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# Lifestyle Medicine Prevention Strategies

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Collaborative\*  
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# Disclosures

- No disclosures or conflict of interest



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# Definition of Lifestyle Medicine

- The use of evidence-based lifestyle interventions to treat and prevent lifestyle-related diseases in a clinical setting.
- It empowers individuals with the knowledge and life skills to make effective behavior changes that address the underlying causes of disease.



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## Current Challenges

- Poor lifestyle choices such as physical inactivity, poor diet, cigarette smoking, and excess alcohol have a significant impact on morbidity and mortality as a result of the development of chronic disease:
  - **55%** increase of all cause mortality
  - **44%** increase in cancer mortality
  - **72%** increase of cardiovascular mortality

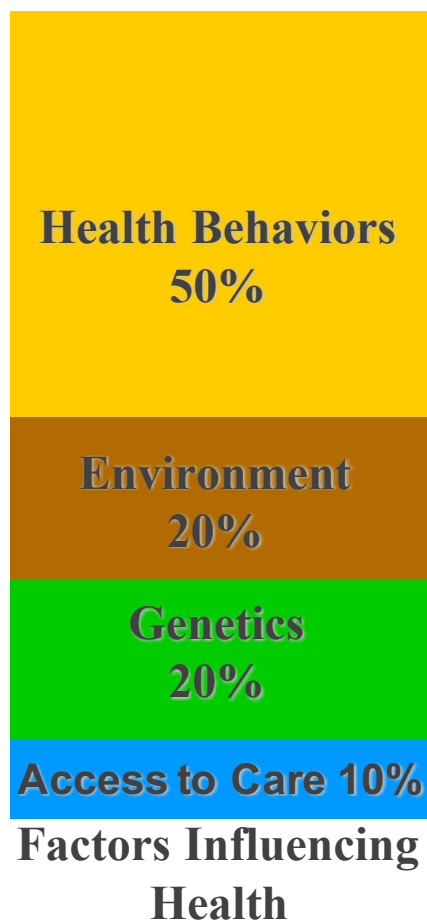
Hu FB et al. *N Engl J Med.* 2001;345:790-797; 2van Dam RM et al. *BMJ.* 2008;337:a1440.



# Chronic Disease

- As the burden of chronic disease grows, the current delivery system is not set-up to manage it effectively
  - More patients have access to healthcare
  - Providers, especially primary care, are asked to do more in less time
  - Reimbursement linked to patient health outcomes
  - Need to meet standards (NCQA, PCMH, PQRS, MU)
- By 2020 the World Health Organization calculates that two thirds of all disease will be lifestyle related

# Expenditures NOT Aligned with Influencers



*SOURCE: CDC, Blue Sky Initiative, University of California at San Francisco, Institute of the Future, 2000*



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## Healthy Lifestyle makes a Difference

- Maintaining BMI < 30, not smoking, exercising 3.5 hrs per week, and eating mostly plant-based diet results in **78%** lower risk of developing chronic disease compared to those without a healthy lifestyle.

Source: Ford, ES, et al. Intern Med 2009;169 (15): 1355-62.

- **70%** of cardiovascular disease can be prevented or delayed with dietary choices and lifestyle modifications.

Forman, Curr Treat Option Cardiovasc Med 2006



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# Lifestyle Matters

- Lifestyle Medicine is a rapidly growing specialty with new evidence for and resources supporting implementation into current traditional medical system.
- Proven ROI when Intensive Lifestyle Therapy (ILT) is incorporated into workplace health and wellness initiatives.
- Lifestyle Medicine is the intersection between Health Promotion and Conventional Medicine.

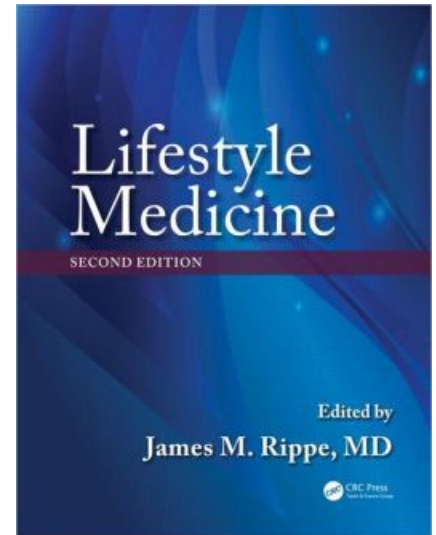
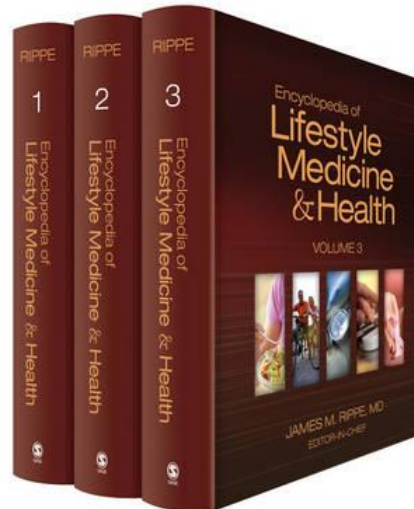




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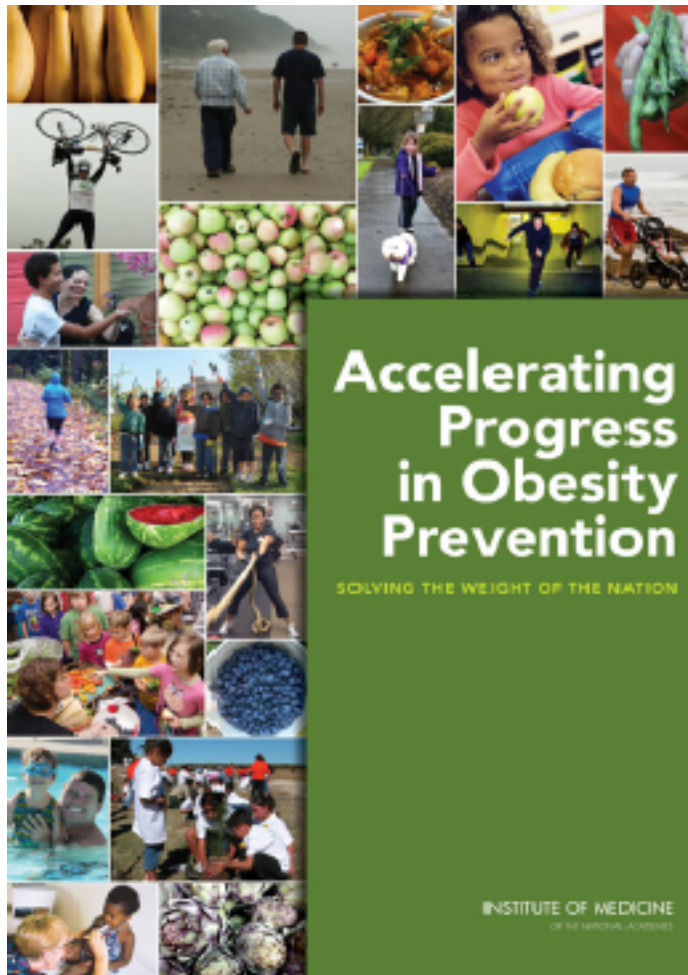


**Lifestyle Medicine**

# IOM Recommendations May 2012



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- Integrate physical activity every day in every way
- Market what matters for a healthy life
- Make healthy foods and beverages available everywhere
- Activate employers and health care professionals
- Strengthen schools as the heart of health



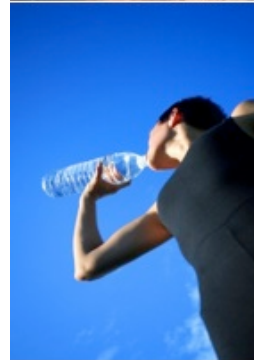
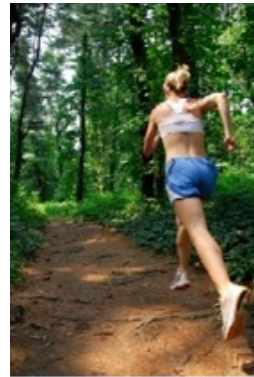
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## Core Interventions

- Optimum nutrition
- Physical activity
- Stress management
- Tobacco cessation
- Improved interpersonal relationships (Social Support)





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# Interheart Study

- Analyzed more than 11,000 MI
- 8 factors accounted for more than 80% of the risk for an MI
  - Smoking
  - Inactivity
  - Lack of consumption of fruits and vegetables
  - Alcohol consumption
  - Abnormal lipids
  - Hypertension
  - Diabetes
  - Abdominal obesity

INTERHEART Study. Lancet. 2005;364:937-52

# Chicago Heart Association Detection Project in Industry

- Followed 18-39 year olds over 30 years. Tracked 5 major risk factors (BP, cholesterol, BMI, diabetes, smoking)
- Key findings:
  - Incidence of CHD and CVD rare in those with favorable levels on all 5 risk factors
  - Mortality rates higher in those who had elevated risk factors in early adulthood
  - Those with favorable profiles compared to those with  $\geq 3$  risk factors, associated with substantially lower lifetime risk for CVD death (7% vs 32% in women)



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## Framingham Heart Study

- Lifetime risk for CVD as well as longevity highly associated with risk factor burden at age 50
- With optimal risk factor at age 50, remaining lifetime risk for CVD events 5% in men, 8% in women compared with 69% in men and 50% in women with  $\geq 2$  risk factors at age 50



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## Lifestyle Medicine *Treat the Cause*







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# 2014 AHA/ACC/TOS Guidelines on Management of Overweight and Obesity

- Recommend “on-site (face-to-face), comprehensive, high intensity lifestyle intervention (14 or more contacts in first 6 months) for all individuals with BMI > 30 or BMI 25-29.9 who would benefit from weight loss”

*Jensen M, Ryan D, Apovian C, et al. Guidelines for the Management of Overweight and Obesity in Adults: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and The Obesity Society. Circulation 2014; 129: S102-S138*



# 2014 USPSTF new guidelines on CV Disease Prevention

- “Based on a large body of evidence, we found that intensive combined lifestyle counseling in persons with CVD risk factors reduced cholesterol, blood pressure, measures of weight, glucose and diabetes incidence at 12-24 months.”
- High intensity intervention defined as > 360 minutes of contact time delivered by trained interventionist

*Lin J, O'Connor E, Evans C, et al. Behavioral Counseling to Promote a Healthy Lifestyle for Cardiovascular Disease Prevention in Persons with Cardiovascular Risk Factors. An Updated Systemic Evidence Review for the U.S. Preventive Services Task Force. AHRQ Publication No. 13-05179-EF-1 August 2014*



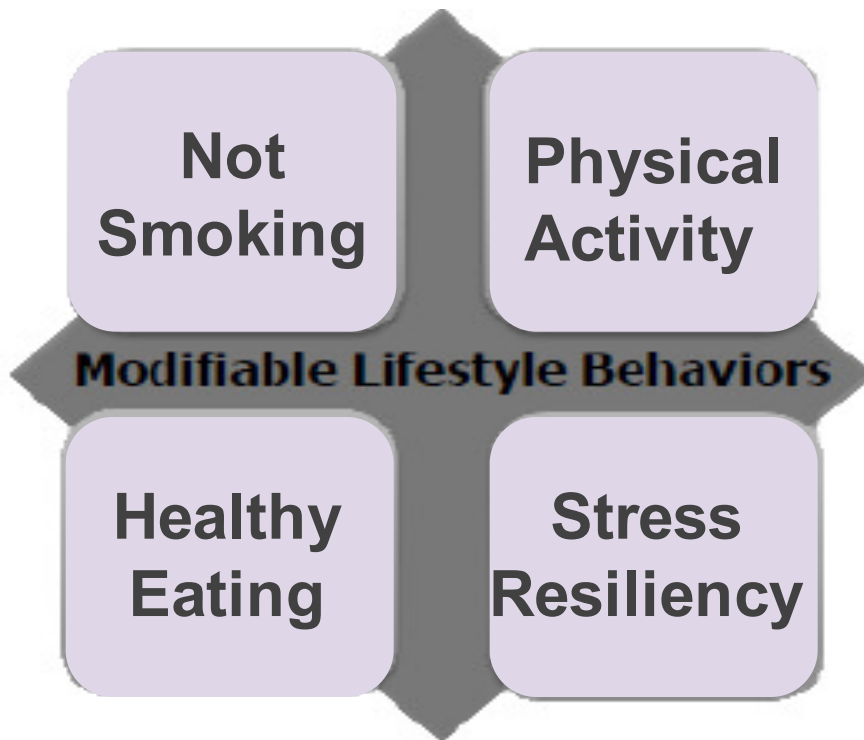
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# Lifestyle as Medicine

- Extensive body of literature supports positive lifestyle habits lowering risk factors for CHD and effectively treating individuals with CHD.
- Interventions:
  - low cost,
  - carry virtually no adverse side effects, and
  - often simultaneously ameliorate multiple risk factors.
- How do we bring this valuable body of information to our patients?

*James Rippe, MD; Lifestyle Medicine, second Edition.*

# Lifestyle Medicine Center



Source: Edward Phillips, MD; Institute of Lifestyle Medicine

## ILT Services

- Shared Medical Appointments (SMA)
- H.E.L.P.
- Full Plate Living
- Mindfulness-Based Stress Reduction Program
- *Restore24*
- **CHIP** (Complete Health Improvement Program)



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# H.E.L.P.

## Shared Medical Appointments

- **Healthy Eating Lifestyle Planning**
  - Week **1**: Shared Medical Appointment
  - Week **2**: Grocery store tour with WMC nutritionist
- **Home Exercise Lifestyle Planning**
  - Week **3**: Shared Medical Appointment
  - Week **4**: Fitness class at WMC with personal trainer
- **Healthy Emotions Lifestyle Planning**
  - Week **5**: Shared Medical Appointment
  - Week **6**: Yoga class with WMC yoga instructor
- SMA sessions billed to medical insurance (co-pay)
- Interactive Lifestyle sessions self-pay



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## H.E.L.P. Outcomes

### Preliminary Results:

	Week 1	Week 6	% Change	Comments
Exercise minutes per week	64	116	81.2%↑	75% of participants reported an increase in exercise minutes. Of those that increased exercise, the average increase was 69 minutes per week.
Servings of fruits and vegetables per day	3.5	3.8	31.8%↑	50% of participants reported an increase in fruit and vegetable servings per day. Of those that increased fruit and veggie servings, average increase was 2 servings per day.
Systolic BP	131	127	3.15%↓	63% of participants had a decrease in systolic blood pressure. Of those that had a decrease, average decrease 11.2 mmHg.
Weight	220 lbs	219	0.005%↓	63% of participants had weight loss. Of those that had a weight loss, average weight loss was 1.32 lbs.
Pain Rating	2.62	1.0	61.8%↓	37.5 of participants reported pain at week 1 Of those with pain, average pain rating at week 1: 7/10 Of those with pain at week 1, average pain rating at week 6: 1.3/10



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# Restore24

## 24 Weeks to Wellness

- *Restore* health and well-being by focusing on 3 key Lifestyle components:
  - Physical Activity
  - Healthy Eating
  - Stress Management
- **24** week wellness program designed for Lifespan employees with chronic medical conditions
- Participants responsible for co-pays for medical visits
- Employer covered all other program costs





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# Restore24 Outcomes

	Initial Assessment	Final Results	% change
Systolic Blood Pressure	131.6	119.5	↓9.2%
Diastolic Blood Pressure	73.8	72.5	↓1.8%
Weight (lbs)	199.7	189.9	↓4.9%
BMI	33.52	31.9	↓4.8%
Waist Circumference (inches)	35.73	34.07	↓4.6%
Body Fat Percentage (%)	40.7	40.3	↓0.98%
HbA1c	7.05	6.89	↓2.3%
Total Cholesterol	201	194	↓3.5%
Triglycerides	154.3	128.6	↓16.7%
PSQI (Pittsburgh Sleep Quality Index)	8.9	6.4	↓28.1%
PHQ9 (Patient Health Questionnaire)	5.25	1.5	↓71.4%
GAD7 (Generalized Anxiety Disorder)	4.75	0.875	↓81.6%

# CHIP

## Complete Health Improvement Program



### The Lifestyle Medicine Center invites you to enroll in our Summer Healthy Lifestyle & Weight Loss Program

Improve your health by learning key lifestyle changes.

Program benefits include:

- Weight loss
- Stress reduction
- Healthy meal planning ideas
- Increased energy
- Improved blood pressure & cholesterol

#### For Women Only

Two 90-minute sessions twice a week for 9 weeks.  
Each session includes nutrition education & a gentle yoga class.

Program runs from June 22 through August 19.

(Mon. & Wed. from 10:00 - 11:30 am OR Mon. & Wed. from 5:30 to 7:00 pm)

Special Reduced Cost: \$120 (includes all materials)

To register for one of our free information sessions,  
call (401) 793-7817.

June 17, 2015 at 10:00 am  
Lifespan Community Health Services OR Women's Medicine Collaborative  
335R Prairie Avenue, Suite 2B 146 West River Street, Suite 11-C  
Providence, RI 02905 Providence, RI 02905



**Medtronic**

This program is generously supported by a grant from Medtronic.

- 9 weeks
- 18 sessions
- 90 minutes each
  - 45 minutes CHIP
  - 45 minutes Yoga
- Grant funded
- \$120 self-pay





## CHIP Outcomes

- 19 participants completed pre and post biometric measures (73% completion rate)
  - 13 lost weight (68%) – total of 82.2 pounds lost
  - 12 decreased total cholesterol (63%)
  - 14 decreased LDL cholesterol (74%)
  - 9 decreased Triglycerides (47%)
  - 10 decreased Glucose (53%)



# CHIP Outcomes

- 22 participants completed pre and post self-assessments (85% completion rate)
  - 19 improved perceived stress (86%)
    - Total PSS4 scores improved from 76 to 46
    - 39.5% improvement
  - 18 improved sleep (82%)
    - Total PSQI scores improved from 102 to 74
    - 27.5% improvement
  - 18 improved depression (82%)
    - Total PHQ9 scores improved from 79 to 32.5
    - 59% improvement
  - 9 improved anxiety (41%)
    - Total GAD7 scores improved from 65 to 40
    - 38.5% improvement

# CHIP

## Patient satisfaction



- My overall experience in this program has been positive – Average 9.59
- I would recommend this program to others – Average 9.77
- Being in a group program has been a positive experience – Average 9.50
- I had sufficient opportunity to ask questions during the group – Average 9.82
- I would participate in another group similar to this – Average 9.55
- The CHIP Kit was helpful – Average 9.77



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# Remember

- Medicine (including Lifestyle Medicine) is both an art and a science
- Behavior change is multifaceted and difficult
  - Learn and adopt behavior change techniques
- There is important evidence in the area of behavior change
  - Recognize that behavior change is hard, but not impossible
- There is emerging evidence in the quality of doctor-patient interaction and the likelihood of behavior change
  - Walk the walk

*Adapted from: James Rippe (Rippe Lifestyle Institute); Lifestyle Medicine 2013*

# Greg Salgueiro, MS, RD, LDN, CIC

## Lifestyle Medicine Manager

### Women's Medicine Collaborative

