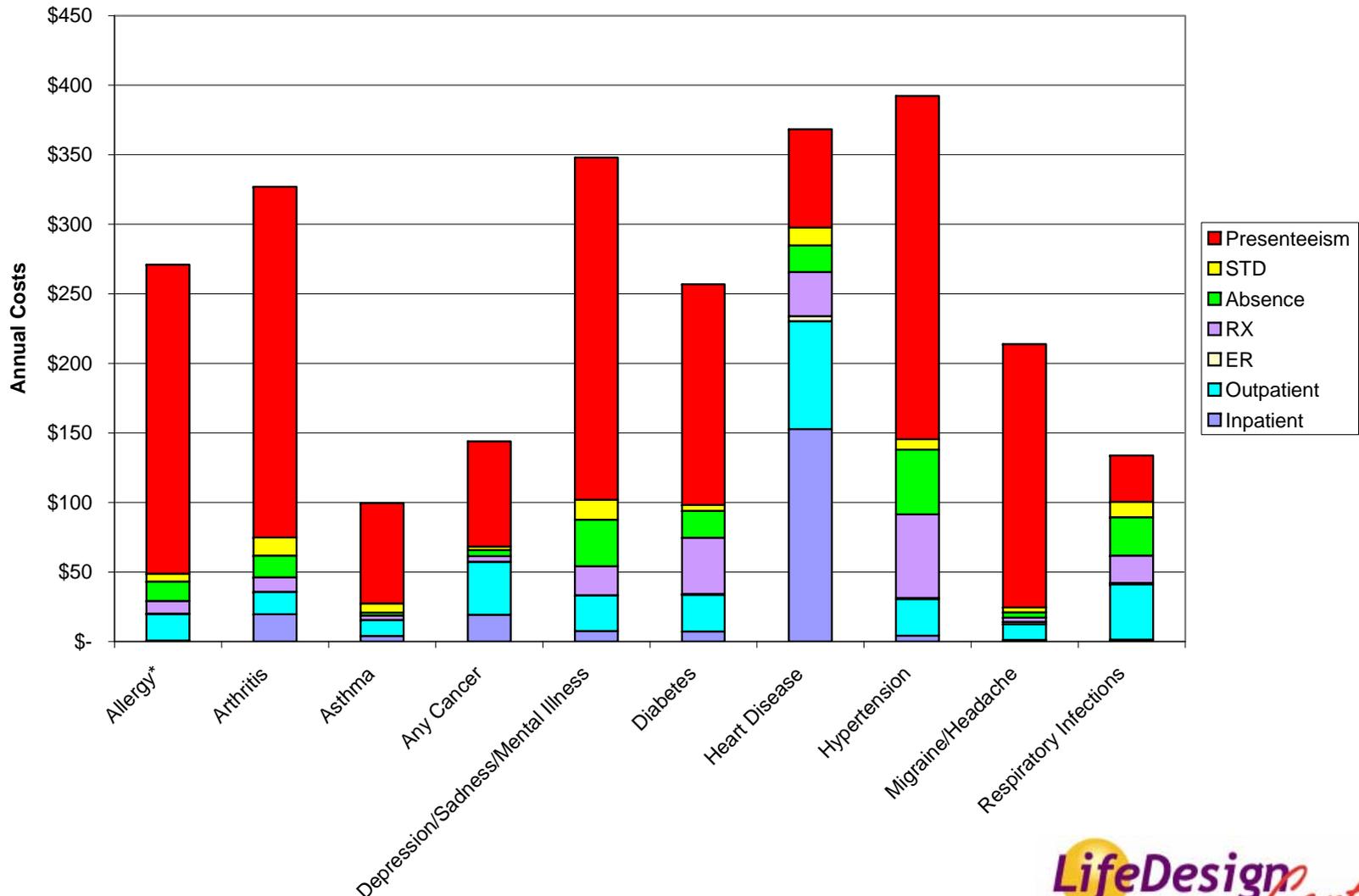


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# The High Costs of Illness in the U.S.

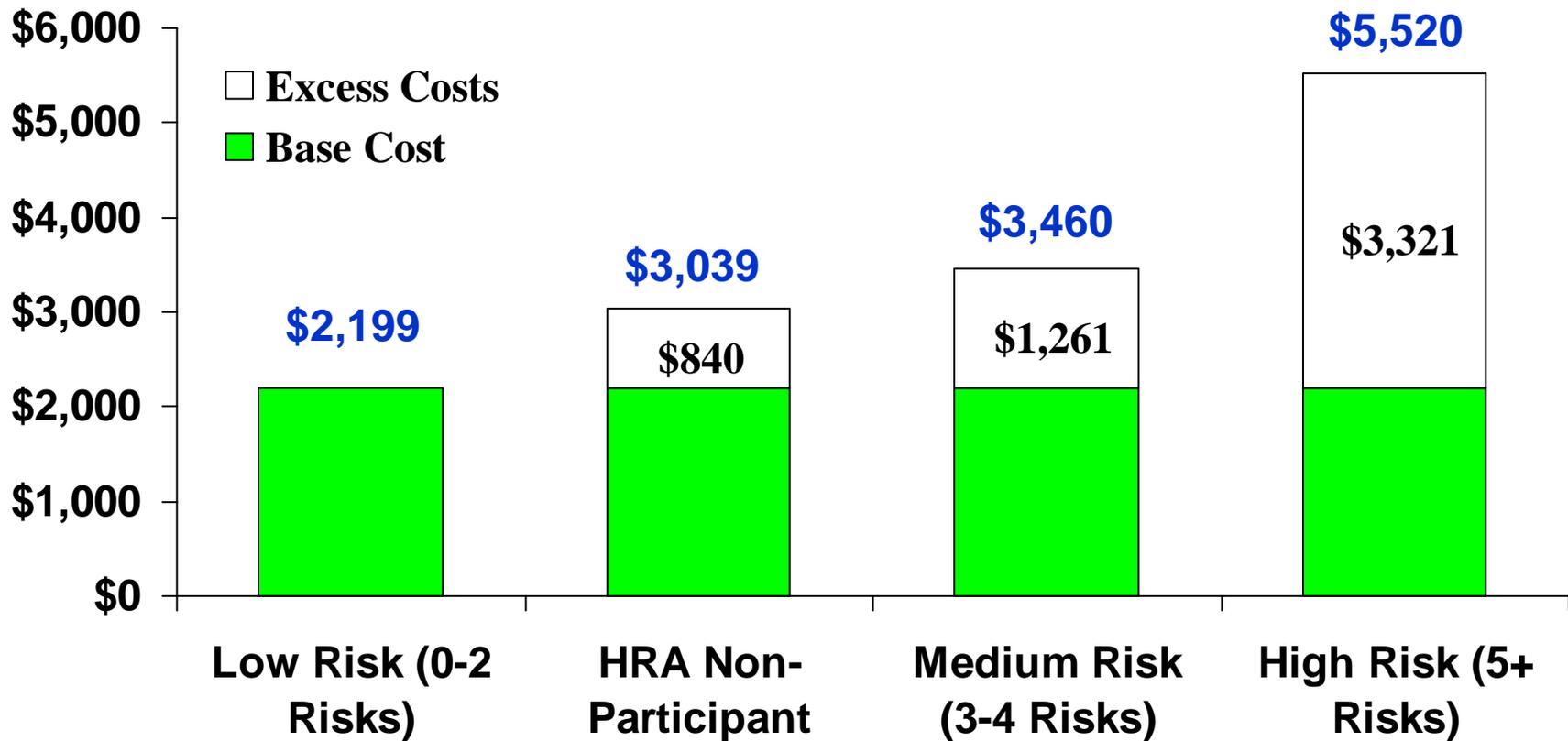
Using Average Impairment and Prevalence Rates (\$23.15/hour wage estimate)

Highest cost of illnesses to employer health plans: Hypertension, Heart disease, Emotional and Mental health, and Arthritis



(Goetzel, Long, Ozminkowski, et al. JOEM 46:4, April, 2004)

# Excess Time Away From Work (TAW) Costs due to Excess Risks





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# Key Health Risks

## Health Risk Reduction Targets

- Stress**
- High blood glucose**
- Overweight (by abdominal circ or BMI)**
- Tobacco use**
- High blood pressure**
- Sedentary Lifestyle**
- High cholesterol (TC, LDL, HDL/Ratio)**
- Number of Risks (>3 ) (starting analyses with SNL/Albuquerque)**
- Sleep Disturbance**

*Goetzel, Long, Ozminkowski, et al. JOEM 46:4, April, 2004*



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# Preventive Health Program Objectives

- Develop Health Risk Reduction program to identify health risks and improve health states among employees;
- Implement strategies to foster a healthy culture at the worksite;
- Provide employees time saving convenience and access to health and fitness resources;
- Provide employees easy access to healthy foods;
- Increase awareness and education through onsite wellness programming;
- Reduce short & long term health care costs
- Reduce productivity losses rates due to illness/injury;
- Enhance work life satisfaction among employees;
- Help to attract and retain a highly talented pool of employees.





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# Health Assessments

## The Corner Stone to Preventive Health Programming

- Provide Onsite Health Assessments: Biometrics And Health Survey.
- Implement Incentive Strategy.
- Implement Stratified Follow-up Program: High, Medium, Low Risk (Change Takes 2-3 Interfaces)<sup>1</sup>.
- Implement Preventive Health Programming To Mitigate Major Population Risks.
- Consider Implementing Interdisciplinary Disease Management & Lifestyle Training, For High Risk Employees (Medical, Preventive Health, EAP, Physical Therapy).



<sup>1</sup> Dee W. Edington, Ph.D. , Director Health Management Research Center University of Michigan. American Journal of Health Promotion Conference, 2005.



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# Shifting Site Culture

Education & Leadership

- Grass Roots Strategies
  - Survey, interview, implement, report
  - Engage healthy mentors
  
- Leadership Involvement
  - Executive & manager outreach
  - Encourage communication about health and work life balance.
  - Engage participation in programs
  
- Creating a Health-Minded Site
  - Stairs
  - Walking paths
  - Getting involved with new building initiatives



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# Shifting Site Culture

## *Continued*

- Onsite fitness facility and/or fitness classes
- Wellness kiosks
- Food service and vending strategies
- Healthy events

Tobacco Free Environment

Wellness Programming



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# Fitness Programming

- Fitness Assessments
- Consultations & Orientations  
Safety Briefings
- Site Fitness Resources: Cardio, Strength, Resiliency,  
Flexibility, & Balance.
- Group Challenges And Creative Activities  
To Maintain Interest And Fun Factor

- **Active For Life Health & Fitness Labs Challenge.** A 10 week health and fitness challenge with events and activities to get people moving and eating healthy. Seven (7) DOE Labs participated this year. We (Sandia Livermore) had 25% of our employees participate with 23 teams.





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# Healthy Foods

- Get Involved in Food Service Provider Contracting
- Vending Machines
  - 50% healthy (selecting standards).
  - Lower price for healthy foods and beverages
- Onsite Cafés and Cafeterias
  - Feature healthy food menu options & specials
  - Implement food labeling strategies
- Onsite Organic Produce Deliveries
- Posters and Pamphlets – Tips for ordering healthy
- Healthy Meeting & Celebrations Tips





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# Wellness Programming

- Stress Reduction Department Workshops
- Sleep Disturbance Assessments & Consultations
- Health Coaching
- Nutrition Consultations & Weight Loss Programs
- Wellness Brown Bag Speakers and Presentations
- Informational Brochures and Hand-outs



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# Program Evaluation & Reporting

## How Do You Know If you Are Hitting the Target?

### Key Metrics To Evaluate Program Effectiveness

- Participation Levels
- User Satisfaction Surveys
- Health Risk Reduction Outcomes
- Cost Analysis
- 3<sup>rd</sup> Party Program Evaluation





# Life Design Center Preventive Health Programs

## Metrics: Health Risk Category Results

The following table lists the yearly totals for the Risk Category Information. The savings and costs are based on the data entered by the user and on the Health Enhancement Research Organization (HERO) 1997 study<sup>1</sup> showing a higher cost for an individual considered high-risk for a risk versus an individual considered low-risk. HERO identified seven risks that are used in this report.

	# of Employees at Risk (Year 1)	# of Employees Who Moved Out of High Risk (Over 6 Years)	Estimated Cost Associated with Each At Risk Employee Per Year	Projected Potential/Actual Cost Savings (Over 6 Years*)
<b>Stress</b>	9	5	\$1,912	\$32,504
<b>High Blood Glucose</b>	9	3	\$2,449	\$26,939
<b>Weight</b>	127	25	\$2,016	\$169,344
<b>Tobacco Use</b>	22	6	\$1,204	\$34,916
<b>High Blood Pressure</b>	95	38	\$1,098	\$147,132
<b>No Exercise</b>	149	27	\$1,197	\$122,094
<b>High Cholesterol</b>	85	0	\$767	\$0
<b>Total</b>				<b>\$532,929</b>

<sup>1</sup> Goetzel, R., et al. *The Relationship Between Modifiable Health Risks and Health Care Expenditures*, *Journal of Occupational and Environmental Medicine*. 1998;10:843-854.

\* The potential/actual cost saving projections assumes the participant reduced their risk during year 1 of their participation and remained at low risk during the time between tests.

\*\* Data for depression was not available due to the HRA that was administered. The estimated cost associated with at risk employees for depression is \$4,074.





# Life Design Center Preventive Health Programs – Productivity Savings

The following table lists the yearly totals for the Productivity Area Savings. The table shows the savings that can be obtained by using a population health management program. The savings and costs are based on the data entered by the user and the study on Health and Productivity Management by Dr. Ron Goetzel.<sup>2</sup>

	Projected Potential/Actual Cost Savings
2003-2004	\$211,484
2004-2005	\$285,271
2005-2006	\$385,203
2006-2007	\$519,995
2007-2008	\$701,267
2008-2009	\$946,313
<b>Total</b>	<b>\$3,049,533</b>

<sup>2</sup>Goetzel, R., et al. Health and Productivity Management: Establishing Key Performance Measures, Benchmarks, and Best Practices. Journal of Occupational and Environmental Medicine. 2000;43:10-17.



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# Life Design Center Preventive Health Programs – Metrics

## PROGRAM COSTS

The table shows the costs of the program from 2003 to 2009 based on the data entered.

\* Costs are estimates based on the information and costs entered into the program. Actual prices may vary depending on participation rates and program components selected.

\*\* An annual Program Cost of \$278,000 per year for 7 years was used in this analysis, which includes HRA/Screening expenses, incentives/giveaways, and operating costs.

	2003 - 2009
Eligible	581
Participation Rate	100%
Participants	581
Description of Costs	
Program	\$1,946,000
<b>Total Program Cost*</b>	<b>\$1,946,000</b>

## BREAK-EVEN ANALYSIS

The table below shows the percentage decrease needed in health care costs to break even with the costs of the population health management program. The table shows the decrease needed to break even based on the values shown.

Average health care expenditure: \$8,750  
 Estimated yearly growth rate for health care expenditures: 12%  
 Number of individuals eligible: 581

Net Yearly Program Costs		Reduction in Yearly Health Care Cost Growth Needed to Break Even	
2003-2009 Net Costs	\$1,946,000	Yearly Break Even	38.28%





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# Life Design Center Preventive Health Programs – ROI Estimate

The table below shows the return on investment (ROI) for the program over the multi-year period. Based on the projected savings and net program costs, the net savings have been discounted to show the present value of the savings over the multi-year period.

	2003-2009
<b>Estimated High-Risk Savings</b>	\$532,929
<b>Estimated Productivity Area Savings</b>	\$3,049,533
<b>Estimated Total Savings</b>	\$3,582,462
<b>Less: Estimated Net Program Costs</b>	\$1,946,000
<b>Net Savings</b>	\$1,636,462
<b>Yearly Benefit-Cost Ratio</b>	1.84

