



SAMHSA-HRSA Center for Integrated Health Solutions

Best Practices In Health and Wellness: What Works In Changing Health Behaviors?

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The Bottom Line

- *Both* obesity and poor fitness are killers
- Changing health behaviors is HARD work but essential to improving health and life expectancy
- The best studies demonstrate modest results in reducing obesity but better results in improving fitness
- What works better? Intensive manualized programs that combine coached physical activity and dietary change lasting at least 6 months (or more)
- Clinically significant weight loss is likely to be achieved by some, but improved fitness by more.....and both are important for heart health



Determinants of Health

- What Factors Account for Health?
- What Factors Account for Premature Mortality?
- How Much is Due to Health Care?
- How Much is Due to Other Factors
 - Genetics, Socioeconomic Factors, Environment, Health Behaviors, etc.



Selected Risk Factors Attributable to Premature Mortality Worldwide

Attributable Risk Factor	% of Annual Deaths
High blood pressure	12.8%
Tobacco use	8.7%
High blood glucose	5.8%
Physical inactivity	5.5%
Overweight & obesity	4.8%
High cholesterol	4.5%
Total	42.1%



Source: World Health Organization (2009)



Cardiovascular Disease (CVD) Risk Factors

Modifiable Risk Factors	Estimated Prevalence and Relative Risk (RR)	
	Schizophrenia	Bipolar Disorder
Obesity	45–55%, 1.5-2X RR ¹	26% ⁵
Smoking	50–80%, 2-3X RR ²	55% ⁶
Diabetes	10–14%, 2X RR ³	10% ⁷
Hypertension	≥18% ⁴	15% ⁵
Dyslipidemia	Up to 5X RR ⁸	

1. Davidson S, et al. *Aust N Z J Psychiatry*. 2001;35:196-202. 2. Allison DB, et al. *J Clin Psychiatry*. 1999; 60:215-220.
 3. Dixon L, et al. *J Nerv Ment Dis*. 1999;187:496-502. 4. Herran A, et al. *Schizophr Res*. 2000;41:373-381.
 5. MeElroy SL, et al. *J Clin Psychiatry*. 2002;63:207-213. 6. Ucoc A, et al. *Psychiatry Clin Neurosci*. 2004;58:434-437.
 7. Cassidy F, et al. *Am J Psychiatry*. 1999;156:1417-1420. 8. Allebeck. *Schizophr Bull*. 1999;15(1)81-89.

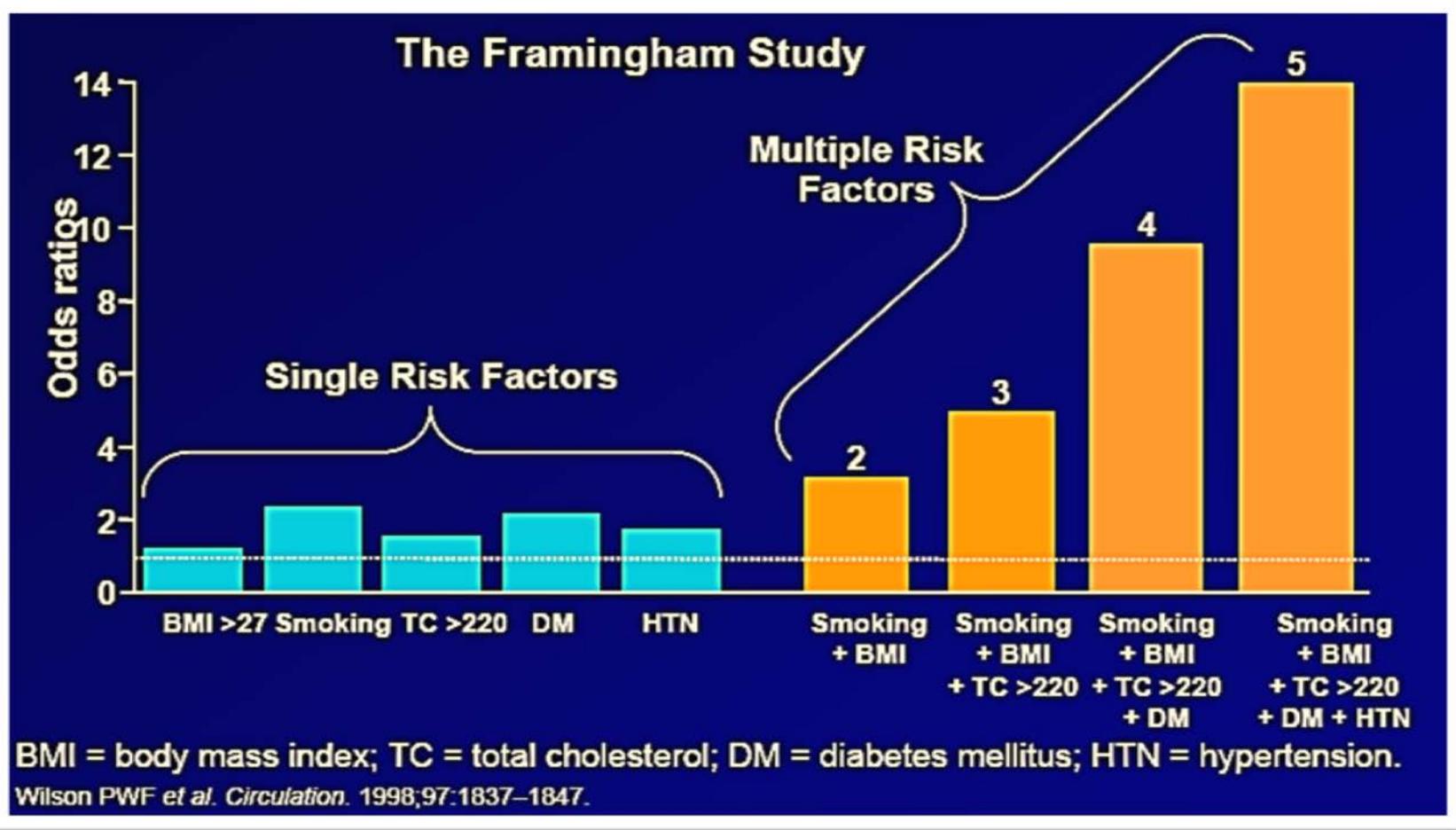


Obesity Risk Factors for Persons with SMI

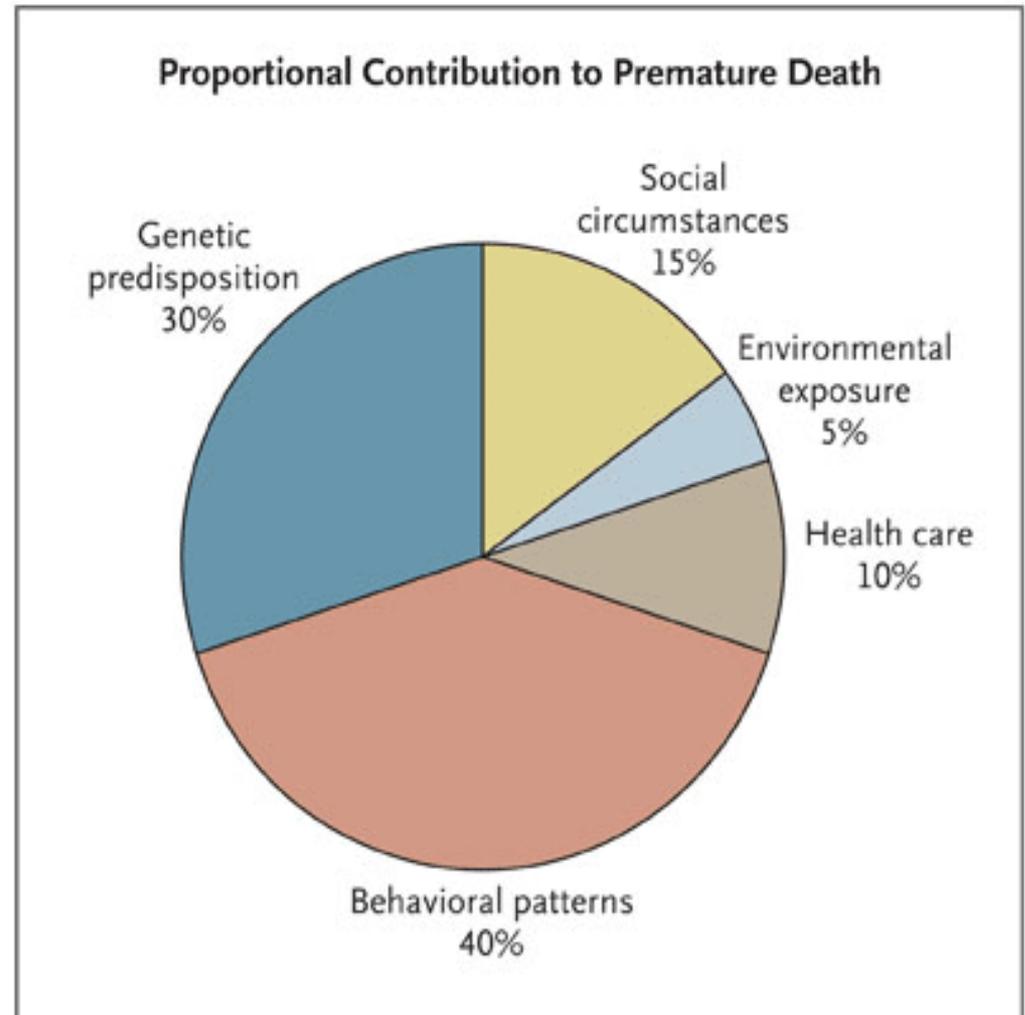
- Obesity: > **42%** (vs. 28% gen pop)
- **3-6X** greater risk of metabolic syndrome
- Regular Moderate Exercise < 20%
- Compared to the general population:
 - Fewer fruits and vegetables
 - More calories and saturated fats



Cardiovascular Risk Factors Add UP! The “Perfect Storm”

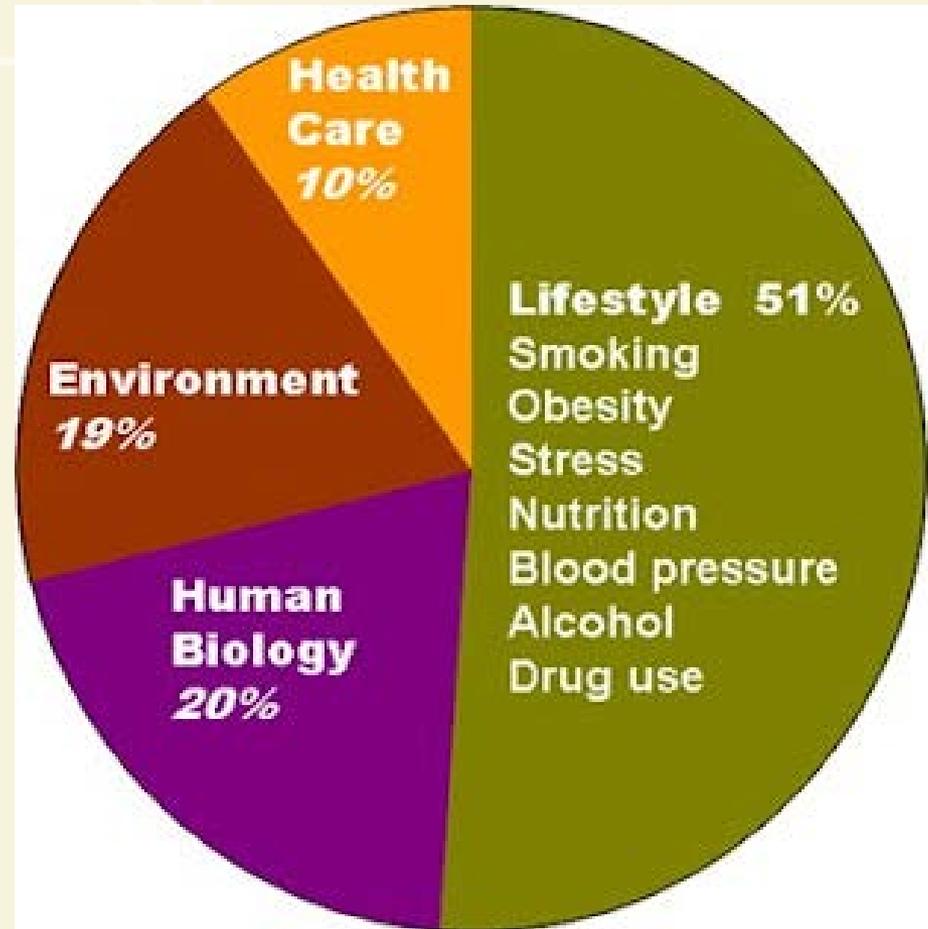


Factors Affecting
Premature Death
in the Population:
Health Behaviors
4X Health Care



Determinants Of Health (World Health Organization)

Lifestyle 5X
Health Care



The Good News: Reducing Risks of Cardiovascular Disease

- Maintenance of ideal body weight (BMI = 18.5-25)
 - 35%-55% ↓ in CVD
- Maintenance of active lifestyle (~30-min walk daily)
 - 35%-55% ↓ in CVD
- Cigarette smoking cessation
 - ~ 50% ↓ in CVD

Hennekens CH. *Circulation* 1998;97:1095-1102.
Rich-Edwards JW, et al. *N Engl J Med* 1995;332:1758-1766.
Bassuk SS, Manson JE. *J Appl Physiol* 2005;99:1193-1204.

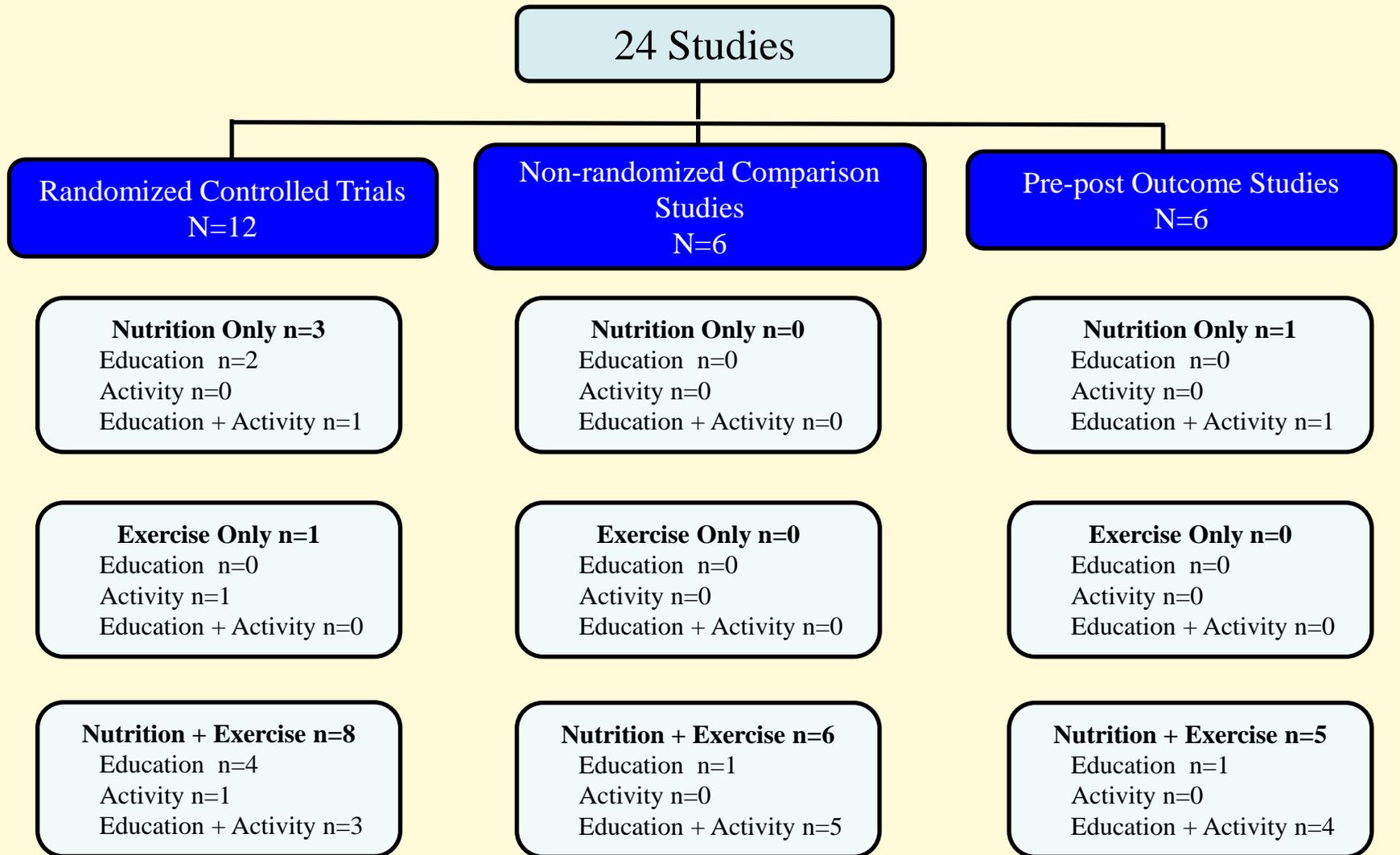


What is the Effectiveness of Health Promotion Programs for Persons with Serious Mental Illness?

What works more?
What works less?



Health Promotion and Serious Mental Illness



Characteristics of Studies with Significant Positive Findings (n = 16)

Main Component	Education	Activity	Education + Activity	TOTAL
Nutrition	1	0	2	3
Nutrition + Exercise	4	1	<u>8</u>	13
TOTAL	5	1	10	16



Characteristics of Studies with Statistically Significant Results

- Duration \geq 24 weeks
- BOTH Education and Activity
- BOTH Diet & Exercise
- Manualized & intensive programs
- Ongoing Measurement and Feedback of Success (e.g., Monitoring Physical Activity, Nutrition Change, Weekly Weights)



Limitations.....

- To date, clinically significant mean weight loss (>5%) has been elusive.....
- Studies generally limited to
- brief duration (3-6 months)
- Small study samples
- Few well-designed RCTs



SUMMARY:

- Most of the studies showed statistically significant weight loss
- Among the few studies reporting the proportion of individuals achieving clinically significant (>5%) weight loss as many as 38% met this goal
- Among the few studies reporting fitness (6MWT) even more achieved clinically significant improved fitness



Recommendation:

1. **Most** likely to be effective:



- Longer duration
- Manualized combined education and activity-based approach
- Both nutrition and physical exercise
- Evidence-based (proven effective by RCTs)



Recommendation:



2. Less likely to be successful:

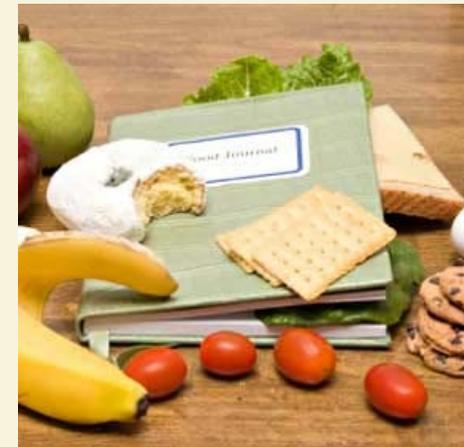
- Briefer duration interventions
- General wellness or health promotion education-only programs
- Non-intensive, unstructured, or non-manualized interventions
- Programs limited to nutrition only or exercise only (as opposed to combined nutrition and exercise).



Recommendation:

3. *If weight loss is a primary goal:*

- The nutritional component is critical and is more likely to be successful if it incorporates active weight management
- Monitoring weight, changing diet and keeping track



Recommendation:

4. *If physical fitness is a primary goal:*

➤ (+) Activity based programs that provide active and intensive exercise and monitoring of physical activity



➤ (-) Programs solely providing education, encouragement, or support for engaging in physical activity.



Recommendation:

5. Integration of Evidence-based Health Promotion as a Core Service:



- Evidence-based health promotion consisting of combined physical fitness and nutrition programs should be an integrated component of mental health services supporting wellness and recovery.



Recommendation:

6. *Pursuing Weight loss vs. Fitness*



➤ Aggressively pursue dietary reform and weight management but also support the value of physical activity in achieving fitness independent of obesity.



Recommendation:

7. Measuring Outcomes and Fidelity



➤ Physical fitness and weight outcomes and program fidelity should be objectively and reliably measured as a core indicator of quality mental health services.



Recommendation:

8. *Selecting a Health Promotion Program for Implementation:*



- Evidence-based: supported by rigorous outcome research (preferably RCTs)
- Manualized with training and supervision
- Feasible: Demonstrated track record of successful implementation and sustainability



Implementation Science: What Does it Take to Successfully Implement Integrated Health Promotion?

Two Federally Funded Initiatives to Support State-wide **Implementation** of In SHAPE in New Hampshire:

- **Statewide Implementation Study:** Training, supervision and technical assistance for organizational change, leadership, and In SHAPE health mentor training
- **CMS Medicaid Wellness Incentive Program:** vouchers for fitness facilities and weight loss programs rewards for attendance at fitness facilities and smoking cessation



SAMHSA/HRSA Center for Integrated Health Solutions

*The resources and information needed to successfully
Integrate primary and behavioral health care*

For information, resources and technical
assistance contact the CIHS team at:

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Integration@thenationalcouncil.org

