



SOUTHERN
ADVENTIST UNIVERSITY

Employee Wellness



National Consortium for Building Healthy
Academic Communities (BHAC)

Healthier Tennessee Workplace



Healthier
Tennessee
Workplace

healthierTN.com



2020 Employee Wellness
Health Assessment Report



Importance of annual health assessments

▶ Who we are :

- ▶ A confidential wellness vendor, that only provides group data to the University and helps to assist with overall health of the population. We provided assessments from 2013 - 2017; returning in 2020.

▶ Why we do what we do:

- ▶ Not all medical problems present themselves so easily. Some of them can be hidden or otherwise known as “silent killers”, and annual health assessments help monitor your health and protect against these.
- ▶ To enhance your regular Doctor’s visit. These health assessments are only a general review of health, they do not replace your doctor’s visits; however, they can enhance your health care visit by having some or all of your labs already taken to eliminate a follow-up appointment with your Doctor. Most lab results are generally good for six months.

PREVENTION IS EVERYTHING when it comes to your Health

- ▶ - Early Detection
- ▶ - Leads to early diagnosis and better treatment and plan of care
- ▶ - Leads to better outcomes longer life that is without chronic disease, disability, or co-morbidity



**Live longer.
Live better.**

Wellness Assessment Dates and Attendance

▶ August 3rd & 4th, 2020



	2017	2020
Number of Employees:	348	196
Number of Spouses:	122	65
Total:	470	261

Reading Blood Pressure

Normal Blood Pressure

The Pressure of blood in the vessels when the heart beats: **systolic pressure**

The Pressure between beats when the heart relaxes: **diastolic pressure**

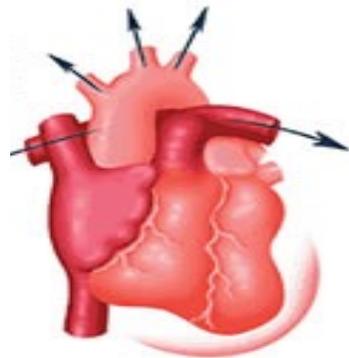
Less than
120/80 mmHg
(millimeters of mercury)

Normal: < 120/80

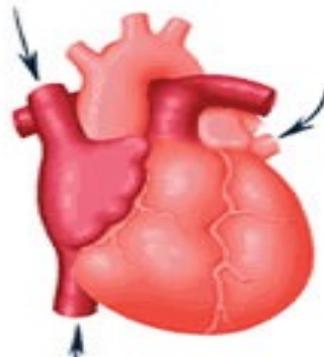
Elevated: 120-129/80

High: Stage 1: 130-139/80-89

High Stage 2: 140/90



Contract



Relax

BP Statistics

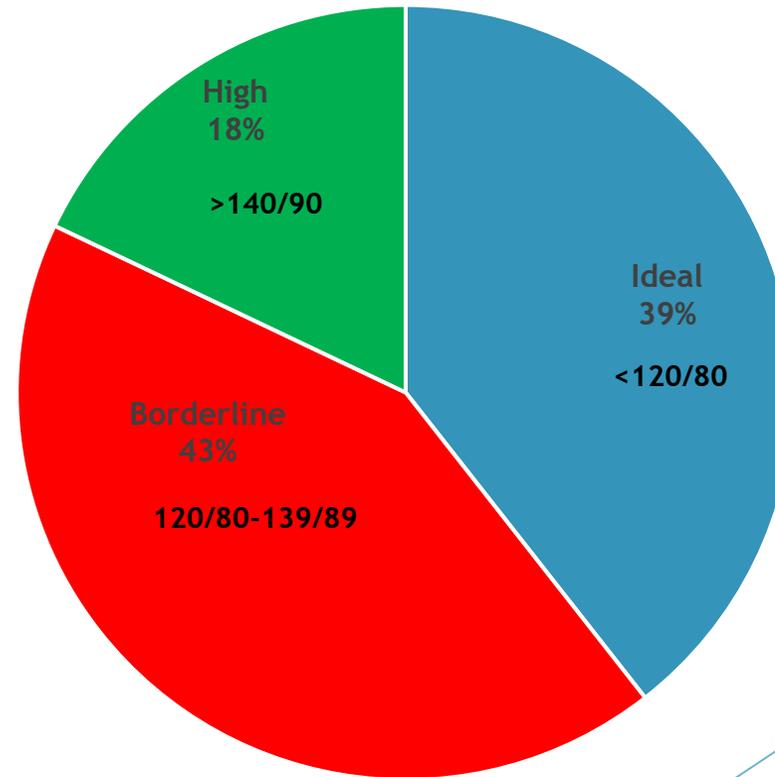
- ▶ 61% of Americans have high BP, according to the CDC.
- ▶ According to recent national studies:
 - ▶ 43% have borderline BP
 - ▶ 18% have high BP

When your blood pressure is **high**:

You are **4x** more likely to die from a stroke 

You are **3x** more likely to die from heart disease 

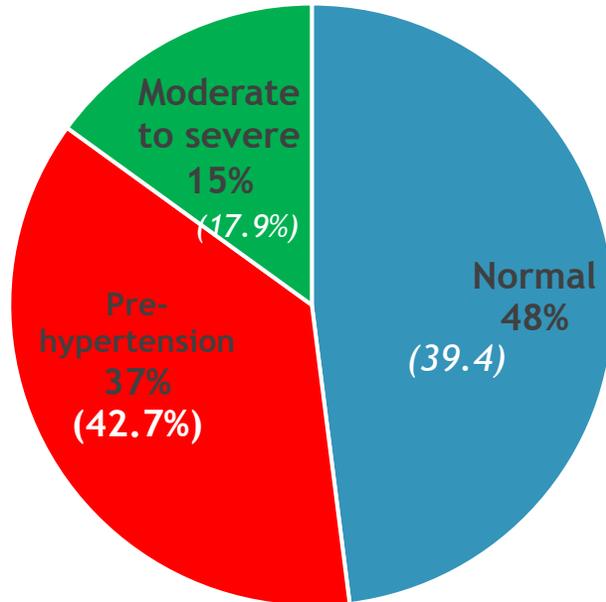
CDC National Statistics Blood Pressure



Blood Pressure Results SAU Group Data

2017 Results

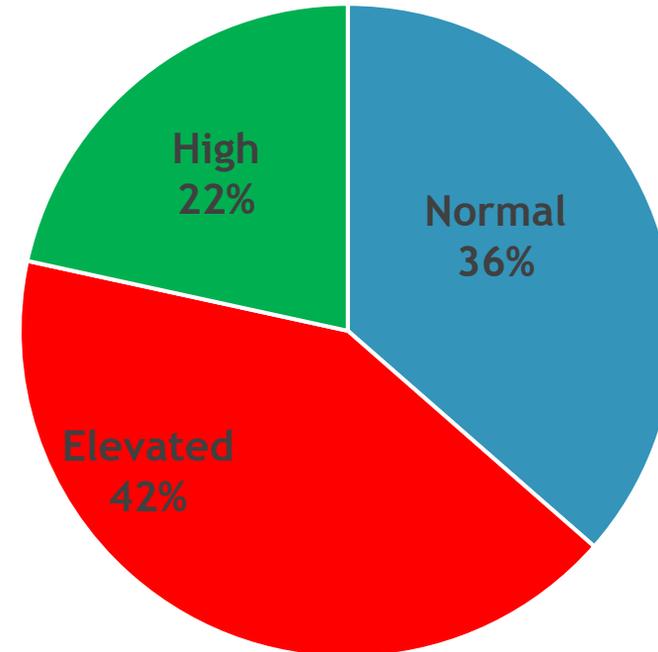
387 Total Participants
(National Average in parentheses)



Normal: <120/80
Pre-hypertension: >120/80-139/89
Moderate to severe: \geq 140/90

2020 Results

255 Total Participants



Normal: 120/80
Elevated: 120-129/80
High: Stage 1: 130-139/80-89
High Stage 2: 140/90

Effects of Hypertension

- ❖ Poor circulation
- ❖ Enlarged heart
- ❖ Decreased mental function
 - ❖ Small vessels in the brain can leak or clot can lodge, blocking the supply of oxygen.
 - ❖ High blood pressure can lead to a stroke.
- ❖ Kidney damage
 - ❖ Inefficiency in filtering.
 - ❖ Cellular damage
 - ❖ Bumpy surface and cyst formation
- ❖ Sexual & erectile dysfunction
 - ❖ High blood pressure damages blood flow to small vessels in the pelvis and effect sex lives of both men and women.
 - ❖ Less blood flow leads to less energy; therefore, lower libido.
- ❖ Bone loss
 - ❖ Elimination of calcium in urine.
 - ❖ Lose of bone density (osteoporosis).
 - ❖ Broken bones.
- ❖ Trouble sleeping
- ❖ Impaired vision

Modifiable Risk Factors of Hypertension

- ❖ Caffeine Use
- ❖ Diet
- ❖ Exercise
- ❖ Sleep
- ❖ Connectedness
- ❖ Social and Spiritual
- ❖ Gratitude and Attitude

How to Reverse/Prevent Hypertension

- ❖ Lower Salt Intake
 - ❖ Sodium is a main contributor to high blood pressure.
 - ❖ Your tastes will adjust after 1-2 weeks.



- ❖ Reduce Meat
 - ❖ Animal protein contributes to high blood pressure as found by NIH researchers.
 - ❖ Eating a whole foods plant-based diet is best.

Modifiable Risk Factors of Hypertension

Lack of physical activity

- ▶ Higher heart rate means higher blood pressure.
- ▶ Lower activity means higher risk for being overweight.



Lack of Potassium

- ▶ Potassium helps balance the amount of sodium in your cells. If you don't get enough potassium, you may accumulate too much sodium, which raises blood pressure



1,300+ mg (1 cup cooked)



422 mg (1 banana)

Modifiable Risk Factors of Hypertension

Attitude of Gratitude

- ▶ Have a heart of gratitude toward yourself and others.

APPRECIATION



Reduction of Stress

- ▶ High levels of stress can lead to a temporary increase in blood pressure.



Modifiable Risk Factors of Hypertension

Lack of sleep

- ▶ We need to aim for 7-8 hours each night.
- ▶ Keeps us more productive during the day



Lack of Connectedness, Social activity, and Spirituality

- ▶ People who have a purpose, have more healthy benefits of life



Your Guide to Breathing Exercises

Simple Deep Breathing Relaxation Exercise

- ▶ **Step 1:** Sit neutral with one hand on your stomach and one hand on your chest.
- ▶ **Step 2:** Breathe in slowly and deeply to the count of 4 seconds, feeling your stomach move in the process.
- ▶ **Step 3:** Hold your breath for 4-7 seconds, letting the oxygen fill your body.
- ▶ **Step 4:** Breathe out for 8 seconds, as slowly and silently as possible. By the count of 8, your lungs should be empty.
- ▶ **Step 5:** Repeat this pattern as many times as you need until you feel relaxed.

RESEARCH SHOWS THAT BREATHING PRACTICES ARE POWERFUL

- Decrease anxiety and depression
- Increase happiness and optimism
- Improve sleep
- Strengthen our ability to regulate emotions
- Improve trauma symptoms
- Reduce impulsivity, cravings & addictions.

Why? The breath is linked to our autonomic nervous system. Daily breathing practices activate the parasympathetic nervous system, which is associated with resting and digesting i.e. a more peaceful mind and body.

Research shows that breathing practices also benefit the body:

- Decrease stress & regulate our body's level of cortisol: the stress hormone.
- Strengthen our immunity by altering genes responsible for stronger immunity.
- Reduce pain and activation of pain centers in the brain.

Your Guide to Breathing Exercises

For more information on deep breathing and relaxation exercises, check out these apps.



- ▶ **Stop, Breath & Think:** Over 55 guided meditation selections, a daily mood tracker and customizable sounds.



- ▶ **Calm:** Choose from an assortment of guided meditation practices from 3-25 minutes!



- ▶ **Insight Timer:** Create your own customized meditation sessions with over 4,500 free, guided meditations and 750 meditation music tracks.



- ▶ **Headspace:** 10-minute meditation practices to help you begin your relaxation routines.

How to Take Your Own Blood Pressure

You don't always have to go to your doctor's office to have your blood pressure checked; you can monitor your own blood pressure at home! Your doctor may recommend that you monitor your blood pressure on a regular basis. Try to avoid factors such as high stress, cold temperatures, intense exercise, and/or caffeine, for at least 30 minutes before taking your blood pressure, as these may cause a temporary rise in your blood pressure.

How to Take Your Own Blood Pressure

Before taking your own BP

1. Obtain an automatic BP monitor.
2. Ensure you have not had any recent exposure to nicotine, caffeine, or other BP raising agents.
3. With your back and arm supported, relax and do deep breathing for 5 minutes in a warm, comfortable environment.
4. Keep BP cuff at heart level.

Begin taking your BP

1. Roll up your sleeve and align the air tube of the machine down the center of your inner arm (brachial artery).
2. Push the start button and wait to hear the machine begin pumping and pressure building around cuff.
3. Maintain your deep breathing exercise throughout the test.
4. Record BP reading for future reference. Also record the time of day it was taken.

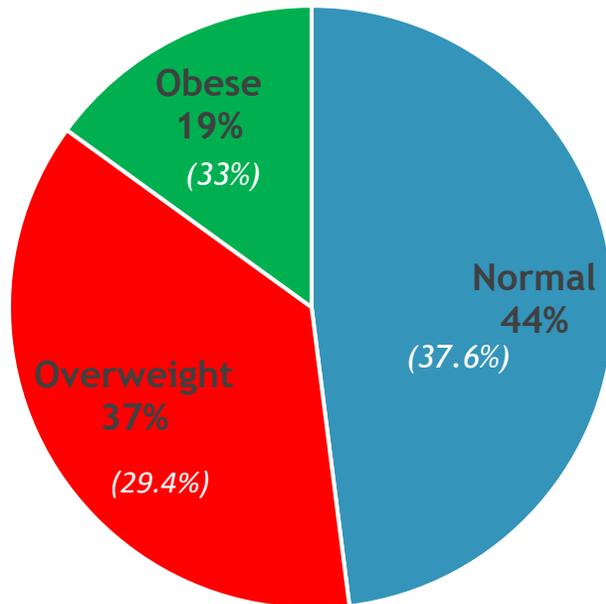
Definitions

- ▶ BMI
 - ▶ A weight-to-height ratio, calculated by dividing one's weight in kilograms by the square of one's height in meters and used as an indicator of obesity and underweight.
- ▶ Overweight
 - ▶ Having excess body fat beyond a healthy ideal and having a BMI of 25 - 29.9 kg/m² (Harvard SPH).
- ▶ Obesity
 - ▶ Being grossly overweight having a body mass index (BMI) of over 30 kg/m² (Harvard SPH).



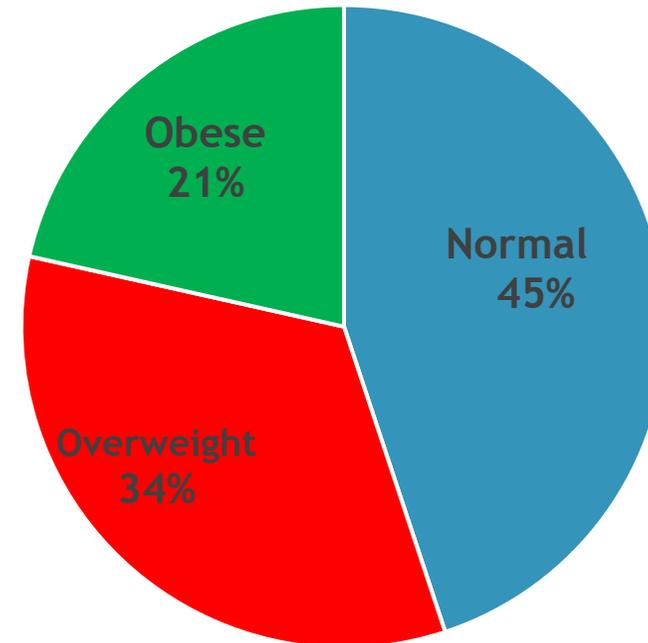
BMI Results SAU GROUP DATA

2017 Results
416 Total Participants
(National Average in parentheses)



2020 Results

256 Total Participants



Normal: <25
Overweight: 25-30
Obese: >30

Health Goals:

Southern Adventist University

These results are based upon Healthy People 2020 guidelines by reducing unhealthy percentages by 10% over a 10 year period. Also increasing healthy percentages by 10% over a 10 year period.

- ▶ Reduce the incidence of **obesity** (>30 BMI) to 18% to :
 - ▶ 17.82% by 2014
 - ▶ **16.74% by 2020 Currently at 21%**
 - ▶ 15.84% by 2025
- ▶ Reduce the incidence of **overweight** (>25 but <30 BMI) from 39% to:
 - ▶ 38.61% by 2014
 - ▶ **36.27% by 2020 Currently at 34%**
 - ▶ 34.32% by 2025
- ▶ Increase the proportion of adults who are **healthy** (<25 BMI) from 43% to:
 - ▶ 43.43% by 2014
 - ▶ **46.01% by 2020 Currently at 45%**
 - ▶ 48.16% by 2025

Importance of a healthy weight

- ▶ Helps to prevent and control many diseases and conditions (See Box 1, pg. 1).
- ▶ Allows you to feel good about yourself and have more energy.

Box 1 — Consider the Risks

If you are overweight or obese you are at risk of developing the following diseases:

- High blood pressure
- High blood cholesterol
- Type 2 diabetes
- Coronary heart disease
- Stroke
- Gallbladder disease
- Arthritis
- Sleep apnea and breathing problems
- Some cancers
 - Endometrial
 - Breast
 - Prostate
 - Colon



Financial Matters

- ▶ Obese adults spend **42%** more on direct healthcare costs than adults who are at a healthy weight. This averages around **\$506** per year out of pocket spending (Finkelstein 2009; Gates 2008).
- ▶ National annual medical cost of overweight and obese individuals is upwards of **\$190.2 billion** (HHS 2012).



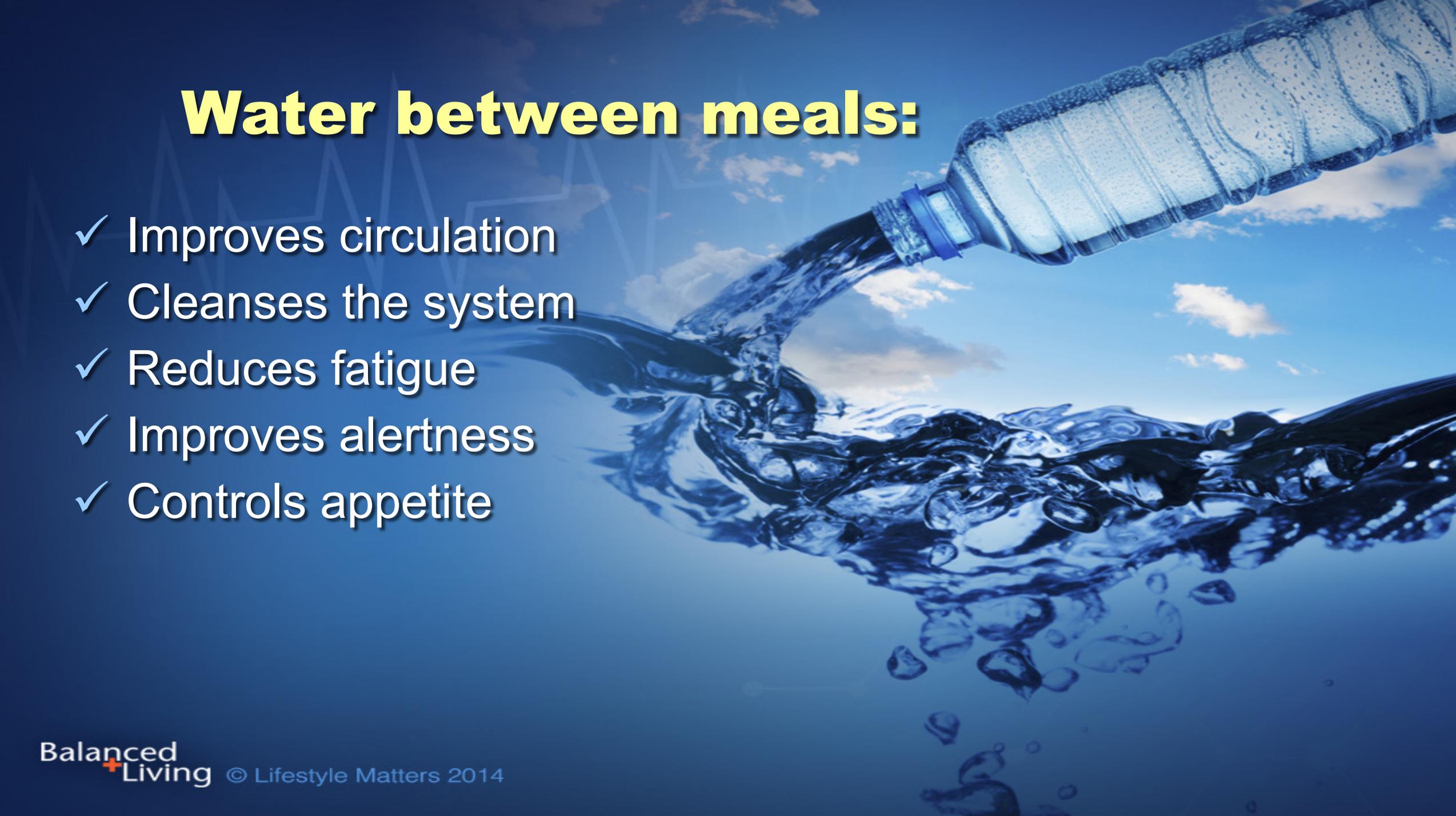
- ✓ Eat food.
- ✓ Not too much.
- ✓ Mostly plants.



✓ Ditch the drinks and enjoy water.



Water between meals:



- ✓ Improves circulation
- ✓ Cleanses the system
- ✓ Reduces fatigue
- ✓ Improves alertness
- ✓ Controls appetite

How to Keep Pounds Off

Those who are successful in not regaining the weight that they have lost have two things in common:

1. They exercise regularly and
2. They always eat a good breakfast

(J am Diet Assoc, 1998, 98:35-9; Obes Rev, 2005, 6:67-85; Obes Res, 2002, 10:78-82; Am J Clin Nutr, 2005, 82(1 Suppl):222-5S)

Total Cholesterol Results SAU GROUP DATA

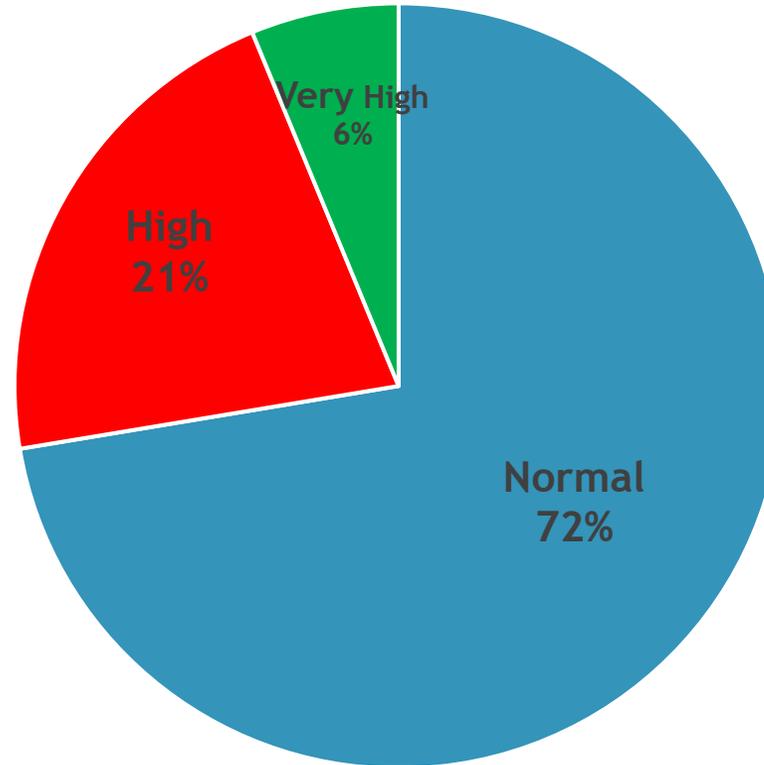
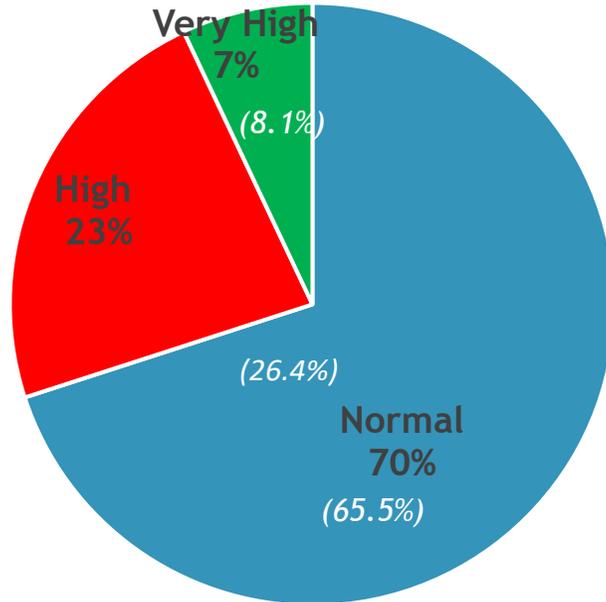
(HDL + LDL + 1/5 of Triglycerides)

2020 Results

257 participants

2017 Results

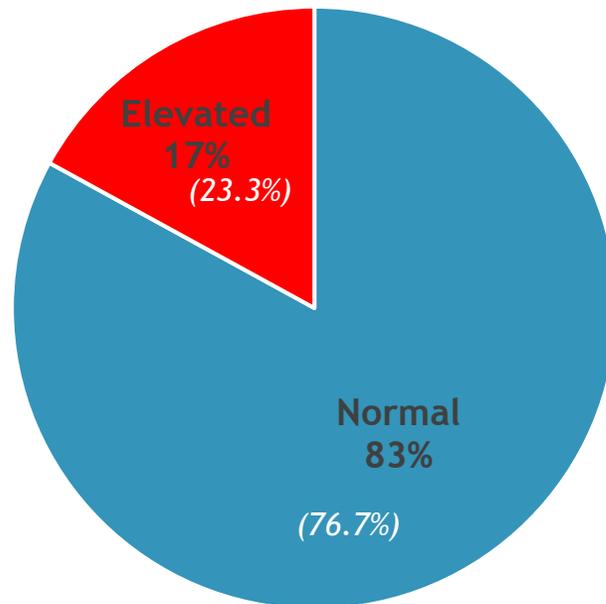
471 Total Participants
(National Average in parentheses)



Normal: <200
High: 200-239
Very High: >239

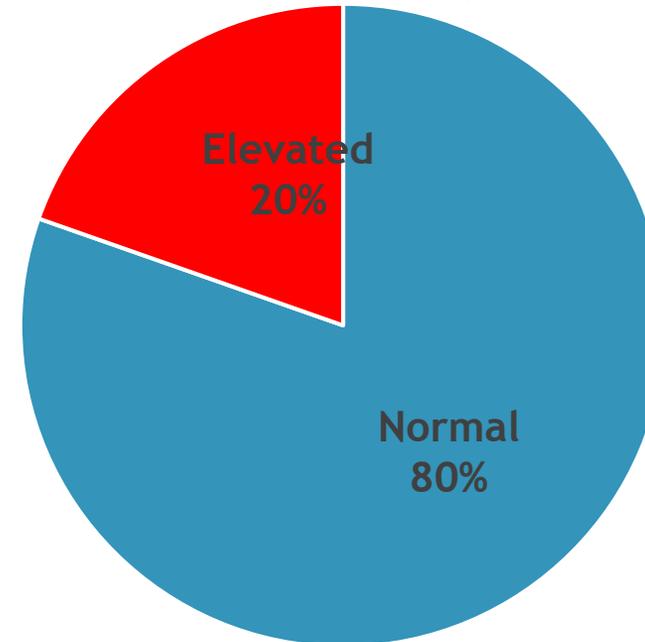
LDL Results - (Unhealthy Cholesterol) SAU GROUP DATA

2017 Results
468 Total Participants
(National Average in parentheses)



2020 Results

255 Total Participants

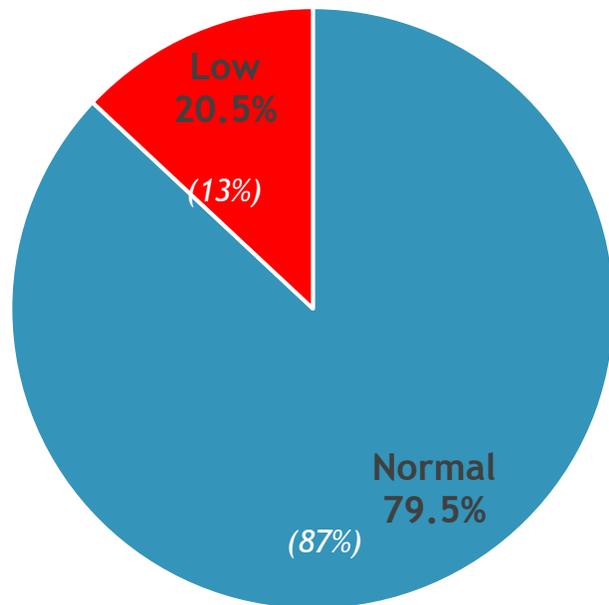


Normal: <130
High: >130

HDL (Healthy) Results - Women SAU

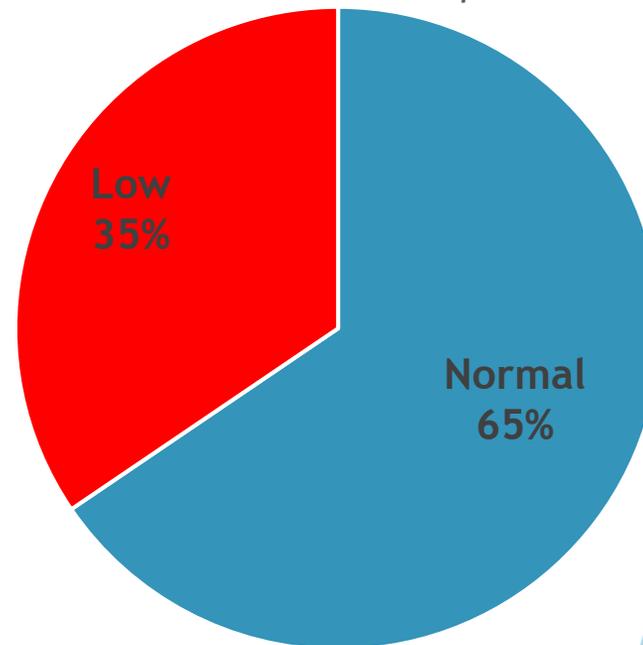
GROUP DATA

2017 Results
255 Total Participants
(National Average in parentheses)



2020 Results

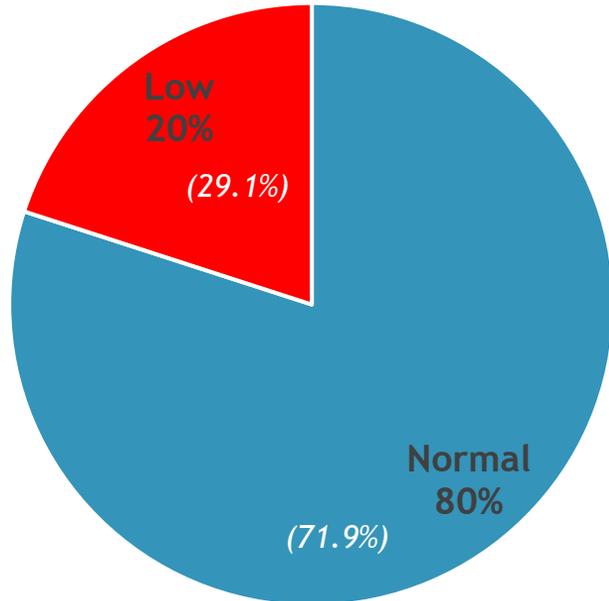
142 Total Participants



Low: ≤ 49
Normal: > 49
(National percentages based on ≤ 40)

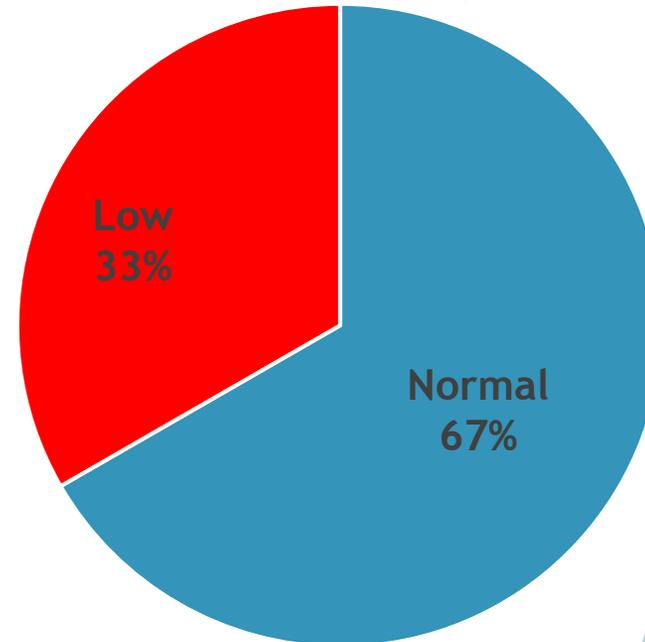
HDL (Healthy) Results - Men SAU GROUP DATA

2017 Results
216 Total Participants
(National Average in parentheses)



2020 Results

114 Total Participants

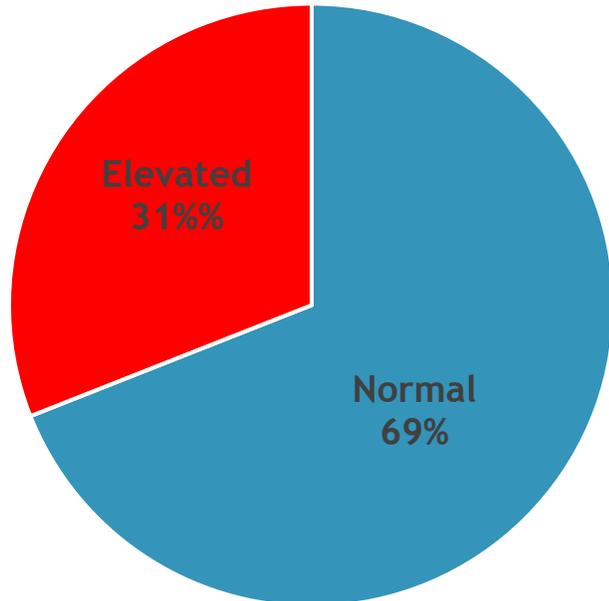


Low: ≤ 39
Normal: > 39

Triglycerides Results SAU GROUP DATA

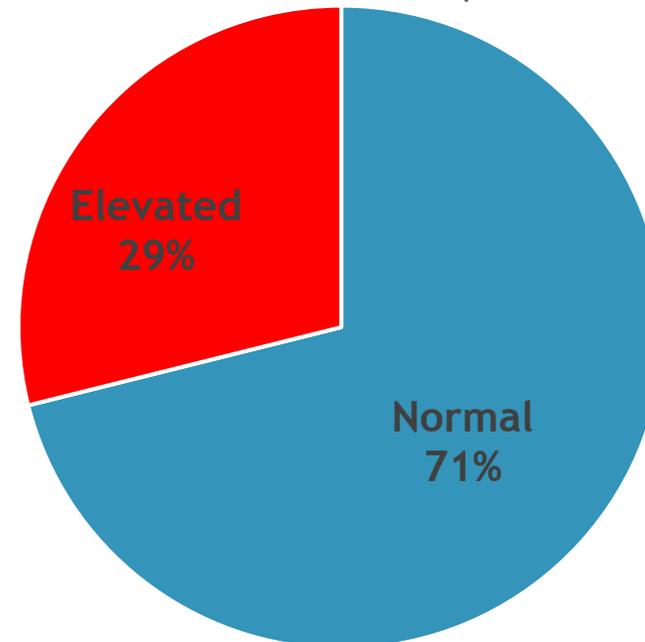
2017 Results

471 Total Participants



2020 Results

256 Total Participants

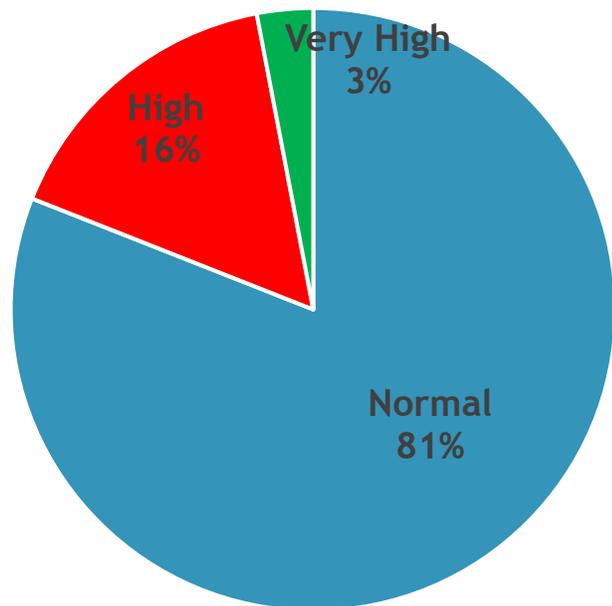


Normal: ≤ 150
Elevated: ≥ 150

Glucose Results SAU GROUP DATA

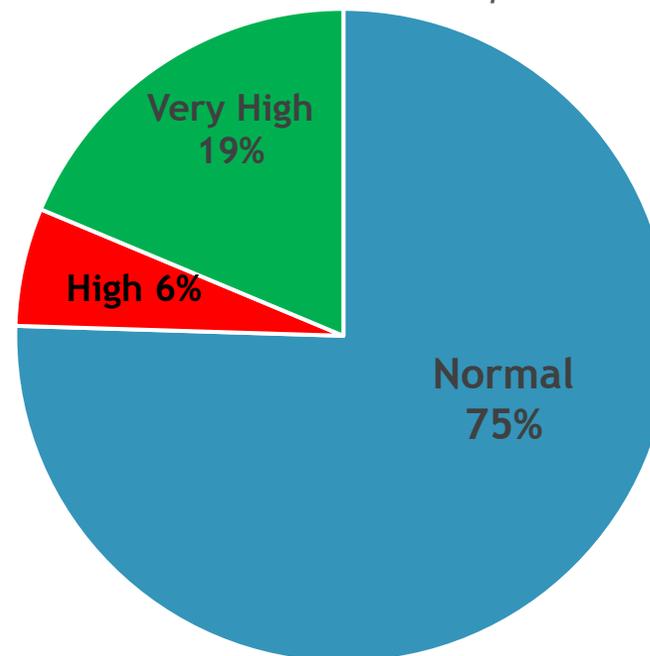
2017 Results

471 Total Participants



2020 Results

257 Total Participants

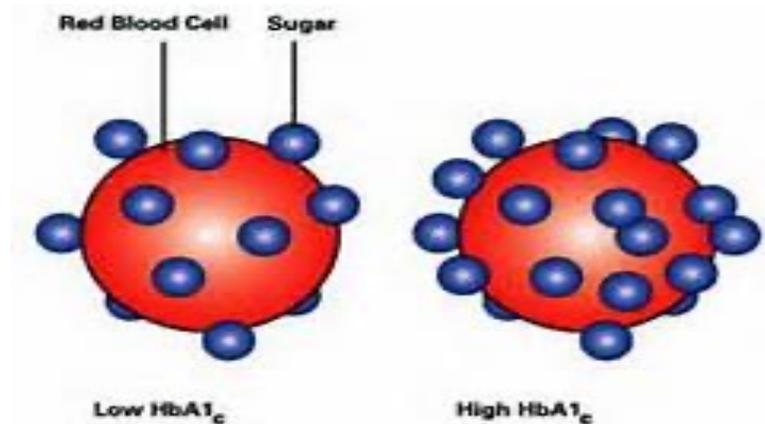


Normal: <100
High: 100-125
Very high: >125

What Hemoglobin levels are normal?

Normal glycated hemoglobin is 5%

- ▶ If 6%, average blood sugars = 126 mg/dL
- ▶ If 7%, average blood sugars = 154 mg/dL
- ▶ If 8%, average blood sugars = 183 mg/dL
- ▶ If 9%, average blood sugars = 212 mg/dL



Diagnostic Tools for Diabetes

▶ Glucose (Sugar) Levels

- ▶ Fasting levels of 100-125 = **prediabetes**
- ▶ Fasting levels of 125+ = **diabetic**

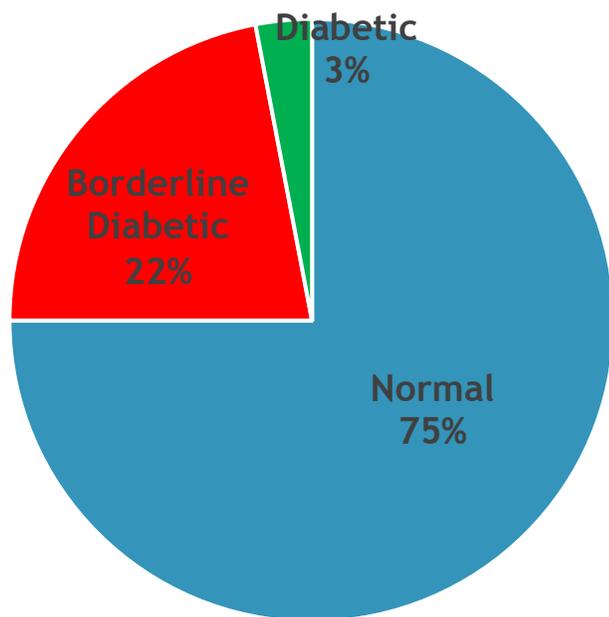
▶ Hemoglobin A1C

- ▶ Shows the average glucose level over past 2 to 3 months.
- ▶ 5.7% to 6.4% = **prediabetes**
- ▶ 6.5% or higher = **diabetic**

Hemoglobin A1c Results SAU GROUP DATA

2017 Results

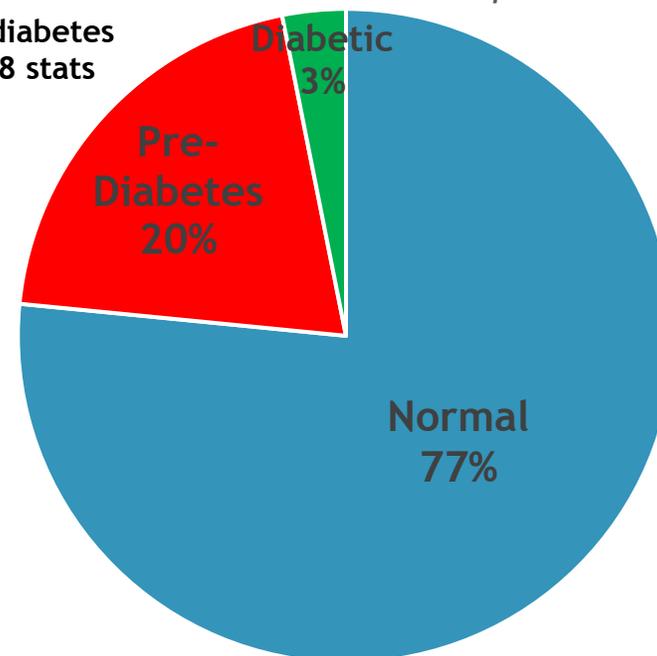
470 Total Participants



2020 Results

256 Total Participants

National Pre-diabetes
34% from 2018 stats

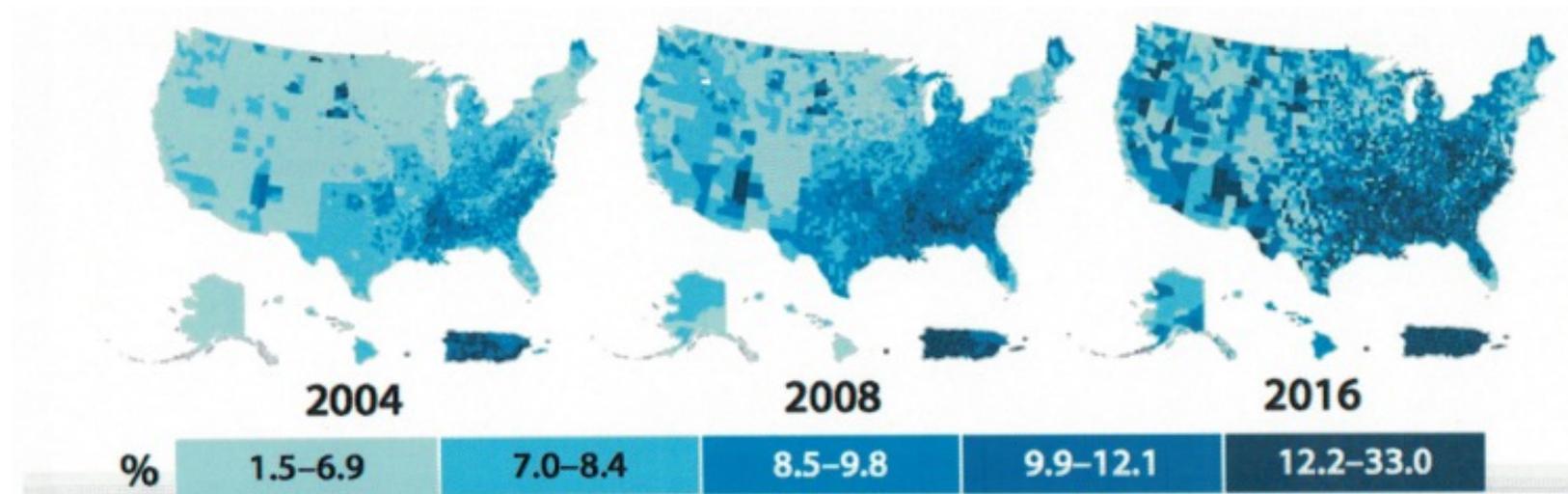


Normal: 4.7-5.6
Pre-diabetic: 5.7-6.4
Diabetic: >6.4

Healthy People 2030 Diabetes Statistics

Among US adults aged 20 years or older, age-adjusted, country-level data indicated:

- ❖ In 2016, estimates of diagnosed diabetes prevalence varied across US counties, ranging from 1.5% to 33.0%.
- ❖ Median country-level prevalence of diagnosed diabetes increased from 7.8% in 2004 to 13.1% in 2016.



Prevalence of Prediabetes Among Adults

An estimated 88 million adults aged 18 years or older had prediabetes in 2018

- ❖ Among US adults aged 18 years or older, crude estimates for 2013-2016 were:
 - ❖ **34.5%** of all US adults had prediabetes, based on their fasting glucose or A1C level
 - ❖ 10.5% of adults with prediabetes based on both elevated fasting plasma glucose and A1C levels
 - ❖ 15.3% of adults with prediabetes reported being told by a health professional that they had this condition
- ❖ Among US adults aged 18 years or older, age-adjusted data for 2013-2016 indicated:
 - ❖ A higher percentage of men (37.4%) than women (29.2%) had prediabetes
 - ❖ Prevalence of prediabetes was similar among all racial/ethnic groups and education levels

Table 3. Displays information listed above

Four Tips for Success in Lowering A1C levels

1. Build a strong foundation

- ▶ Start each day with a good breakfast
 - ▶ Make it substantial with generous fiber grams
 - ▶ Sets you up for a success all day long

2. Use diversion

- ▶ Take a walk outside
- ▶ Take a deep breath
- ▶ Drink a glass of water (Hunger feeling can actually be thirst)
- ▶ Say a prayer
- ▶ Contact a supportive friend

3. Plan ahead

- ▶ Write out your menu (daily, weekly, weekends)
- ▶ Shop from your menu, and only when full to avoid temptations
- ▶ Find new healthier, quick fixes to avoid frozen foods or drive through
- ▶ Keep fresh, cleaned veggies in the drawer
- ▶ If eating out, plan ahead what to order

4. Set goals

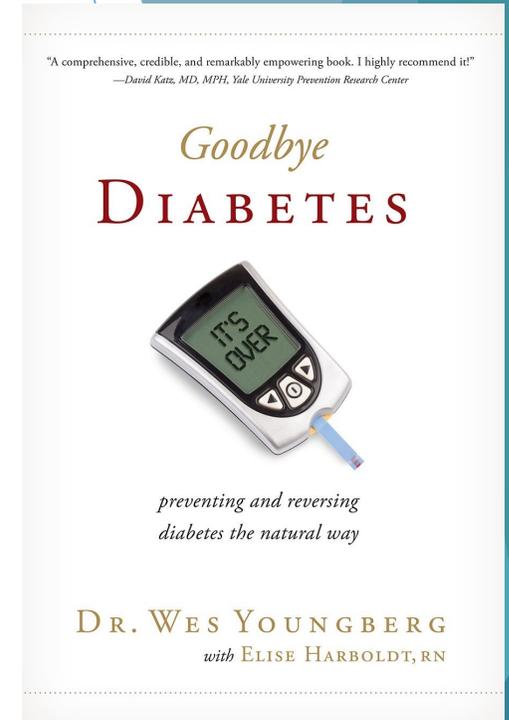
- ▶ Specific goals, not generals like “going to eat better”
- ▶ Realistic goals, ex. 1 lb a week for 4 weeks
- ▶ Sustainable goals, ex. I am going to walk to the mailbox each day this week.

What if you plateau?

- ▶ Get back to the basics and evaluate what you are eating
 - ▶ Examples- too many: hidden oils, nuts, PB&J, hidden sugars, cheese
- ▶ Increase intensity of exercise
 - ▶ Burn the fat in those little cupboards in the large muscles.

“Exercise is beneficial...but a lack of exercise is not the primary reason for weight problems...exercise can never take the place of a healthful diet.”

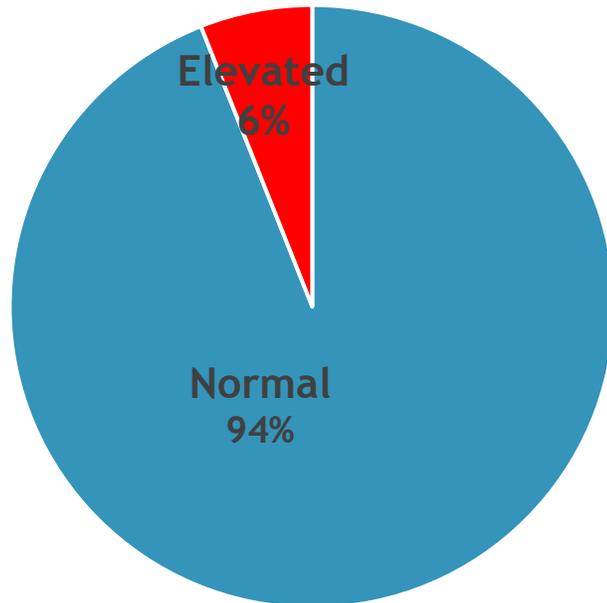
Dr. Neal Barnard pg 122.



PSA Results - Men > 40

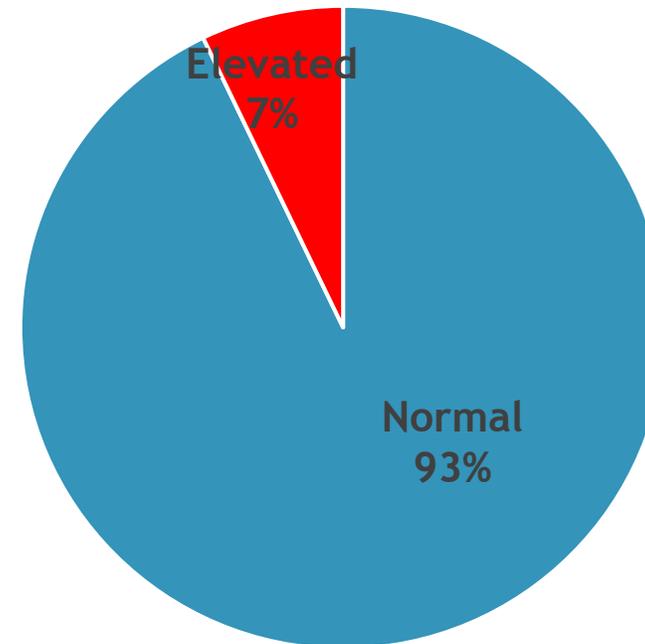
2017 Results

173 Total Participants



2020 Results

98 Total Participants

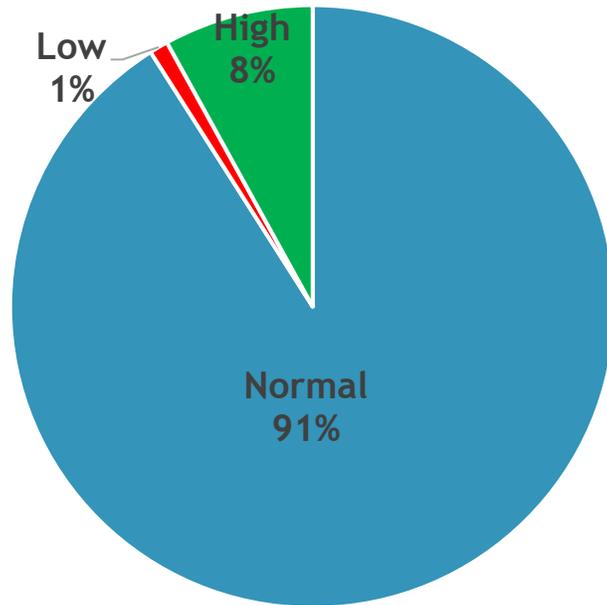


Elevated: >4.5
Normal: ≤4.5

TSH Results - Women

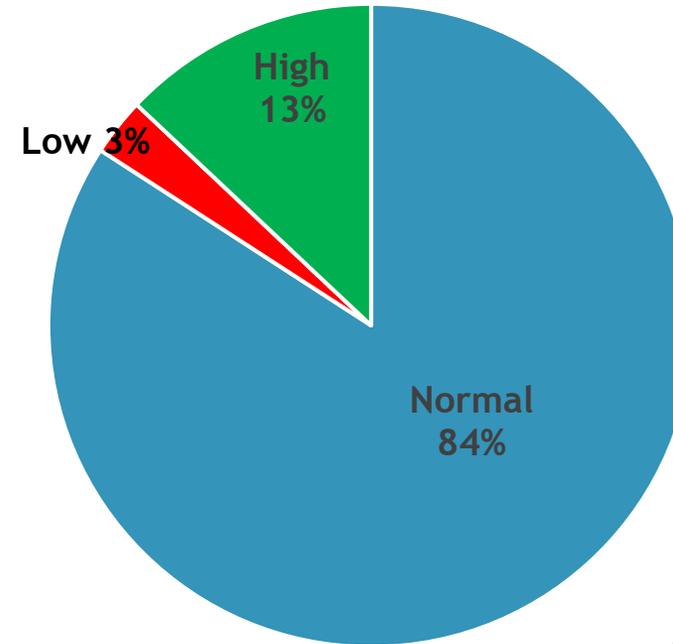
2017 Results

181 Total Participants



2020 Results

139 Total Participants



Hyperthyroidism: < 0.5
Normal: $0.51 - 5.1$
Hypothyroidism: > 5.0

Participation Statistics SAU Group - Previous Years



Participants	2017	2016	2015
Total	625	647	617
Employee & Spouse	470	482	468
Employee	348 (81%)	350 (76%)	361 (75%)
Spouse	122	132	107
Part time/ Retirees/Volun teers	155	165	149
Incomplete	74	21	80



Group Risk Categories

1. Lowest Low Risk

Lowest Low Risk

—

No levels elevated



- BMI: less than 25 kg/m²
- Cholesterol: Less than 200
- Blood pressure: $\leq 120/80$
- Blood glucose: ≤ 100 , with A1C less than 5.6%

Group Risk Categories

2. Low Risk

Low Risk

—

Only 1 level
elevated



- BMI: greater than 25 kg/m²
- Cholesterol: Any abnormal level, including lower HDL levels
- Blood pressure: any pressure above 120/80 up to 139/89
- Blood glucose: any level above 100, with A1c greater than 5.7% up to 6.4% (pre-diabetic)

Group Risk Categories

3. Moderate Risk

Moderate Risk

—



Only 2 levels elevated

- BMI: greater than 25 kg/m²
- Cholesterol: Any abnormal level, including lower HDL levels
- Blood pressure: any pressure above 120/80
- Blood glucose: any level above 100, with A1c greater than 5.7% up to 6.4% (pre-diabetic)

Group Risk Categories

4. High Risk

High Risk

–

3 or 4 levels elevated



- BMI: 30 – 35 kg/m², Class 1
- Cholesterol: 200 – 239, or ratio greater than 5.0 – 5.4
- Blood Pressure: above 120/80 up to 139/89 (prehypertension)
- Blood glucose: between 100 – 124, with A1c greater than 5.7% up to 6.4% (pre-diabetic)

Group Risk Categories

5. Higher High Risk

Higher High Risk

—

All 4 levels elevated



- BMI: 35 kg/m² or higher, Class II and III
- Cholesterol: 240 total or higher, or ratio greater than 5.5
- Blood pressure: 140/90 and greater (hypertensive)
- Blood glucose: greater than 125, with A1c >6.4% (diabetic)

Leptin Diet: 5 Simple Rules

1. **Never eat after dinner.** Finish eating dinner at least three hours before bed.
2. **Eat three meals a day.** Allow 5-6 hours between meals. Do not snack!
3. **Do not eat large meals.** Finish a meal when you are slightly less than full.
4. **Eat a high protein breakfast.** Aim for 20-30 grams of protein at breakfast.
5. **Reduce the amount of carbohydrates eaten.** LIMIT, do not cut out carbs.

Other tools for success:

- ▶ Increase fruits and veggies (5-10 a day).
- ▶ Decrease fatty or processed foods (fake) meats.
- ▶ Exercise by finding your passion.

Food Cravings and Addictive Foods

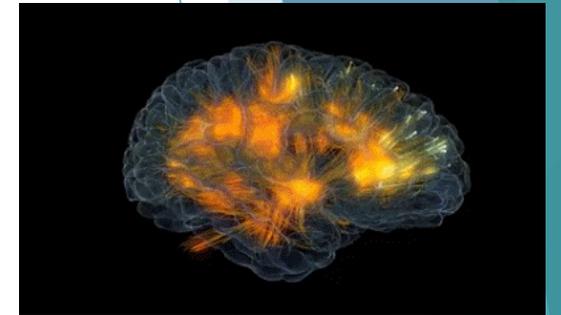
Food Cravings

- ▶ Cravings are triggered by *biological properties of the foods themselves!*
- ▶ It's in their chemical make-up
- ▶ Only certain foods lend themselves to cravings
- ▶ Same foods tempt everyone the same way

Addictive Foods

- ▶ We turn to sugar, chocolate, cheese or meat
 - ▶ They are MORE than mere foods
 - ▶ Have a chemical effect on the brain

*Stimulates the brain's pleasure center
Stress leads to cravings!*



Addictive Foods - Breaking Free

- ▶ **Best way to deal with these foods?**
 - ▶ Stop teasing yourself, don't buy them
 - ▶ Set them aside completely
 - ▶ Do not keep them in the house
- ▶ **Cravings kick in when you are hungry**
 - ▶ Eat a healthy, heart breakfast
 - ▶ Don't skip meals
 - ▶ Get regular exercise
 - ▶ Get plenty of rest
- ▶ **Avoid situations that trigger cravings**
 - ▶ Watching certain TV shows
 - ▶ Concession stands
 - ▶ Certain friends
- ▶ **Choose healthier options while at**
 - ▶ Potluck dinners
 - ▶ Restaurants
- ▶ **Just don't eat them!**
 - ▶ Cravings will leave rather quickly once left out of diet

Risk Factor - Age

- ▶ **With age we will have:**
 - ▶ Slower metabolism
 - ▶ Slower healing
 - ▶ General decline in health
- ▶ **But it does not have to be this way...**
 - ▶ As long as we continue to adjust our diets, exercise, stress, and turn off the bad hereditary genes that can be done with lifestyle interventions.



Risk Category	2017 (470 total)	2016 (461 total)	2015 (388 total)	2014 (433 total)	2013 (487 total)
Highest (All 4 levels) 2 total	0.5%	0%	0%	1%	1%
High (with 4 levels): 38 total	9%	13%	9%	7%	2%
High (with 3 levels): 86 total	22%	23%	19%	20%	19%
Moderate: 94 total	23.5%	21%	26%	26%	27%
Low: 86 total	22%	23%	25%	21%	23%
None: 90 total	23%	20%	21%	25%	28%
Lowest & Low Totals (goal of >70%)	45%	43%	46%	46%	51%
Highest & High (goal of <20%)	31.5%	36%	28%	28%	22%

*2017: 74 participants had incomplete data as they didn't complete the entire assessment

Healthy People 2030 Core Objectives

- ❖ Most Healthy People 2030 objectives are core, or measurable, objectives that are associated with targets for the decade. Core objectives reflect high-priority public health issues and are associated with evidence-based interventions.
- ❖ Core objectives have valid, reliable, nationally representative data, including baseline data from no earlier than 2015. If applicable, they have a measure of variability. Data will be provided for core objectives for at least 3 time periods throughout the decade.

Healthy People 2030 Progress Tracking

Over the course of the decade, we use data sources to track progress toward achieving core objectives, as follows.

- ❖ **Baseline only:** We don't yet have data beyond the initial baseline data, so we don't know if we've made progress.
- ❖ **Target met or exceeded:** We've achieved the target we set at the beginning of the decade.
- ❖ **Improving:** We're making progress toward meeting our target.
- ❖ **Little or not detectable change:** We haven't made progress or lost ground.
- ❖ **Getting worse:** We're farther from meeting our target than we were at the beginning of the decade.

Questions & Answers