Evidence-based Tips for Improving Heart Health

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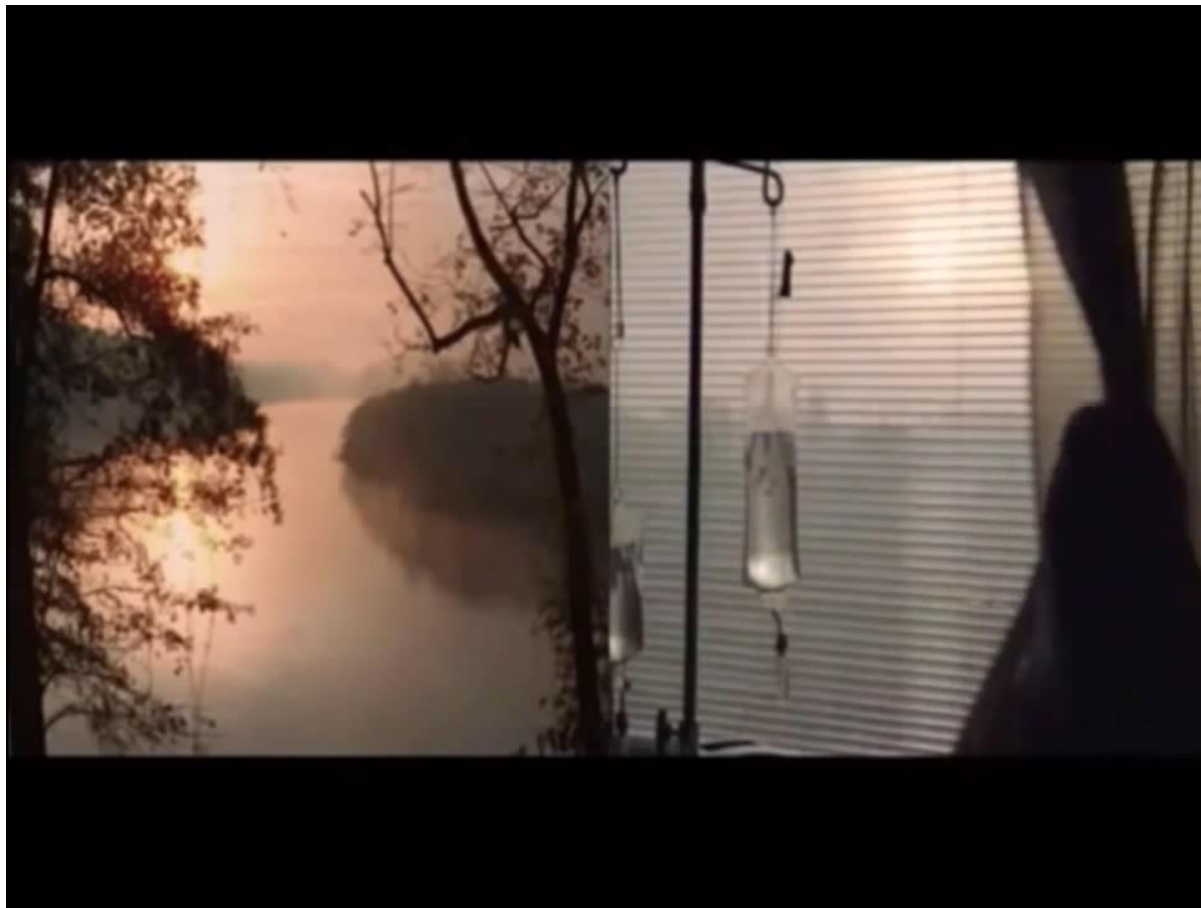Editor, *Worldviews on Evidence-based Nursing*

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From a Small Coal Mining Town to Buckeye Nation: My Story

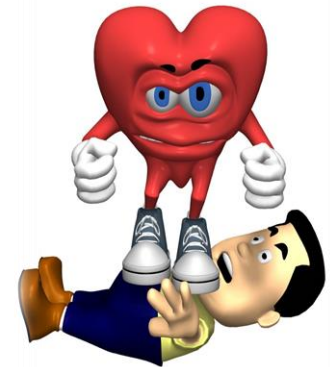# What Will the Last 10 Years of YOUR Life Look Like?

THE CARDIOVASCULAR DISEASE BURDEN
## *THE NATION'S #1 KILLER*

Heart Disease Burden

- Heart disease is the leading cause of death in the United States for both men and women

- 600,000 people in the U.S. die of heart disease each year ; someone has a heart attack every 34 seconds

- Women wait an average of 54 hours to seek treatment, 3 times as long as men

Centers for Disease Control and Prevention (2014, August). *Heart Disease Facts*. Retrieved from http://www.cdc.gov/dhdsp/data_statistics/fact_sheets/fs_heart_disease.htm

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Women and Heart Disease

- 1 in 3 Die from Heart Disease and often Present Differently than Men

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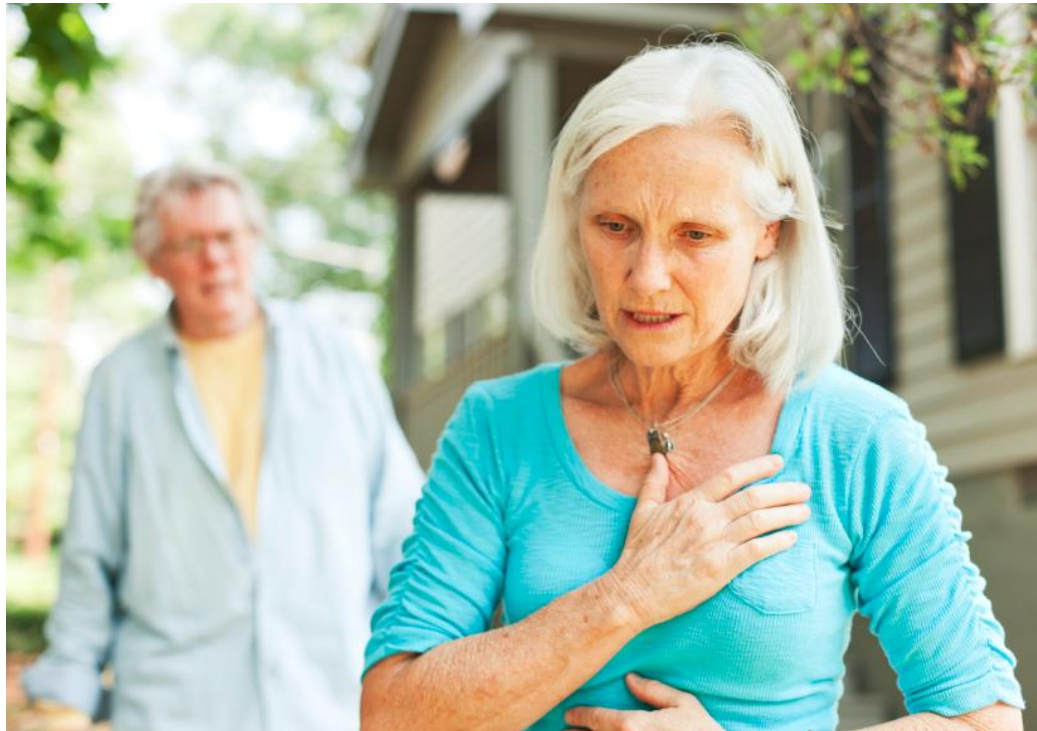
Stroke Burden

- Stroke is the fourth leading cause of death in the U.S.

- 800,000 people in the United States have a stroke each year

- One American dies every 4 minutes from a stroke; 130,000 Americans

- Over 85% of strokes are caused by blockage in the brain's blood vessels

- Stroke often leads to long-term disability

Centers for Disease Control and Prevention (2014, August). *Stroke Facts*. Retrieved from http://www.cdc.gov/stroke/facts.htm

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Signs of Stroke

- Sudden onset of **numbness** or weakness in the face, arm, or leg, especially on one side of the body.

- Sudden onset of **confusion**, trouble speaking, or difficulty understanding speech.

- Sudden onset of **trouble seeing** in one or both eyes.

- Sudden onset of **trouble walking**, dizziness, loss of balance, or lack of coordination.

- Sudden onset of **severe headache** with no known cause.

- **Call 9-1-1 immediately if you or someone else has any of these symptoms.**

Cardiovascular Disease Risk Factors

Risk Factors that CAN be changed

- High blood pressure
- High cholesterol
- Tobacco Smoke
- Overweight/Obesity
- Diabetes
- Physical Inactivity
- Unhealthy eating
- Depression
- Stress

Risk Factors that CANNOT be changed

- Race
- Older age (65 or older)
- Gender
- Genes

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Considering all Causes of Morbidity and Mortality, Behaviors are the #1 Killer of Americans

Current State of Health in the U.S.

Overweight and obesity will soon surpass tobacco as the number one cause of preventable death and disease in the United States; 42% of Americans will be obese by 2030 (CDC, 2012); 1 out of 3 Americans will have diabetes by 2050

One out of 2 Americans have a chronic disease

One out of 4 Americans have multiple chronic conditions

Our children are now predicted to have a shorter life span than their parents
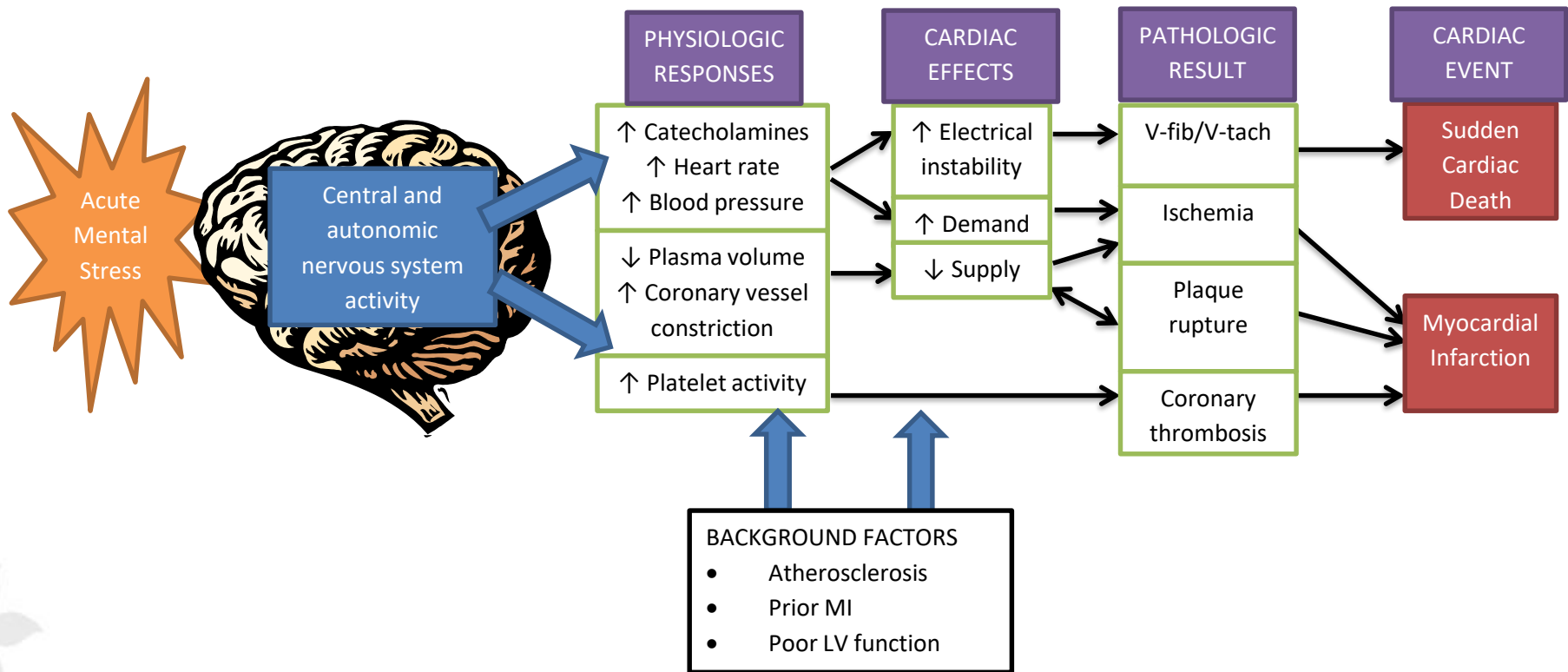
What Does The Evidence Tell Us?

Americans are Stressed & Depressed!

About one out of 4 children, teens and adults have a mental health problem yet less than 25% get any help. Depression and stress are predictors of heart disease and poor health outcomes.
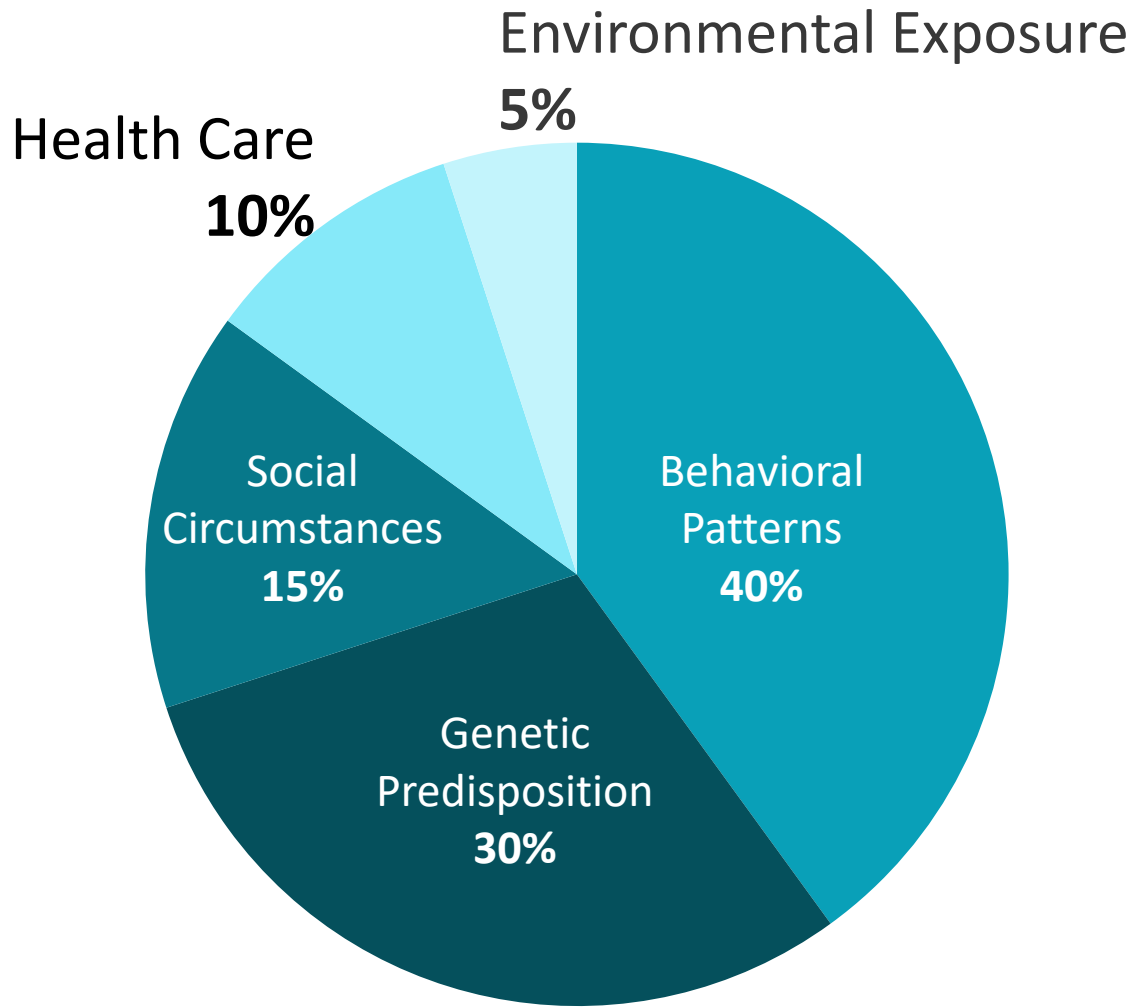
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The Effect of Stress on The Cardiovascular System

Every day, we make behavioral choices that influence our health and wellness outcomes

Contributors to Premature Death

Based on Evidence, What Do We Know?

People who have the following behaviors have 66% less diabetes, **45% less heart disease**; 45% less back pain, 93% less depression, and 74% less stress

- **Physical activity**- 30 minutes 5 days per week

- **Healthy eating**- 5 servings of fruits and vegetables per day

- **No smoking**

- **Alcohol in moderation**- 1 drink per day for women, 2 drinks per day for men

1 cup/serving of fruits/vegetables

EXAMPLES OF 1 CUP

1 small apple	1 large banana	1 medium grapefruit
1 large orange	1 medium pear	1 small wedge watermelon
2 large or 3 medium plums	8 large strawberries	1 large bell pepper

CDC website- http://www.fruitsandveggiesmatter.gov/what/examples.html

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Only 6.3

Healthy lifestyle behaviors can prevent heart disease but only 6.3% of adults engage in the 5 leading health behaviors that can reduce the risk of chronic disease. Nearly 83% of health-care spending could be cut if more people employed:

❖ **Not Smoking**

❖ **Exercising regularly**

❖ **Avoiding alcohol or drink in moderation**

❖ **Maintaining a healthy body weight**

❖ **Getting sufficient sleep (at least 7 hours per night)**

-CDC, 2016

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New Year's Resolutions
for 2009 ~~2011~~ 2012
2013

1. Lose ~~more~~ weight *again*

2. Get fit *next year*

3. Give ~~up alcohol~~ ~~and cigarettes'~~ *drink* less

4. *find job* ~~Stand up to boss~~

5. *Try to* Be nicer to my *ex-* wife

6. Sort out junk in ~~shed~~ *life*

Sitting Increases Risk of Heart Disease

The #1 Excuse for Not Engaging in Physical Activity is Time

The Million Hearts® Initiative and Ohio State

- Million Hearts® was launched by the DHHS and the CDC in 2012 to prevent 1 million heart attacks and strokes by 2017

- Ohio State was the first University-wide partner in the U.S.

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Know your ABCSs

- Appropriate Aspirin Therapy

- Blood Pressure Control

- Cholesterol Management

- Smoking Cessation

- Stress Reduction*

Picture http://www.thediabetesclub.com/wp-content/uploads/2010/07/blood-pressure.jpg

* Added by Ohio State University

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Appropriate Aspirin Therapy

- The Million Hearts® goal for 2017 is to increase aspirin usage in high risk people to 65%

- The U.S. Preventive Services Task Force[1] recommends aspirin therapy for cardiovascular disease and stroke prevention in:

  - Men 45-79
  - Women 55-79

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1. US Preventive Services Task Force, Aspirin for Prevention of Cardiovascular Disease

Blood Pressure Control

• The Million Hearts® goal for 2017 is to achieve blood pressure control in 65% of people with hypertension

• 1 in 5 adults do not know they have hypertension

• About half of adults with do not have it under control

• Blood pressure guidelines[1] recommend initiating treatment for a blood pressure of $\geq$140/90 for adults aged <60 years and a blood pressure of <150/90 for individuals aged ≥ 60 years

1. The 8th Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure, 2014.
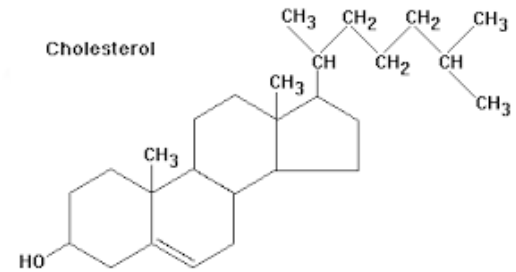
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Tips for Lowering Blood Pressure

- Get it checked on a regular basis
- Take blood pressure medication consistently
- Lose weight if overweight
- Stop smoking
- Engage in regular physical activity
- Limit salt (less than 1500 mg daily)
- Reduce stress
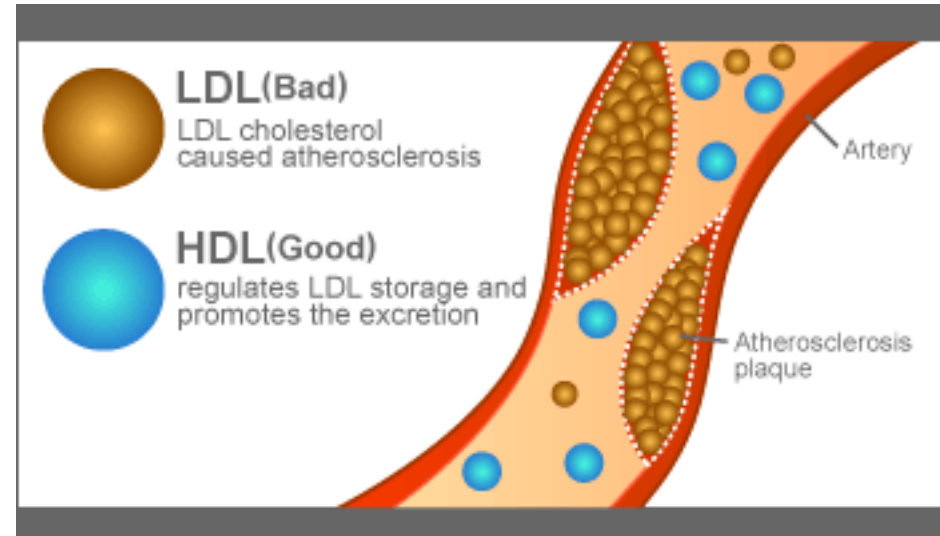
Cholesterol Management

- The Million Hearts® goal for 2017 is to achieve cholesterol control in 65% of people with high cholesterol

- Risk factors, disease states, LDL cholesterol levels, and an estimated 10 year risk of having an cardiovascular event determine whether cholesterol medication is initiated[1]

1. 2013 ACC/AHA Guidelines on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adult

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Function of Cholesterol: Aids in Tissue and Hormone Formation and Protects nerves)

- Total cholesterol (TC)
  - <200mg/dl;
  - 200-239: borderline high
  - >240: high
- LDL
  - <100mg/dl
  - Ideal is <70
- HDL
  - >60mg/dl
- Triglycerides should be <150
- Non-HDL (Total Cholesterol minus HDL)
  - <130mg/dl
- TC/HDL ratio (Total Cholesterol divided by HDL)
  - Ideal is 4:1 or lower

LDL(Bad)
LDL cholesterol caused atherosclerosis

HDL(Good)
regulates LDL storage and promotes the excretion

Artery

Atherosclerosis plaque

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Tips for Lowering LDL Cholesterol

- Have it checked
- Eat plenty of fruits and vegetables, whole grains and beans
- Limit foods high in cholesterol (like beef, pork, cheese, whole milk and lard)
- Bake, broil, or roast food rather than fry
- Engage in the recommended amounts of physical activity
- Stop smoking
- Eat a handful of nuts daily
- Use olive oil
- Avoid transfats
- Eat plant sterols (found in some margarine spreads)

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Tips for Raising HDL

- Quit smoking
- Weight reduction
- Physical activity
- Eat healthy fats
  - Monounsaturated
  - Polyunsaturated
  - Use olive oil (cold flat pressed)
- Alcohol in moderation
  - One drink a day for women
  - Two drinks a day for men

Smoking Cessation

- People who smoke increase their risk of heart disease by 2-4 times that of people who do not smoke

- Social smoking also is a risk factor

- 19% of the U.S. population smokes

- The Million Hearts® goal is to reduce this number to 17%

Stress Reduction*

- Stress can increase the body's release of certain hormones, such as cortisol and adrenaline

- Persistently elevated levels of these hormones from chronic stress may lead to serious health problems, such as heart disease and high blood pressure[1]

1.National Institute of Mental Health, Fact Sheet on Stress
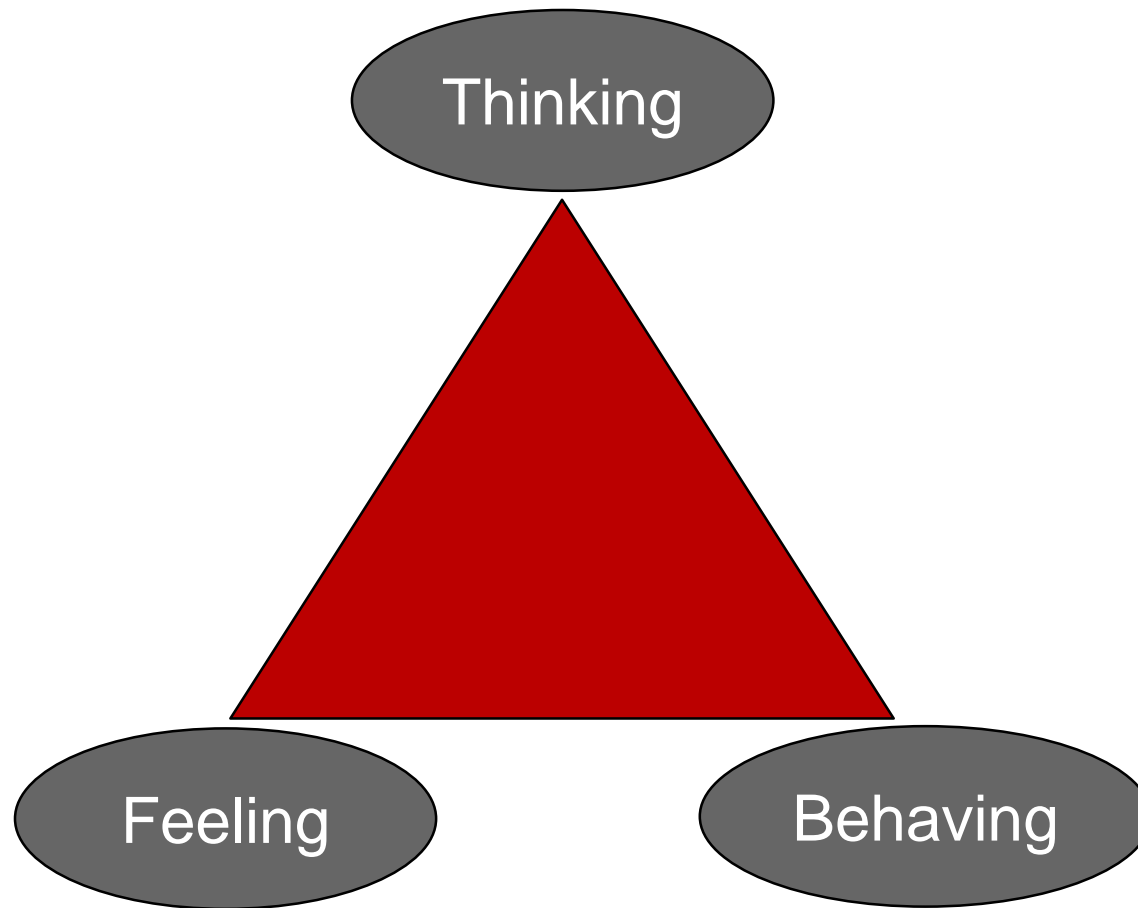
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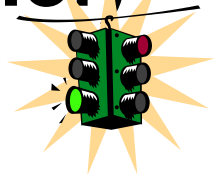# Positive Ways to Deal with Stress

Take Care of Yourself

STRESSOR (*A*ntecedent or *A*ctivator event)

↓

NEGATIVE THOUGHT TO STOP (*B*elief)

↓

REPLACE THE NEGATIVE WITH A POSITIVE THOUGHT

↓

POSITIVE EMOTION & BEHAVIOR (*C*onsequence)

Write down an example of your own automatic negative thoughts

- Hint: Think back to a recent time you felt stressed, depressed, or angry.
- What was the trigger? (you couldn't control that)
- Your automatic thought?
- Your feeling?
- Your general way of behaving when you feel that way?
- How could have you have stopped the negative thought and turned it around to feel better?

Catching your automatic negative thoughts

- When you notice your mood has changed or intensified, or is going in a negative direction or you are noticing bodily sensations associated with negative emotions, ask:

What was just going through my mind?
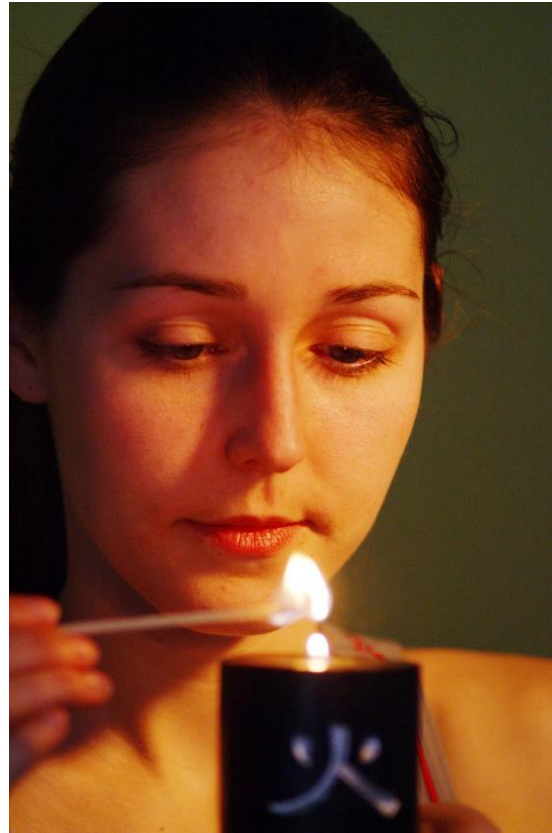
Thought stopping skills

- Visualize a stop sign

- Rubber band on the wrist/ snap

- Visualize watching the negative image on TV and change the channel

- Use imagery skills to switch to a pleasant image

Staying "In the Present Moment"

Strategies for Preventing & Dealing with Stress

- Balance work and personal life: take time to enjoy things you like to do; Don't feel guilty saying "no!"

- Read 5 to 10 minutes every morning in a positive book

- Check and monitor Vitamin D level

- Socialize regularly with family/friends

- Have an attitude of gratitude- write your blessings down

- Laugh more often

- Take 5 deep breaths when feeling early symptoms of stress

- Make a plan for how to deal with what is causing stress

- Talk to someone you trust about how you feel

The Million Hearts® Initiative

Controlling these risk factors can reduce risk of heart attack and stroke by more than 80%[1].

1. Centers for Disease Control and Prevention (n.d.) About Heart Disease and Stroke. Retrieved from http://millionhearts.hhs.gov/abouthds/risk-factors.html#hdAge

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The Million Hearts® Pledge

- SIGN the Million Hearts® pledge at millionhearts.hhs.gov

- COMMIT to changing just ONE thing

- PARTNER with us TODAY to provide the biggest Million Hearts® outreach in the COUNTRY

The National Interprofessional Education and Practice Consortium to Advance Million Hearts®

- Ohio State is the founder
- The goal is to screen and educate 100,000 people about Million Hearts® by December, 2017
- Now with over 150 participating organizations and Universities
- Over 55,000 people across the U.S. have been screened
- Join us by becoming a Million Hearts® Community Ambassador. Access the free educational modules at https://millionhearts.osu.edu
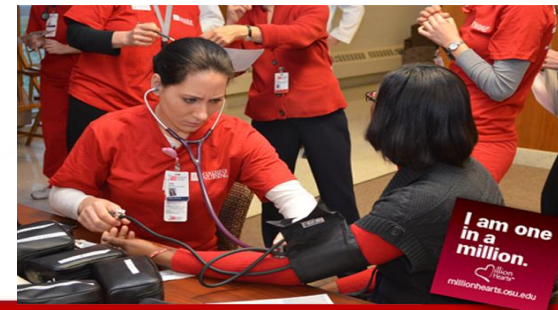
Why is Ohio State Investing in Wellness for Faculty, Staff and Students?

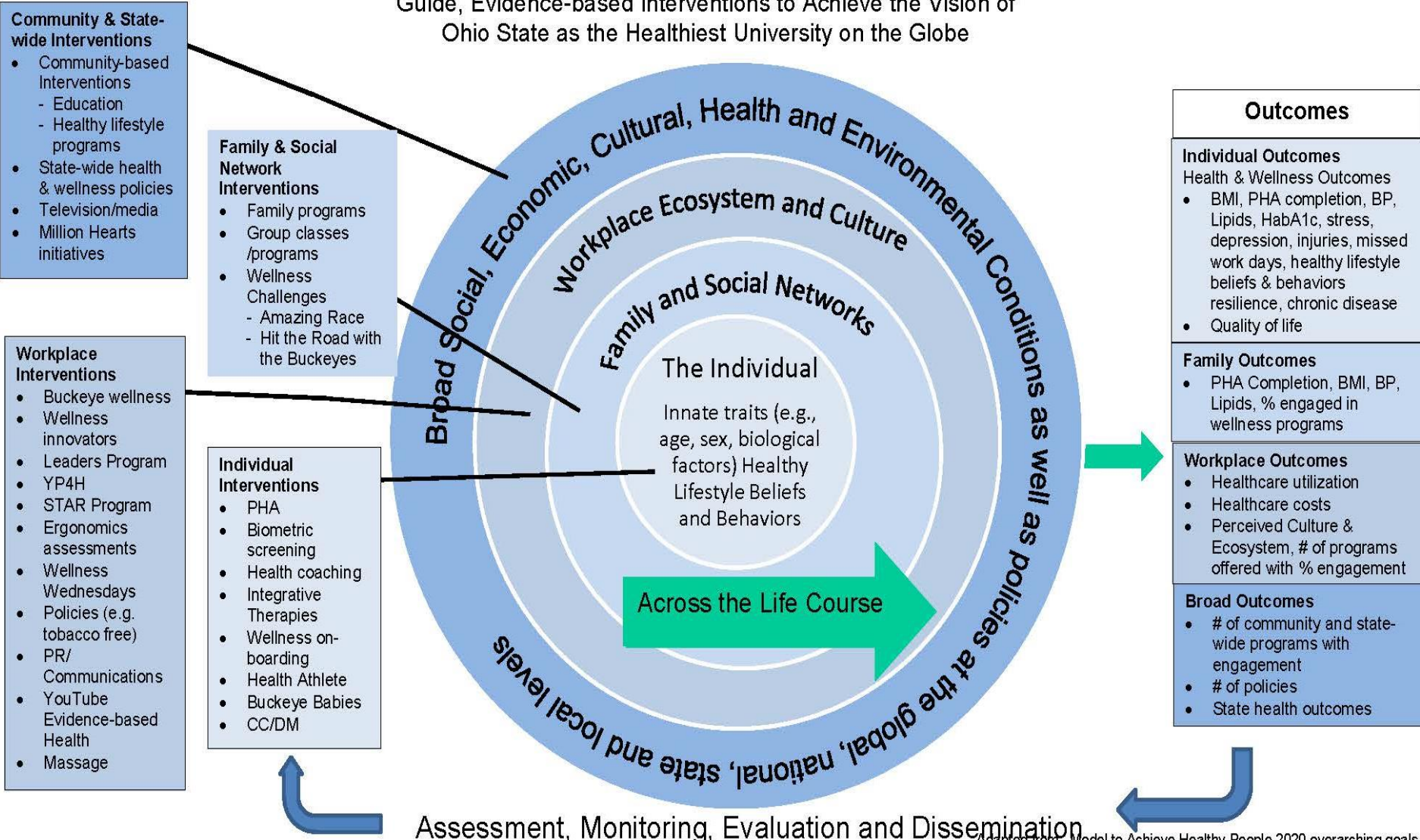- We want our people happy, healthy & engaged!
- For every dollar invested in worksite wellness, there is a return of more than $4.00 in reduced healthcare costs, higher engagement, improved productivity and lower absenteeism

-Weldon, 2011

Harvard Business Review

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The Social-Ecological Framework and Life-Course Perspective Guide, Evidence-based Interventions to Achieve the Vision of Ohio State as the Healthiest University on the Globe

Community & State-wide Interventions
- Community-based Interventions
  - Education
  - Healthy lifestyle programs
- State-wide health & wellness policies
- Television/media
- Million Hearts initiatives

Family & Social Network Interventions
- Family programs
- Group classes /programs
- Wellness Challenges
  - Amazing Race
  - Hit the Road with the Buckeyes

Workplace Interventions
- Buckeye wellness
- Wellness innovators
- Leaders Program
- YP4H
- STAR Program
- Ergonomics assessments
- Wellness Wednesdays
- Policies (e.g. tobacco free)
- PR/ Communications
- YouTube Evidence-based Health
- Massage

Individual Interventions
- PHA
- Biometric screening
- Health coaching
- Integrative Therapies
- Wellness on-boarding
- Health Athlete
- Buckeye Babies
- CC/DM

Broad Social, Economic, Cultural, Health and Environmental Conditions as well as policies at the global, national, state and local levels

Workplace Ecosystem and Culture

Family and Social Networks

The Individual

Innate traits (e.g., age, sex, biological factors) Healthy Lifestyle Beliefs and Behaviors

Across the Life Course

Outcomes

Individual Outcomes
Health & Wellness Outcomes
- BMI, PHA completion, BP, Lipids, HabA1c, stress, depression, injuries, missed work days, healthy lifestyle beliefs & behaviors resilience, chronic disease
- Quality of life

Family Outcomes
- PHA Completion, BMI, BP, Lipids, % engaged in wellness programs

Workplace Outcomes
- Healthcare utilization
- Healthcare costs
- Perceived Culture & Ecosystem, # of programs offered with % engagement

Broad Outcomes
- # of community and state-wide programs with engagement
- # of policies
- State health outcomes

Assessment, Monitoring, Evaluation and Dissemination

Percentage of Low-Risk Employees According to Framingham Risk Scores

Employees with Five Health Assets
Normal BP, < 200 Cholesterol, HDL, Non-Smoker,
No Prior Diabetes or Coronary Artery Disease

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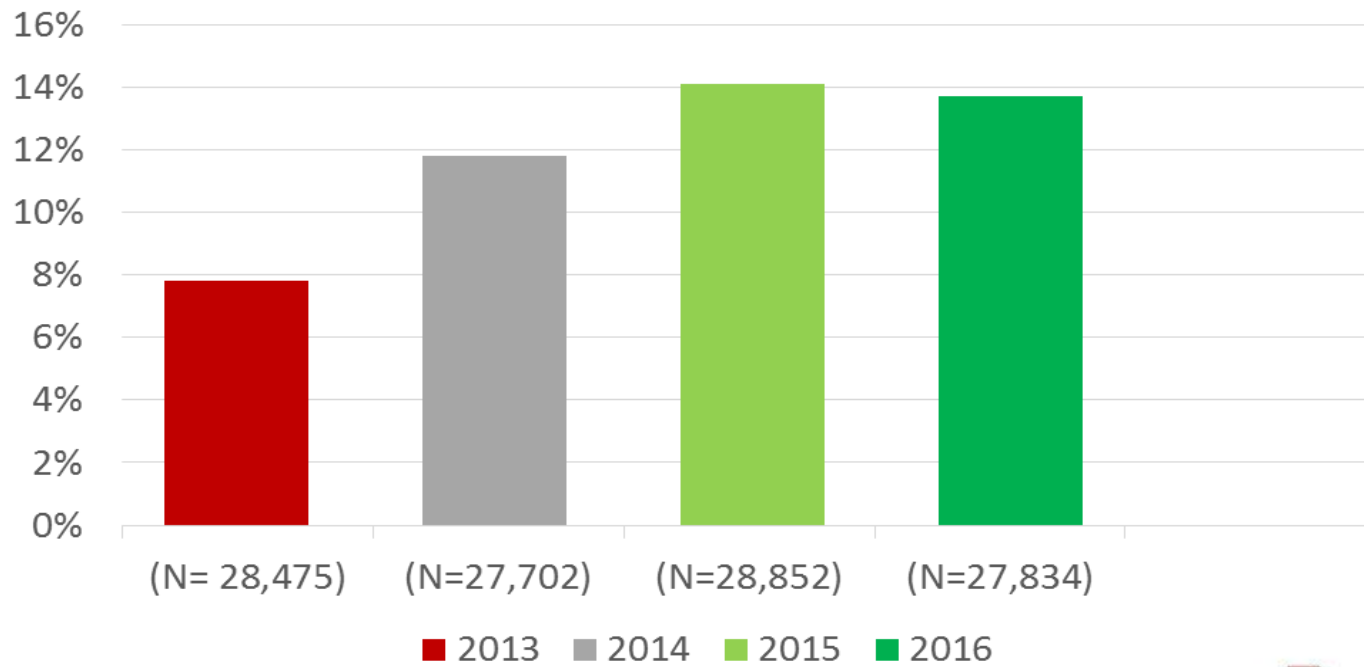
The "Shoe" was scarlet for the launching of the Women's Heart Alliance-OSU partnership on October 29, 2016: A Focus on Young Women's Heart Health
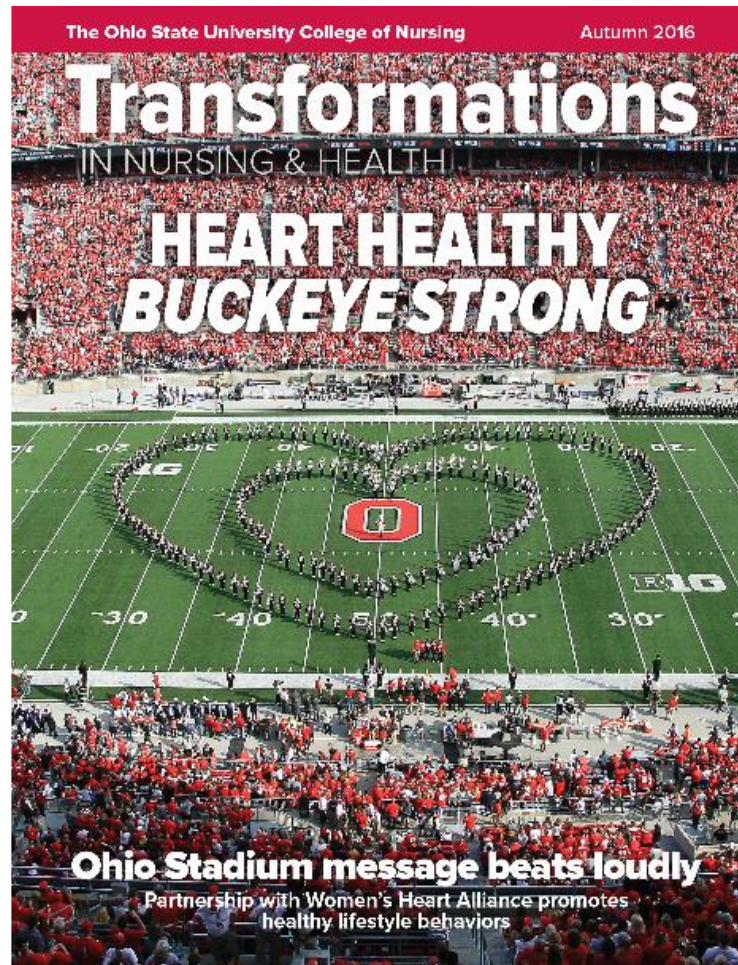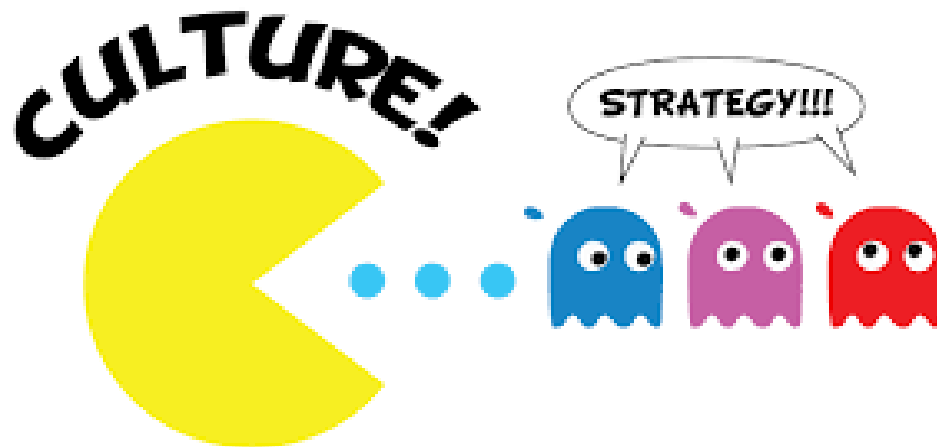
The OSU/WHA Leadership Team

Student Involvement has been Key with Heart Checks
We are Heart Healthy; Buckeye Strong

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A Sustainable Culture of Wellness is a Must for Health

Remember,
Culture Eats Strategy!

In God We Trust,

Everyone Else Must

Bring Data!

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How to be an Evidence-based Engaged Healthcare Consumer: Remember *ASKEBP*

- ***A****sk your provider for the evidence behind the screening or treatments he or she is recommending*

- ***S****top your provider if you don't understand your care and ask for evidence-based explanations in language you can understand*

- ***K*eep asking questions until you are satisfied with the answers**

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How to be an Evidence-based Engaged Healthcare Consumer: Remember *ASKEBP*

- *E*ngage in healthcare decisions with your provider

- *B*e sure to seek out care as well as information resources that are evidence-based and reliable

- *P*ersist if you are not satisfied with your care or the answers to your questions!

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Bern's Main Reasons for Change

It's Time to Move and Dance Around the World with Matt

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