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Physical Activity Promotion at the Workplace: Design Matters

IOM Physical Activity Workshop

Obesity Solutions Roundtable

April 13-15, 2015

Outline

- The changing workplace
- The need for physical activity and movement
- Organizing framework
- Design principles for best practice programs
- Case example
- Discussion

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The Workplace is Changing…

Among other important shifts,

- Technology is changing the energy requirements of the job
- Sedentary job types create positive energy balance
- Technology enables employees to work remotely
- The workforce is aging and people are working longer prior to retirement
- Media and communications technologies vary widely in reaching workers/families to promote PA

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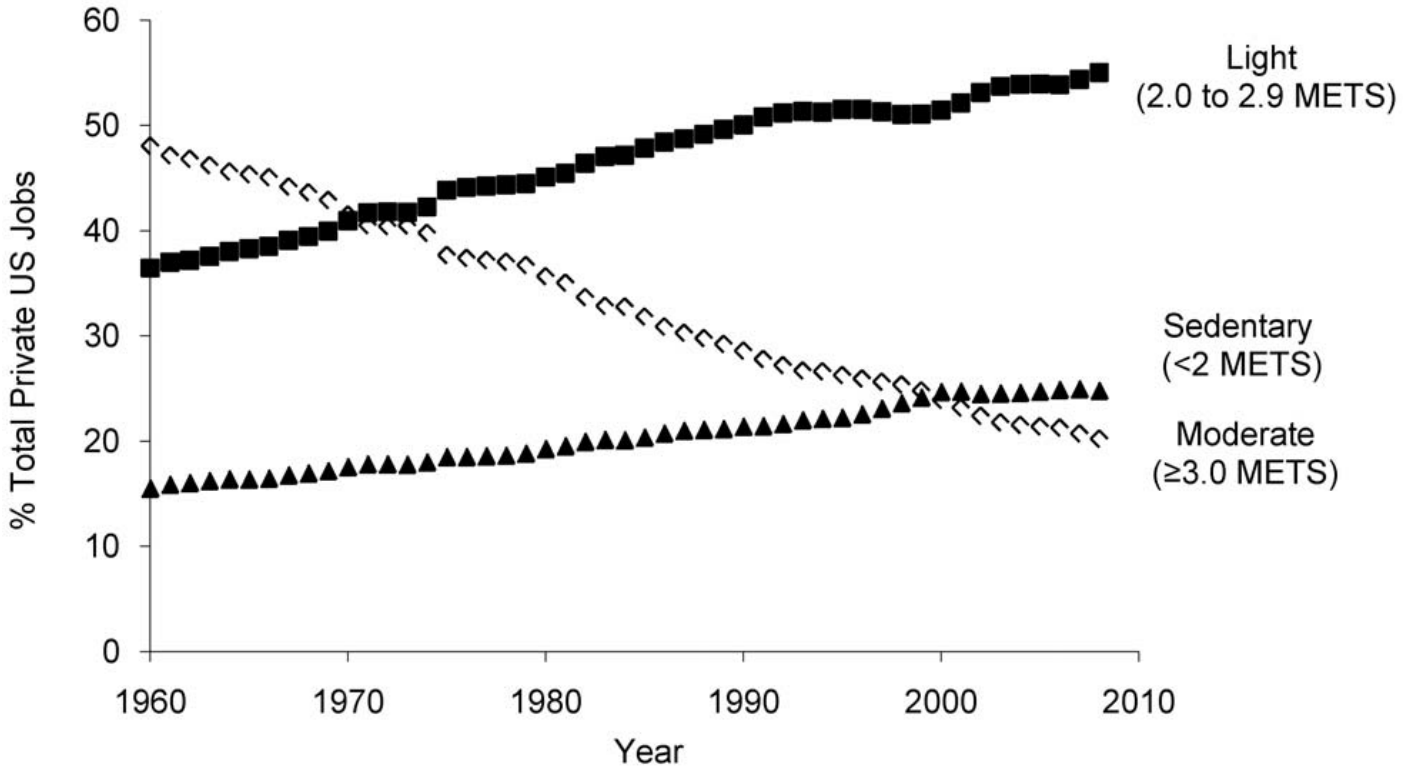
Work is Changing…



On-the-job energy expenditure has reduced over the past 50 years by ~100 kcal/day (Church, et al. *PLoS ONE*, 2011)

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Workers are Changing…

Obesity levels of the U.S. workforce have ~doubled over the past 30 years (Pronk. *Ann Rev Public Health*, 2015)

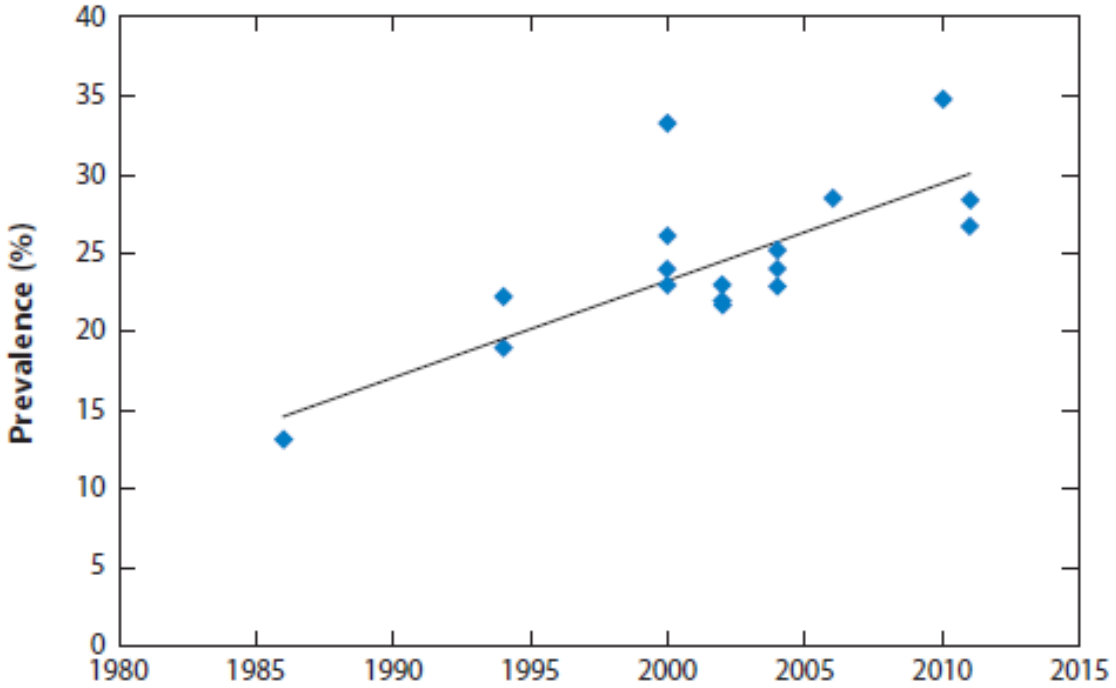

Figure 3

Employee obesity prevalence over time, based on nationally representative study populations.

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The Need for Physical Activity and Movement

- Physical activity is associated with 4.7% lower health care charges per active day per week

  (*Pronk, et al. JAMA, 1999*)

- Physical inactivity, overweight, and obesity combined were associated with 23% of health plan health care charges and 27% of national health care charges

  (*Anderson, et al. PCD, 2005*)

- Based on a systematic review of population-level physical activity interventions, the most efficient programs are those that increase walking and biking. Cost effectiveness indicators:
  - community rail-trails ($0.006/MET-h)
  - Pedometers ($0.014/MET-h)
  - School health education ($0.056/MET-h) (*Laine, et al. AJHP, 2014*)

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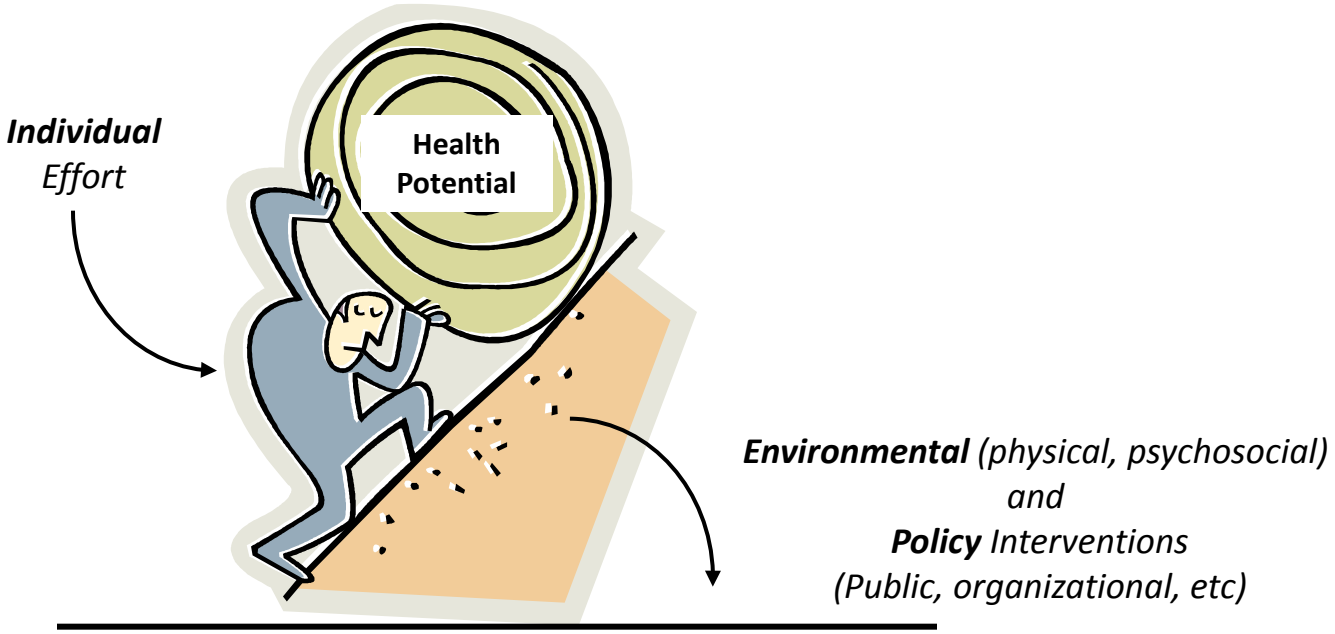
Making healthy choices easy choices



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Source: Pronk NP, Kottke TE. Health Promotion in Health Systems. In: Rippe, J. *Lifestyle Med*icine, 2013.

What Works to Promote PA at the Workplace?

- Building PA into the workday
  - Workflow design, PA “booster” breaks, walking meetings
- Building PA into the physical workplace
  - Staircases, sit-stand devices, activity-friendly campus, incentives, leadership, etc.
- Creative use of technology
  - wearable PA tracking devices, online resources
- Promotion of active commuting
  - Bicycle-to-work programs; public transportation
- Building a PA-friendly work culture

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What Works to Promote PA at the Workplace?

- Based on systematic reviews:
  - pedometer programs can increase daily step count
  - active travel (bike/walk to work) can increase daily PA
  - Workplace coaching can increase daily PA

  (*Dugdill, et al. Int'l J Workplace Health Manage, 2008*)
- Barriers to PA occurs at multiple levels of influence—program design should use ecological or multi-level models

  (*Edmunds, et al. Int'l J Workplace Health Manage, 2008*)
- Recommendations for PA promotion at the workplace include those from the National Physical Activity Plan [NPAP]:
  - Comprehensive, multi-component, socio-ecological model based

  (*Pronk. J Physical Act Health, 2009*)

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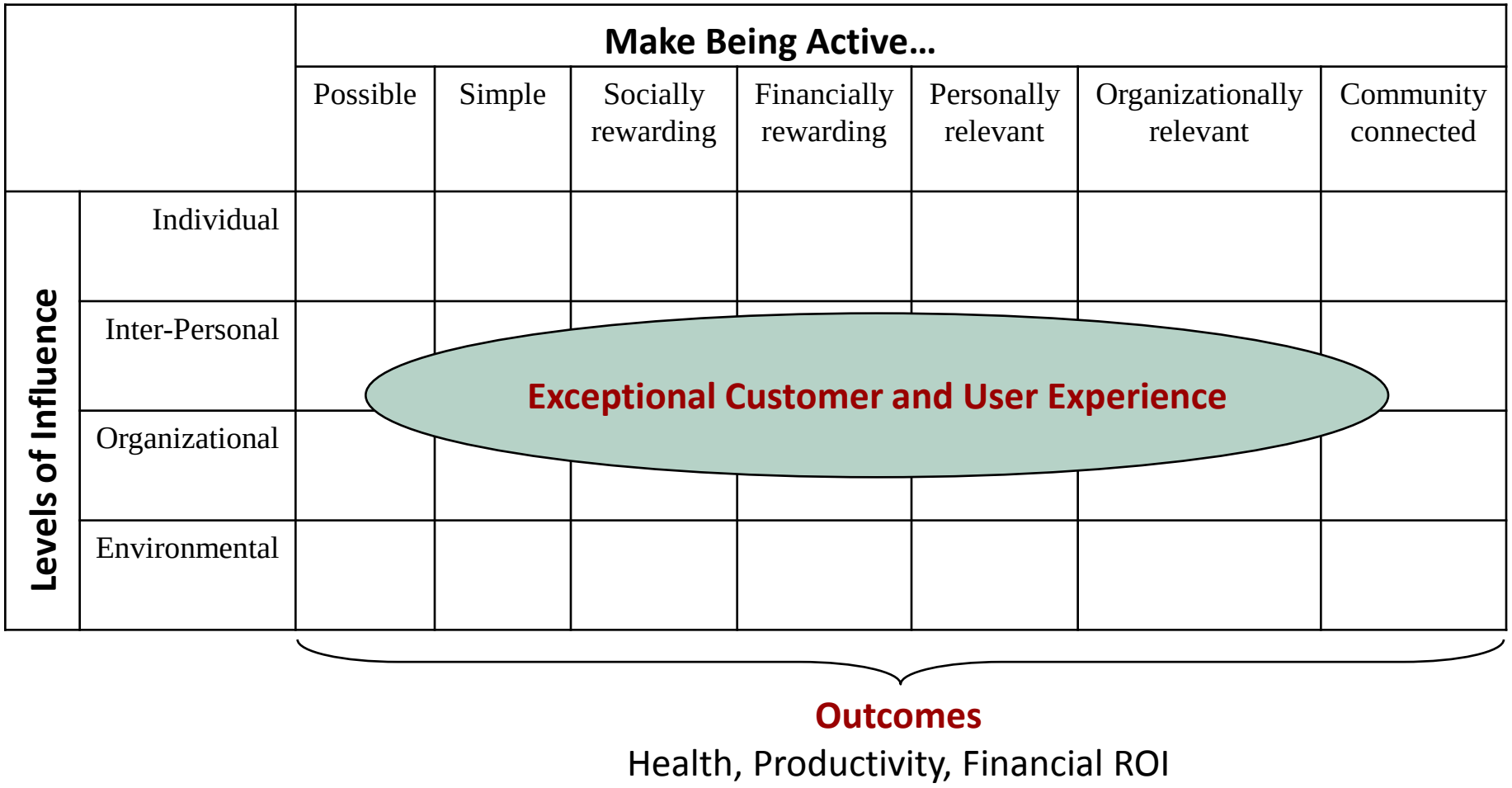
A Translational Framework for Program Design



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Source: Pronk, NP. J Phys Act Health, 2009, 6(Suppl 2), S220–S235

Identification of Best Practices

- Review of 28 scientific and “grey” literature, industry reports, and consensus statements
- Generated 44 best practices, such as:
  - Organizational commitment to a healthy culture
  - Adequate resourcing
  - Meaningful and relevant incentives
  - Wellness champion network
- Some are tactics, some are approaches, some are strategies…
- ***What are the design principles we should pay attention to?***

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Best Practice Program Design Principles

- **Design for success**
  1. Leadership
  2. Relevance
  3. Partnership
  4. Comprehensiveness
  5. Implementation
  6. Engagement
  7. Communications
  8. Data-driven
  9. Compliance

Based on 44 Best practices

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Pronk, NP. Best practice design principles of worksite health and wellness programs. *ACSM's Health & Fitness Journal* 2014;18(1):42-46.

Best Practice Program Design Principles

1. ***Leadership***
   - Setting vision; assign accountability; ensure structural support/resources; engage leaders; set policy
2. ***Relevance***
   - Address needs and interests that optimize participation; linked to long-term engagement
3. ***Partnership***
   - Integration with multiple stakeholders (internal and external)

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Best Practice Program Design Principles

4. ***Comprehensiveness***
   - Meet the definition of comprehensive programs as per Healthy People 2010 (health education, supportive environments, integration into the company's structure, linkage to other programs such as EAP, screenings)
5. ***Implementation***
   - A planned, coordinated, and fully executed work plan
6. ***Engagement***
   - Promotion of respect, trust, and co-ownership; leveraging company culture; use of incentives that optimizes intrinsic motivation; environments that make healthy decisions the easy choice

Best Practice Program Design Principles

7. ***Communications***
   - Use of a formal communications strategy linked to goals an objectives; multiple delivery channels and modes
8. ***Data Driven***
   - Insights based on data and ongoing measurement and monitoring; continuous improvement approach; data security, data integrity
9. ***Compliance***
   - Meeting regulatory standards and requirements (HIPAA, ADA, GINA, State law, etc.); data confidentiality

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Case Example: Building Vitality at IBM

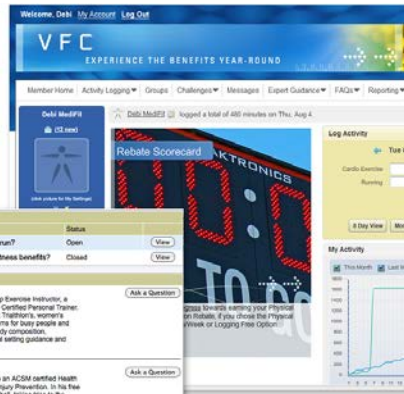
- PA and fitness as part of an overall employee well-being effort
- An online PA resource called the "Virtual Fitness Center" (VFC)
- The VFC serves as an interactive behavior change tool with goal setting, activity logging, team-based campaigns, progress reports, coaching access, and incentives to participate

1. Goals setting

3. Team-based 12 w

2. Activity logging

4. Progress reports



5. "Ask Our Pros" Online Q&A

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Source: Pronk et al Building vitality at IBM. In: Pate R, Buchner D. Implementing Physical Activity Strategies. Human Kinetics, 2014.

Case Example: Building Vitality at IBM

- Results
  - Year 1 participation: ~16,000 users (12.5%) (no incentive)
  - Year 2-4 participation: >80,000 users (63%) (incentives added)
  - Improvements among VFC users in:
    - PA-related risks (52%), health perceptions, life satisfaction, smoking, body weight, overall risk status
  - Average annual health care costs among VFC users between 2003 and 2005 increased by $291/yr compared to $360/yr for non-users
  - Significantly lower inpatient hospital costs, heart disease costs, and costs to treat diabetes among VFC users

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Source: Pronk et al Building vitality at IBM. In: Pate R, Buchner D. Implementing Physical Activity Strategies. Human Kinetics, 2014.

Conclusions

- The workplace is a complex and dynamic environment
- PA and movement enhance worker performance and support positive business outcomes
- PA promotion should be an integral part of an overall well-being strategy
- Organizing frameworks and principles for best practice program design are available

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Thank You!

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