



Health Risk Assessment

**Executive Summary
for**

Putnam County School Board

January 7th, February 4th, March 4th, 2009

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Putnam County School Board

Executive Summary

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The Health Risk Assessment was administered for Putnam County School Board between January 1, 2009 and March 31, 2009. There were 441 employees that participated in the health fair. The average overall wellness score was 70. This score is an indicator of wellness that takes into account all behaviors surveyed in the assessment. A score below 80 indicates an elevated likelihood that individuals will develop certain medical conditions.

Demographics

Demographic information from participants is as follows: 15% of participants were male and 85% were female. The majority (77%) of participants were White. Ethnicity is measured because certain races are higher risks for certain health conditions. According to the American Diabetes Association, ethnic groups in the United States with the highest risk of Type 2 Diabetes include African Americans and Hispanic/Latino Americans. The American Heart Association lists heart disease as the number one killer of African Americans and Latino/Hispanic Americans. See chart below.

Total Responses: 438

African American: 78

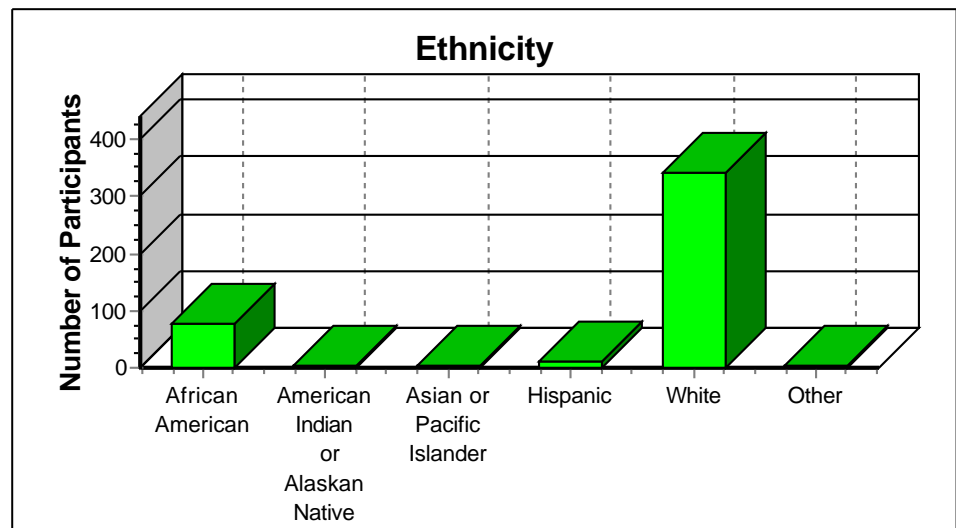
American Indian /
Alaska Native: 2

Asian or
Pacific Islander: 2

Hispanic: 12

White: 341

Other: 3



Total Responses: 441

Ages:

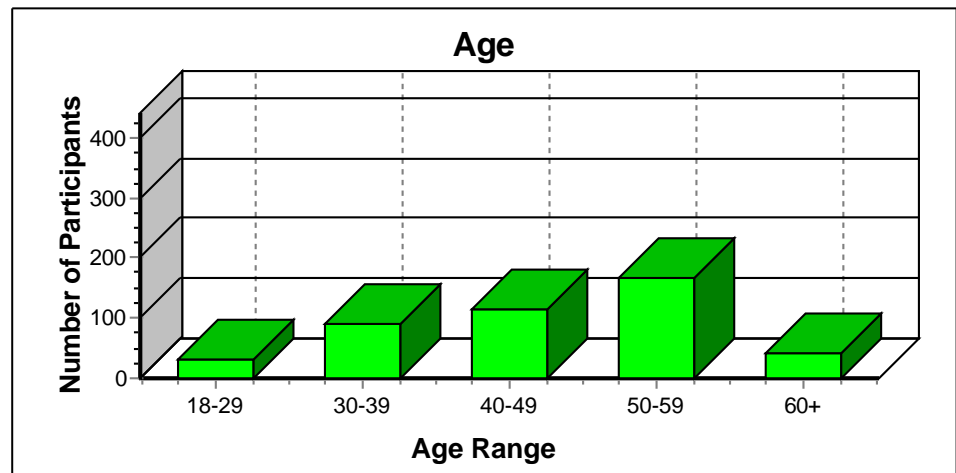
18-29: 31

30-39: 92

40-49: 113

50-59: 165

60+: 40



Healthy Lifestyles

Lifestyle behaviors of Putnam County School Board are assessed in areas of motor vehicle safety, alcohol, and tobacco use. The overall scores for motor vehicle safety, alcohol, and tobacco are 91, 88, and 86 respectively. However, 4% are at borderline to high risk for drinking and driving, 13% have borderline to high levels of alcohol consumption, and 15% are at borderline to high risk for use of one type of tobacco form or another.

Total Drink and Drive
Responses: 438

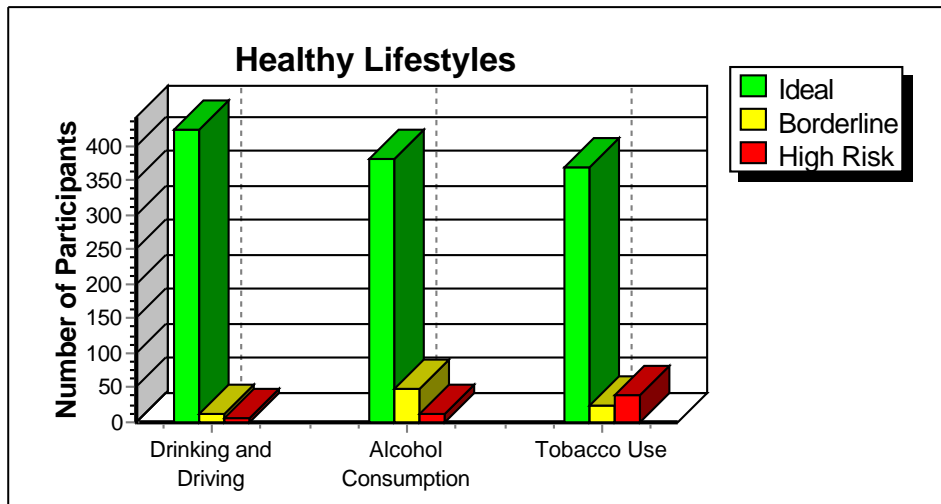
Ideal: 422
Borderline: 11
High Risk: 5

Total Alcohol Consumption
Responses: 438

Ideal: 380
Borderline: 47
High Risk: 11

Total Tobacco Use
Responses: 432

Ideal: 369
Borderline: 23
High Risk: 40



A study completed in 1998 and 1999 by Employers Health Coalition(1) through "The Healthy People/Productive Community Survey" reveals that impairment at work ("presenteeism") generated much more lost time in productivity than absenteeism. The American Lung Association reports 23% of the US adult population are smokers. Across all seventeen diseases studied in 1999, productivity days lost due to impairment at work, on average, were 7.5 times greater than those due to absenteeism. Employees that reported they smoked lost an average of 4 days in a four-week period due to presenteeism versus 3 for those employees that did not smoke. The smokers in the study also had a higher incidence of certain diseases including hypertension and depression.

Assuming the average compensation for Putnam County School Board is \$20/hr (\$160 per day), the potential annual savings for "presenteeism" due to smoking is at least \$332,800 (4 days lost per four-week period x 40 employees that are high risk x average compensation (8 hrs x \$20/hr) x 13 four-week periods).

Alcohol users, according to the Employers Health Coalition, are those that reported they drink 2 or more drinks per day or more than 5 drinks on one or more occasions during the previous month. While presenteeism results for employees that are considered alcohol users were not statistically significant, alcohol users missed 0.4 days of work in a four- week period versus 0.2 for those that did not fall into this category.

Mental Wellness

High levels of stress and/or depression increase risk factors for major illness or diseases such as high blood pressure, heart disease and stroke. Mental wellness scores are calculated using questions based on stress levels and depression. Putnam County School Boards' overall mental wellness score is 71.

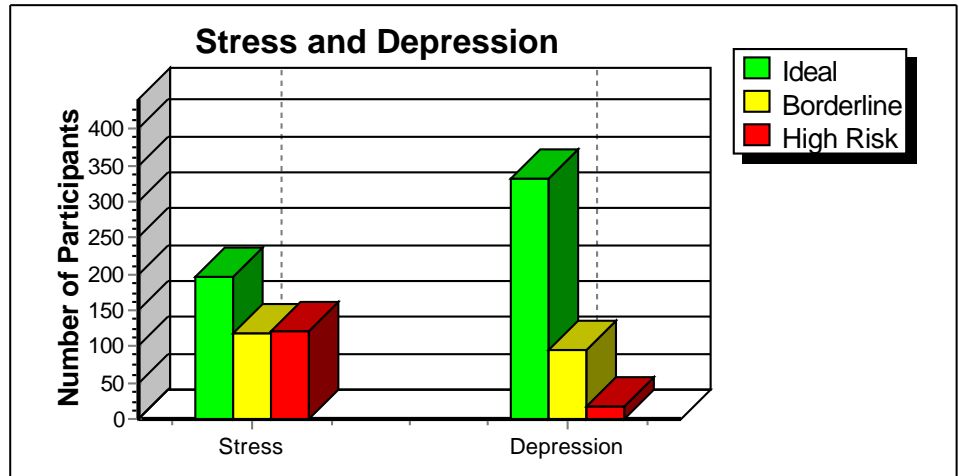
Of the participants, 240 (55%) are at risk for developing complications related to stress (119 are borderline and 121 are at high risk); 110 (25%) are at risk of depression (94 are borderline and 16 high risk).

Total Stress
Responses: 437

Ideal: 197
Borderline: 119
High Risk: 121

Total Depression
Responses: 441

Ideal: 331
Borderline: 94
High Risk: 16



The prevalence of depression for Putnam County School Board is 36 per 1000 employees. This is lower than the prevalence of depression of 103 per 1000 according to the "The Healthy People/Productive Community Survey".

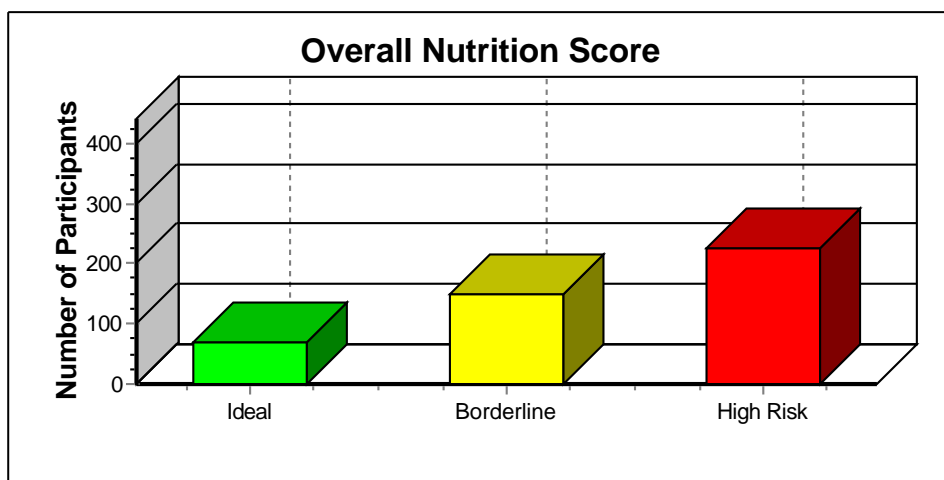
The average productivity time lost for depression is 4.9 days in a four-week period. We assume the average compensation for Putnam County School Board is \$20/hr (\$160 per day). The potential annual savings for "presenteeism" due to depression is at least \$163,072 (4.9 average days lost per four-week period x 16 employees at high risk x average compensation (8 hrs x \$20/hr) x 13 four-week periods).

Nutrition

Based on a compilation of questions about nutrition habits, Putnam County School Board participants have an overall nutrition score of 53. Nutrition scores were based on questions about fat, fiber, fruit and vegetable consumption.

Total Responses: 441

Ideal: 68
 Borderline: 149
 High Risk: 224



Specifics

Proper nutrition improves overall health and well-being and decreases risk for several illnesses and diseases. Participants responded to 10 nutrition questions based on frequency of consumption of certain foods. Based on those results, 15% of participants have ideal nutrition levels, 34% have borderline nutrition levels, and 51% are high risk based on nutrition practices.

Total Fats Responses: 441

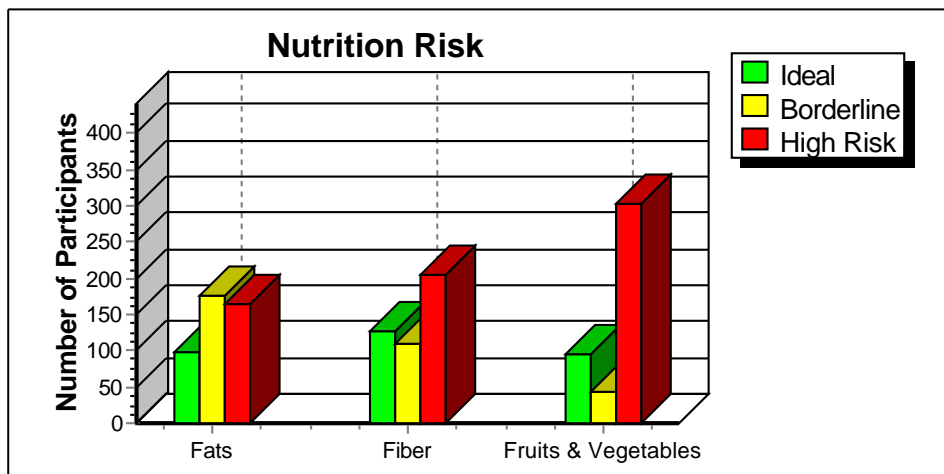
Ideal: 99
 Borderline: 177
 High Risk: 165

Total Fiber Responses: 441

Ideal: 126
 Borderline: 110
 High Risk: 205

Total Fruits & Vegetables Responses: 441

Ideal: 96
 Borderline: 42
 High Risk: 303

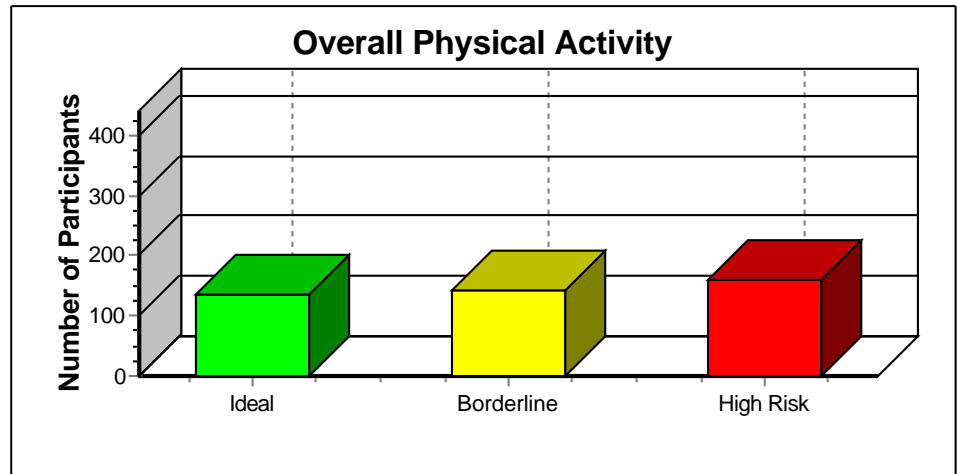


Physical Activity

Physical activity levels were determined by assessing Putnam County School Board participant's amount of vigorous exercise and general physical activity. Putnam County School Board has an overall physical activity score of 57.

Total Responses: 441

Ideal: 134
 Borderline: 143
 High Risk: 160
 No Response: 4

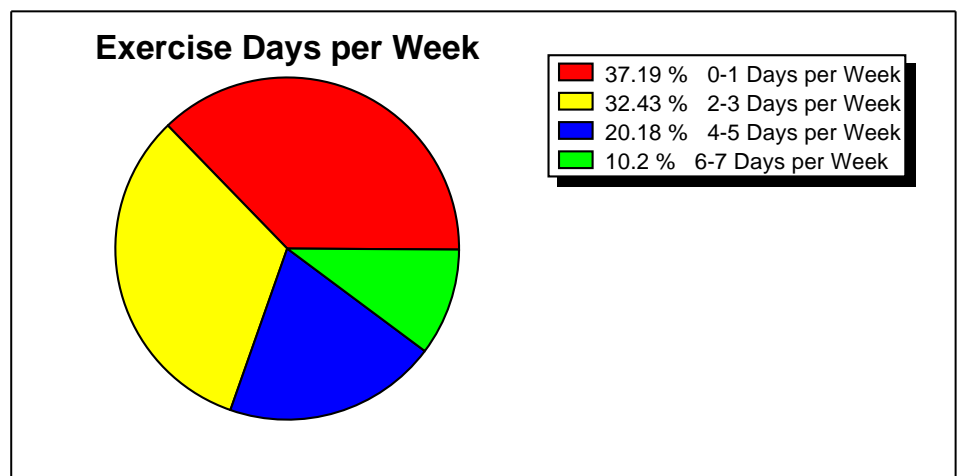


Specifics

Regular physical activity has been a lifestyle habit proven to improve overall health and well-being while decreasing risk for several illnesses and diseases. The graph below shows Putnam County School Board participants' regular exercise activity by the number of days a week they exercised for at least 20 minutes.

Total Responses: 441

0-1 Days per Week: 164
 2-3 Days per Week: 143
 4-5 Days per Week: 89
 6-7 Days per Week: 45



BMI (Body Mass Index)

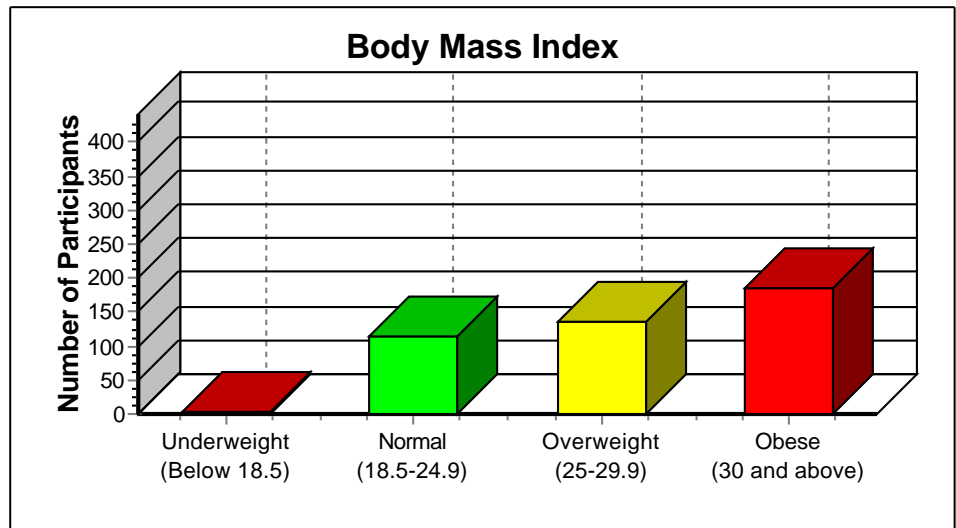
Body Mass Index is a tool for indicating weight status in adults. It is a measure of weight for height. According to the National Center for Chronic Disease Prevention and Health Promotion, for adults over 20 years old, BMI falls into one of these categories:

Below 18.5 = Underweight
 18.5-24.9 = Normal
 25.0-29.9 = Overweight
 30 and above = Obese

Of the Putnam County School Board participants, 320 participants (73%) are considered to be overweight or obese (135 are overweight and 185 are obese).

Total Responses: 437

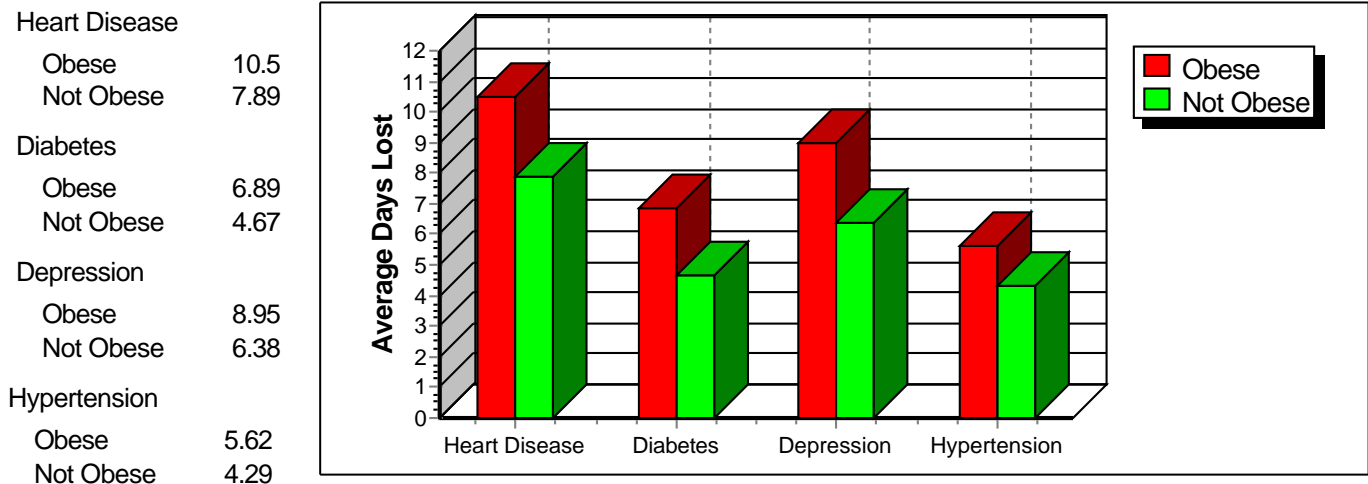
Underweight 4
 Normal 113
 Overweight 135
 Obese 185



BMI is only one of many factors used to predict risk for disease. As BMI increases, the risk for some diseases increases. Some common conditions related to overweight and obesity include: Premature death, cardiovascular disease, high blood pressure, osteoarthritis, some cancers and diabetes.

The relationship of BMI and the number of days lost from work is very strong. According to the study completed by Employers Health Coalition, on average, for the 4 conditions below, obese individuals lost 2.2 days more in a 20-week period compared to non-obese individuals. The potential annual savings for "presenteeism" due to obesity related conditions is \$846,560 (2.2 average days lost per four-week period x 185 employees at high risk x average compensation (8 hrs x \$20/hr) x 13 four-week periods).

Average Total Days Lost for Those at Risk for Being Overweight by Disease



Blood Pressure

High blood pressure, also known as hypertension, is often referred to as a silent killer because it is generally a condition with no symptoms. Regular, elevated blood pressure can lead to a heart attack, stroke, heart failure, or kidney failure. Putnam County School Board has a blood pressure score of 74.

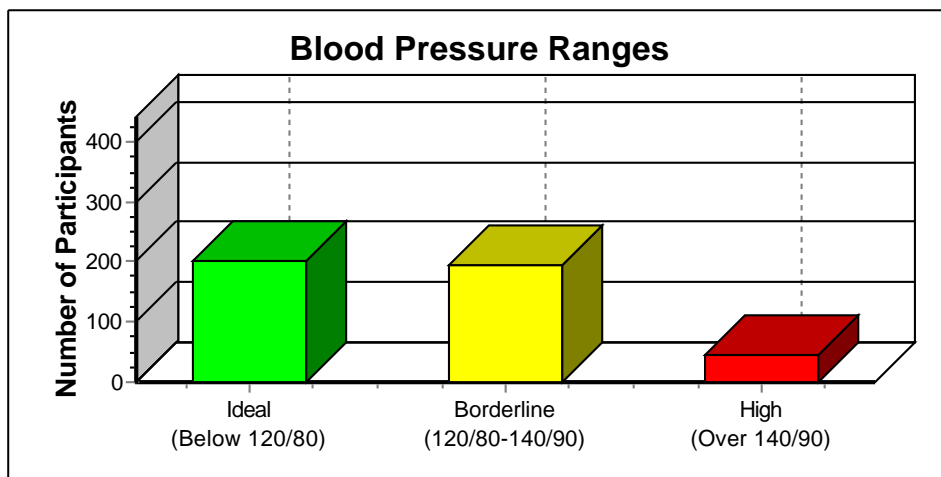
The health risk assessment shows 237 out of 438 Putnam County School Board participants (54%) have a risk of hypertension (44 at high risk and 193 at borderline). The prevalence of hypertension is 10 per 100 employees. This is lower than the Healthy People 2010 targets of 16%.

According to the study completed by Employers Health Coalition, the average productivity time lost for hypertension is 1.2 days in a four-week period. If the average compensation for Putnam County School Board is \$20/hour (\$160 per day), the potential annual savings for "presenteeism" due to hypertension is at least \$109,824. (1.2 average days lost per four-week period x 44 employees at high risk x average compensation (8 hrs x \$20/hr) x 13 four-week periods)

The following chart depicts participants' blood pressure ranges, which are measured against the current American Heart Association standards.

Total Blood Pressure Responses: 438

Ideal: 201
Borderline: 193
High Risk: 44



Diabetes

Diabetes is a disease in which body cells do not absorb enough insulin, and if uncontrolled, diabetes can cause several life-threatening conditions as well as numerous illnesses and disabilities. Putnam County School Board has an overall diabetes score of 49. Participants' age, diet, activity levels, weight and family history were included in calculating risk for diabetes. Out of 441 Putnam County School Board participants, 184 (42%) are at high risk for diabetes, but only 8% self-reported having diabetes.

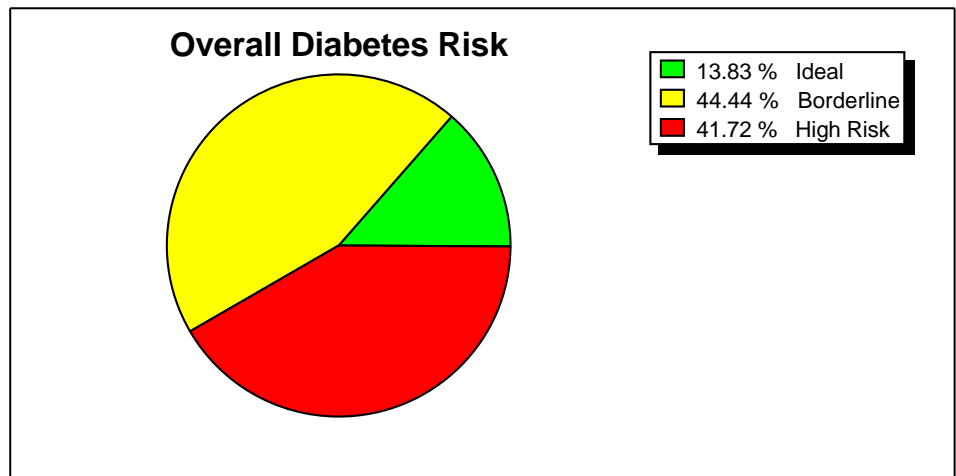
Based on actual blood sugar results from 441 participants, 15% of participants are high (> 125 mg/dl) and 34% are at borderline (100-125 mg/dl). Overall, 79% of employees are unaware they are at risk of diabetes due to elevated blood sugar, family history, weight, and activity levels. The prevalence of diagnosed diabetes for Putnam County School Board is 76 per 1,000 employees. This is higher than the national prevalence of diagnosed diabetes of 49.1 per 1,000.

According to the study completed by Employers Health Coalition, the average productivity time lost for diabetes is 2.1 days in a four-week period. If the average compensation for Putnam County School Board is \$20/hour (\$160 per day), the potential annual savings for "presenteeism" due to diabetes is at least \$803,712 (2.1 average days lost per four-week period x 184 employees at high risk x average compensation (8 hrs x \$20/hr) x 13 four-week periods).

The following chart depicts participants' overall diabetes risk.

Total Responses: 441

Ideal: 61
 Borderline: 196
 High Risk: 184

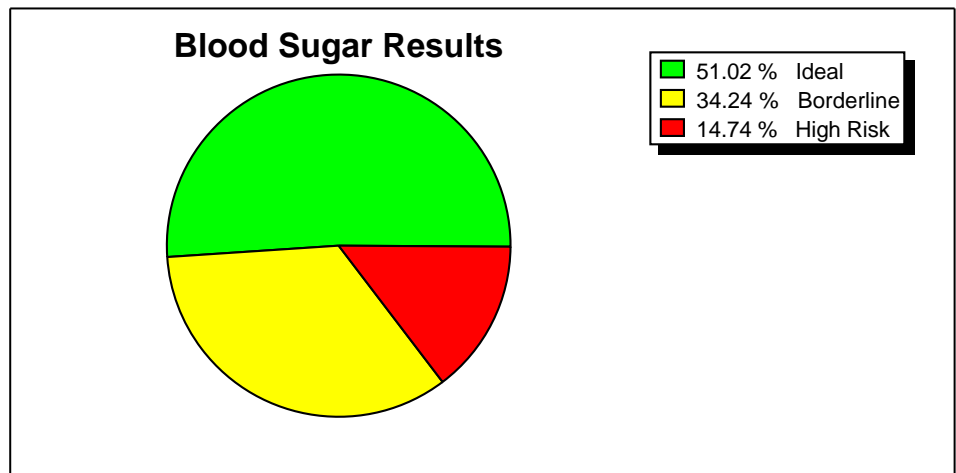


The following chart depicts the participants' blood sugar results, which are measured against current American Diabetes Association standards.

Total Responses: 441

Ideal: 225
 Borderline: 151
 High Risk: 65

Ideal (100 mg/dl & below)
 Borderline (101-125 mg/dl)
 High Risk (125 & above)



Cholesterol

High cholesterol is a key risk factor for heart disease. Cholesterol is made up of various components. Low-density lipoproteins (LDL) can join with cells and fats in the blood and build up on the inner walls of the arteries, which can be dangerous. High-density lipoproteins (HDL) help remove LDL from the arteries and help protect from heart attacks. Therefore, knowing overall cholesterol numbers is important, but it is best to know levels of HDL as well. Putnam County School Board has a cholesterol score of 75. Out of the 441 Putnam County School Board participants who had their cholesterol checked, 159 (36%) are at risk of high total cholesterol (54 are high risk and 105 are at borderline). The prevalence of high cholesterol is about 12%, which is lower than the Healthy People 2010 target of 17%. The average cholesterol ratio for Putnam County School Board participants is 5.69. Any ratio below 4.0 can be considered an ideal cholesterol ratio. Various lifestyle behaviors, such as diet and exercise, can help improve HDL levels.

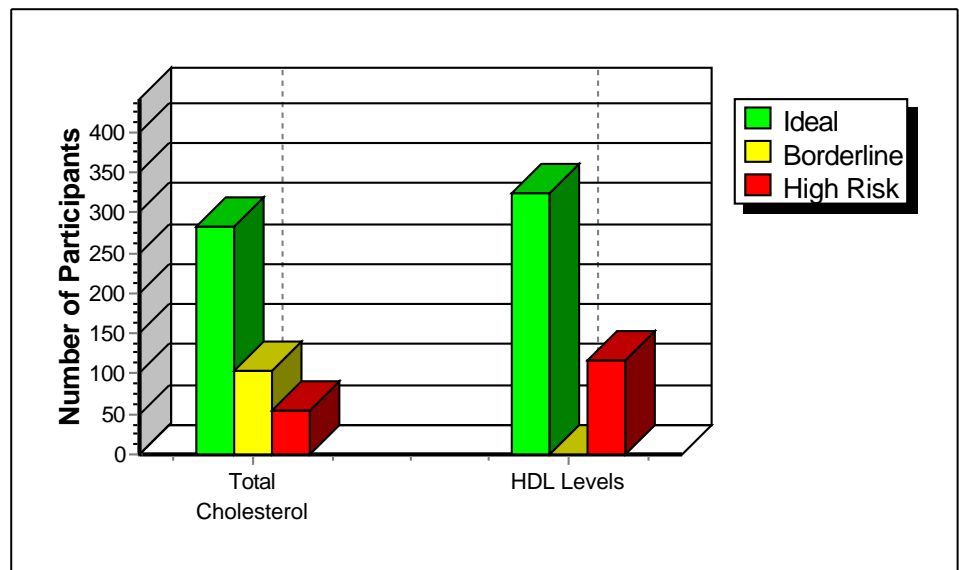
The following chart depicts the ranges for the cholesterol levels for Putnam County School Board employees.

Total Cholesterol 441
Responses:

Ideal: 282
Borderline: 105
High Risk: 54

HDL Responses: 440

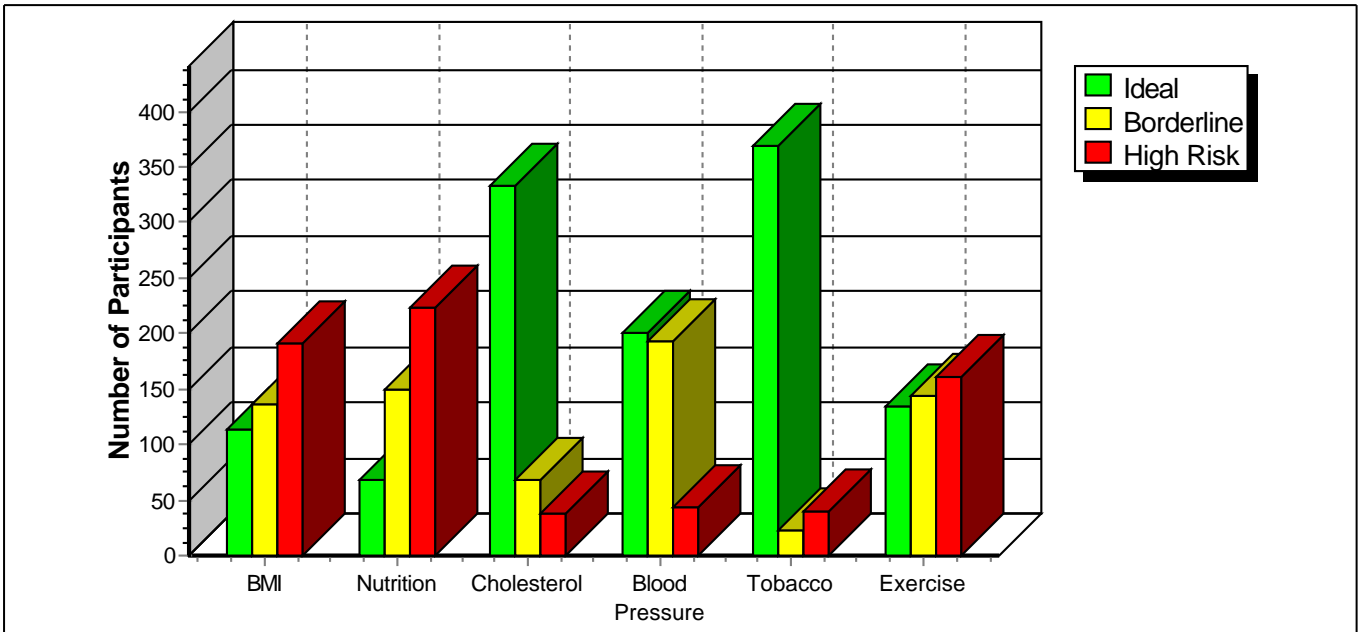
Ideal: 324
High Risk: 116



Range	Total Cholesterol	HDL
Ideal	< 200	> 40
Borderline	200 - 239	
High Risk	>= 240	<= 40

Heart Health

Heart health is affected by numerous controllable and uncontrollable factors. The following are the controllable factors and the risk levels for Putnam County School Board's participants.



	BMI	Nutrition	Cholesterol	Blood Pressure	Tobacco	Exercise
Total Responses:	437	441	441	438	432	437
Ideal:	113	68	282	201	369	134
Borderline	135	149	105	193	23	143
High Risk:	189	224	54	44	40	160

Uncontrollable risk factors for heart disease include age, gender, race and family history. Although participants cannot change these factors, it is important to understand all areas that impact heart disease. As age increases, so does an individual's risk for heart disease. Women are at a slightly higher risk of developing heart disease than men, although it usually does not occur in women until after menopause. Of those that participated in the Health Risk Assessment, 85% were women.

A family history of heart disease is another uncontrollable risk factor. Often, first-degree blood relatives are considered the strongest link for family history risk. Putnam County School Board's population contains 37% of employees with a family history of heart disease and 4% have been directly affected by some form of heart problem.

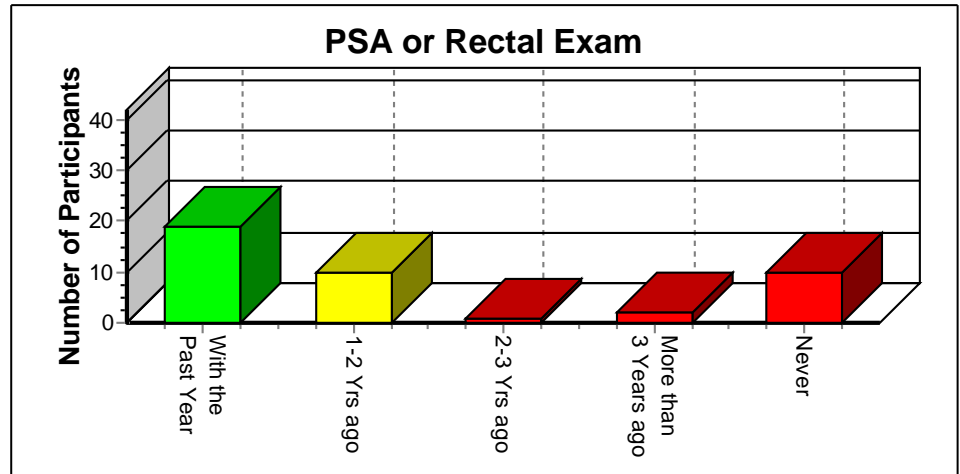
Men's Health

Many diseases and conditions could be prevented or cured if caught in the early stages. Heart disease is the number one killer of men, but cancer also contributes to many deaths.

Rectal exams are used to check for early signs of colorectal and/or prostate abnormalities, including cancer. Of the male participants over the age of 40 in this assessment, 55% have not had a rectal exam or Prostate-Specific Antigen (PSA) test within the past year.

Total Responses: 42

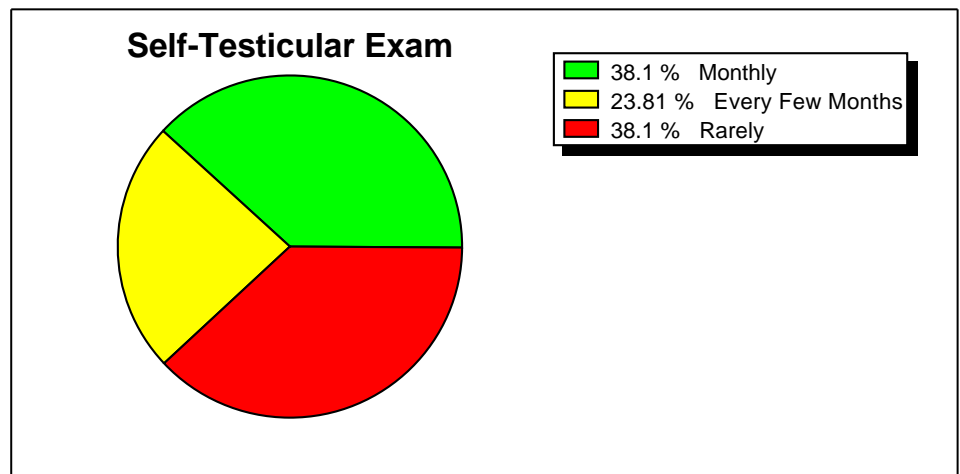
Within the past year: 19
 1-2 Yrs ago: 10
 2-3 Yrs ago: 1
 More than 3 Yrs ago: 2
 Never: 10



Self-testicular exams may allow men to discover a potentially serious diagnosis at an early stage. Of Putnam County School Boards' male population 40 years of age or older, 38% rarely or never did self-testicular exams.

Total Responses: 42

Monthly: 16
 Every Few Months: 10
 Rarely: 16



Women's Health

Adult women should have annual pap smears, which are the leading screening tool for cervical cancer. Of the female participants in this assessment, 18% have not had a pap smear within the past 2 years.

Annual mammograms are recommended for women over the age of 40 to detect breast tumors or problems that could indicate breast cancer. A mammogram has not been administered within the last two years in 16% of this population.

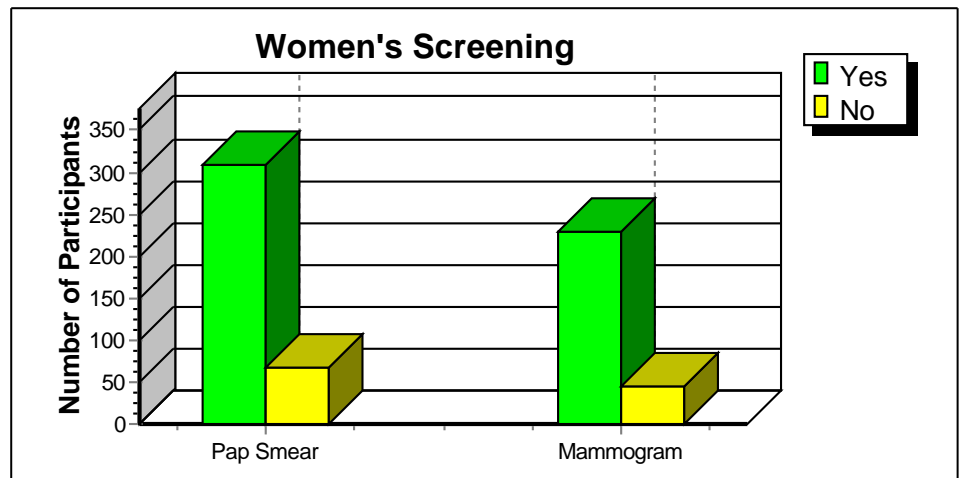
The following is a chart with those who have had a particular screening within the past two years versus those who have not.

Total Pap Smear
Responses: 376

Yes: 309
No: 67

Total Mammogram
Responses: 275

Yes: 230
No: 45

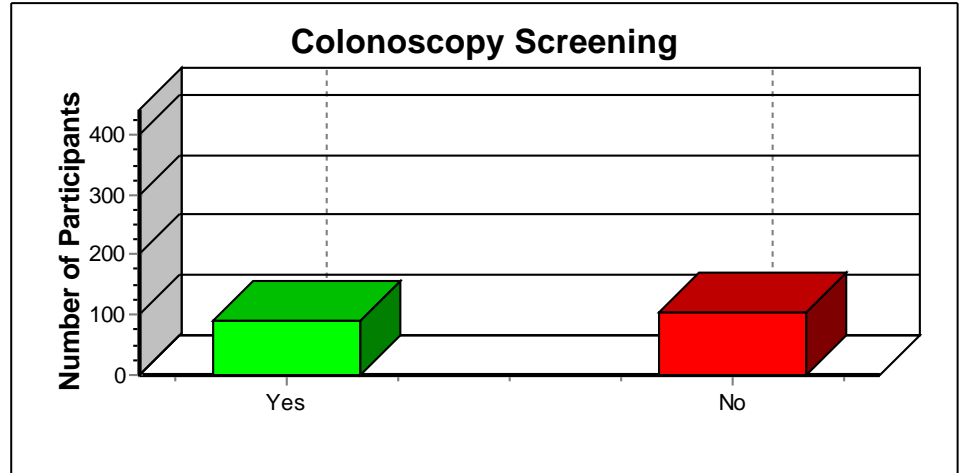


Colon Cancer Screening

More than 90% of colon cancer cases occur in people age 50 or older. For this reason, the American Cancer Society recommends testing for this disease beginning at age 50 for both men and women. In many cases, colon cancer can be prevented if small growths or polyps are found and removed early.

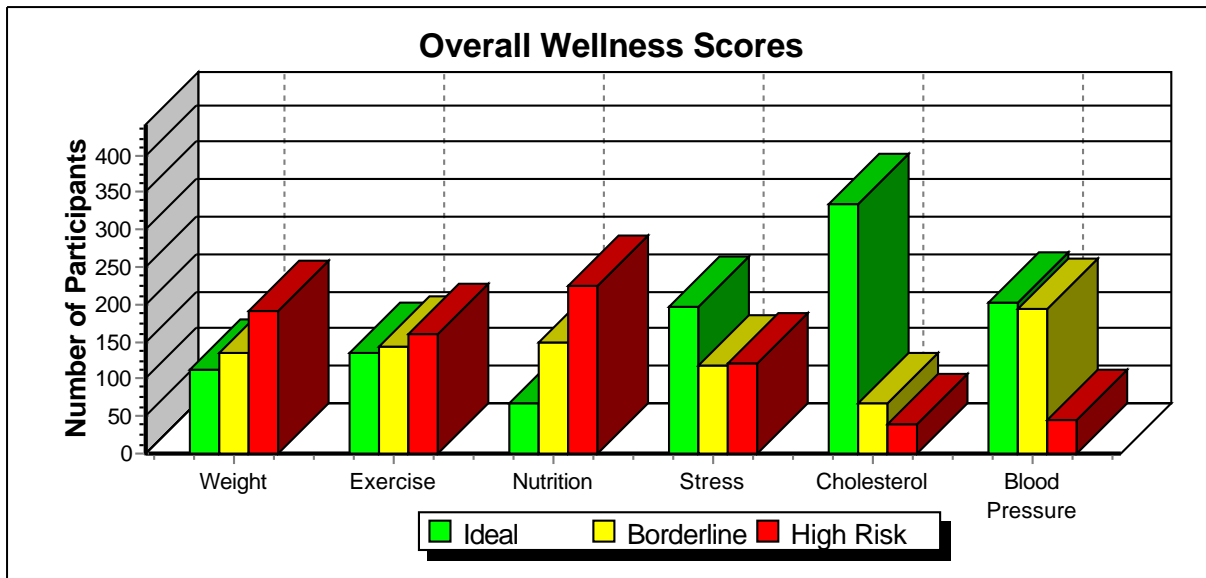
Total Responses: 195

Yes: 91
No: 104



Summary

Overall Wellness



Risk Areas

The top four high risk areas for Putnam County School Board in terms of prevalence are as follows:

Risk Area	Number	Percentage
Nutrition	224	50.8
Weight	185	42.3
Exercise	160	36.6
Stress	121	27.7

Of the 441 employees that participated in the health risk assessment:

- 4% are at risk for drinking and driving
- 13% are at risk for alcohol consumption
- 15% are at risk for use of tobacco
- 25% are at risk for depression and 55% are at risk for stress
- 85% are at risk for overall nutrition
- 69% are at risk for overall physical activity
- 73% are at risk for being overweight or obese
- 54% are at risk for hypertension
- 36% are at risk for high cholesterol
- 42% are at high risk for diabetes and the prevalence of diagnosed diabetes is higher than the national average.

Of the male participants over the age of 40:

- 55% of participants have not had a rectal exam or Prostate-Specific Antigen (PSA) test within the past year and
- 38% rarely/never did self-testicular exams.

Of the female participants, 18% have not had a pap smear within the past 2 years.

Of the female participants over 40, a mammogram has not been administered within the last two years in 16% of this population.

Through our risk reduction action plan, the total potential savings for Putnam County School Board is \$2,255,968 per year.

(1) Employers Health Coalition, Health People/Productive Community © Survey Project 1998 & 1999 www.ehccaccess.org & www.healthypeople.com