

Transforming our Future: Why Health and Wellness needs to be a Priority in the University of Wisconsin – Eau Claire Strategic Plan?



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“Physical fitness is the basis for all other forms of excellence.” JFK

Abstract

Objective: The purpose of this study was to risk stratify college students for cardiovascular disease according to the American College of Sports Medicine and to assess their cardiovascular fitness. **Participants:** Eighty-one college students from a mid-size public university participated in the study. **Methods:** Participants completed a Health Knowledge Survey. A Rockport 1-Mile Walk sub-maximal test was performed to evaluate cardiovascular fitness. Each participant’s anthropometric measurements, lipid profile, and blood pressure were taken to determine risk factors. Participants self reported smoking, family history, and physical activity factors. **Results:** There was a lack of knowledge among participants regarding cardiovascular disease. Fifty-five percent were dyslipidemic and 57% did not meet physical activity recommendations. Twenty-six percent were overweight and 10% were obese. Smokers comprised 9% percent of the participants while 11% had high blood pressure. Forty-nine percent and 51% were risk stratified at moderate and low risk, respectively. **Conclusion:** There is clearly a need for intervention within this population. Primary prevention may impose healthy lifestyle habits that will decrease the prevalence of cardiovascular disease later in life.



Introduction

Cardiovascular disease (CVD) is the single leading cause of death in the United States. There are two main approaches for eliminating risk factors and preventing CVD, primary and secondary prevention. Primary prevention concentrates on managing potential risk factors for CVD through education and lifestyle modifications. The key is to impose the modifications early in life before the consequences of an unhealthy lifestyle result in CVD or related problems. Previous research has shown that CVD risk factors are present in college students and that this population may underestimate their risk for developing the disease. However, there are few comprehensive studies that have assessed health knowledge, risk factors, risk stratification, and cardiovascular fitness. Furthermore, the University of Wisconsin – Eau Claire (UWEC) is recently undergoing a revision of its strategic plan. The Department of Kinesiology is passionate that health and wellness goals are specifically emphasized in the final form of the strategic plan. Assessment data of the current risk for CVD in the UWEC student population could provide compelling evidence to the Strategic Planning Committee and the Chancellor to include such goals in the final strategic planning document.

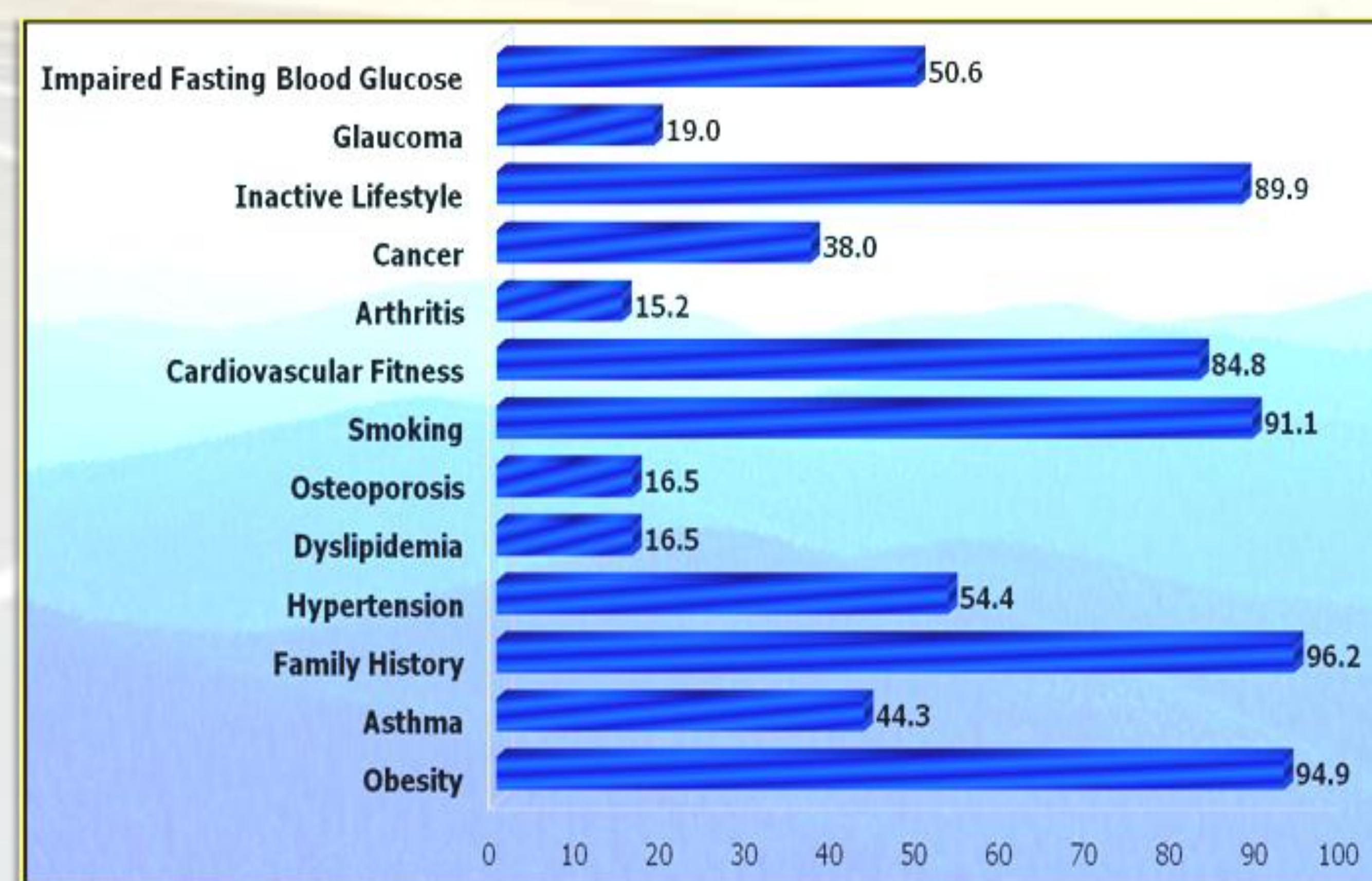
Purpose

The purpose of this study was to assess college students' perception of CVD risks. The study was also designed to measure and quantify these risks, in addition to cardiovascular fitness, as determined by the ACSM¹. It was hypothesized that 50% of college students would have at least one risk factor for CVD. It was also predicted that about one third would be overweight or obese, about ten percent would have elevated total cholesterol, and about twenty percent would be hypertensive. By completing this study, we hope to demonstrate a strong need for improved health promotion and intervention in college students at UWEC.

Methods

Eighty-one college students, 54% female and 46% male, from a required wellness theory class participated in this study. The students encompassed a variety of majors and each year of study was represented. Prior to testing, each student completed a Physical Activity Readiness Questionnaire, Health History Questionnaire, Health Knowledge Survey, and informed consent. The participants were divided into four groups and performed the Rockport 1-Mile Walk submaximal oxygen uptake test. The next week they reported to the laboratory portion of testing where the researchers assessed their anthropometric measurements, lipid profiles, and resting blood pressures. All procedures were performed according to American College of Sports Medicine guidelines¹.

Figure 1. College Students' Knowledge of CVD Risk Factors



Results

Results from the Health Knowledge Survey are presented in Figure 1. The percentages represent the participants who identified the condition as a risk factor for CVD. The prevalence of each risk factor assessed is presented in Figure 2. According to the Rockport 1-Mile Walk sub-maximal test, nearly 30% of participants were fair, poor, or very poor with regards to their cardiovascular fitness (Table 1). The majority of participants, 45%, fell in the average range. Twenty-six percent were good or very good. Upon risk stratification, this study found that 51% of the participants were at low risk and 49% were at moderate risk for CVD. Participants' total number of CVD risk factors ranged from 0 to 5.

Figure 2. Actual CVD Risk Factors Present in College Students

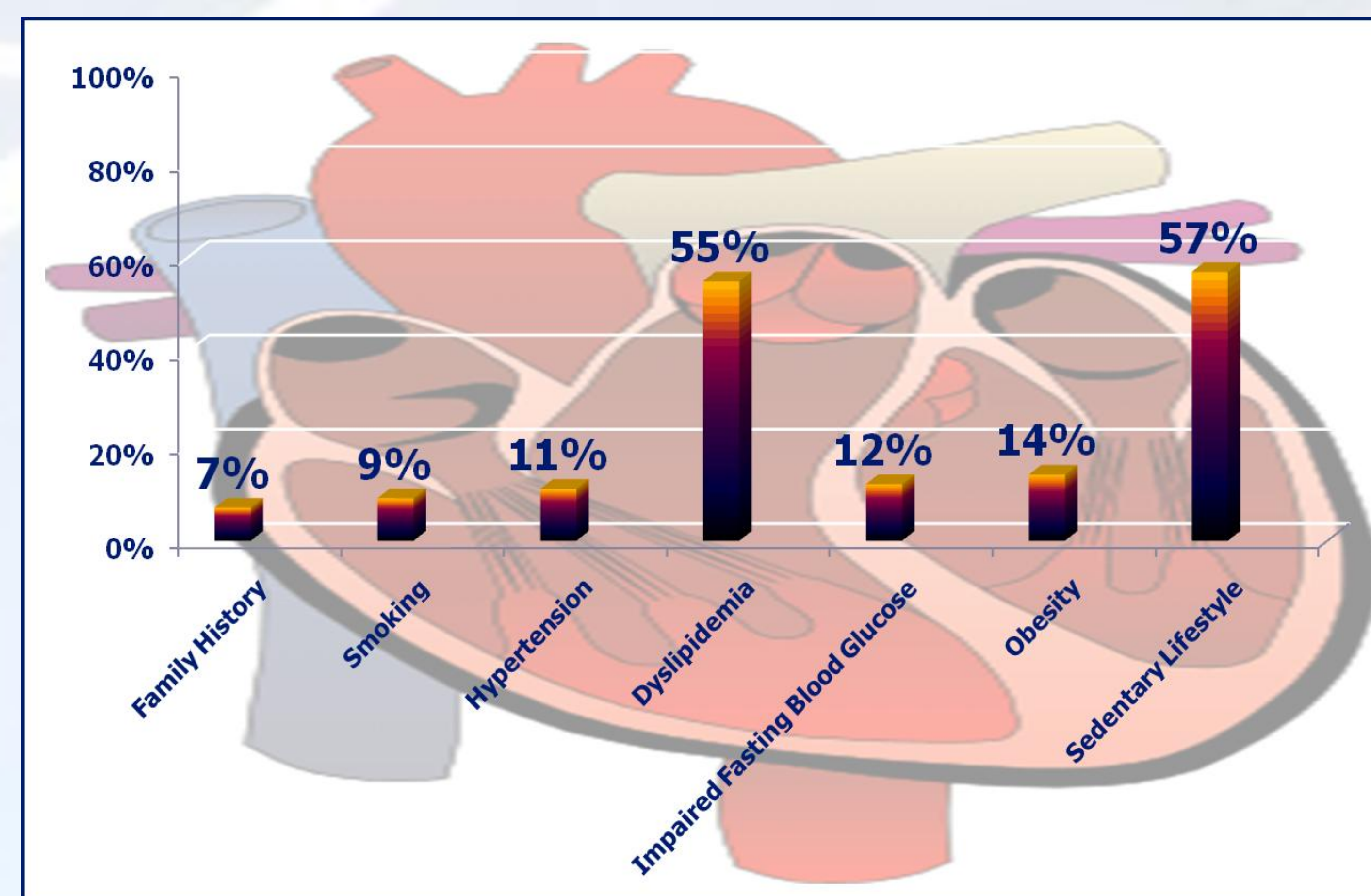


Table 1. Cardiovascular Fitness of College Students

Ranking	Frequency (N=69)	Percent
Excellent	0	0
Very Good	4	6
Good	14	20
Average	31	45
Fair	18	26
Poor	1	1.5
Very Poor	1	1.5

Summary and Conclusions

- Our findings indicate one out of every two UWEC students is already at moderate risk for CVD, suggesting that intervention is needed within this population if future CVD is to be prevented.
- It was troublesome to find that only half the participants identified impaired fasting blood glucose and hypertension as risk factors for CVD (Figure 1). Furthermore, a mere 16% recognized that dyslipidemia contributes to CVD. A lack of understanding of these terms or a lack of general education about CVD may have influenced the participants' perception of these CVD risk factors.
- A sedentary lifestyle was the most prevalent risk factor in this study, with nearly 60% of the participants not meeting the U.S. Surgeon General's Recommendation for physical activity.
- The blood lipid profile revealed 55% of the student population sampled is dyslipidemic. Further, 84% of the participants were unaware that dyslipidemia is a risk factor for CVD. This is particularly alarming given the fact that dyslipidemia is one of the most powerful risk factors for CVD.
- The theme of our proposed strategic plan is to 'transform our future'. If "physical fitness is the basis for all other forms of excellence" according to our past-president John F. Kennedy, then data from the present study suggests that UWEC cannot satisfactorily fulfill its strategic plan mission to 'transform our future' by continuing to graduate students unknowledgeable about and at risk for CVD. This practice will only contribute to skyrocketing health care costs.
- We believe the new UWEC strategic plan affords an opportunity to place greater emphasis on health and wellness in the future of our institution.
- We recommend a health and wellness class, along with a full health risk assessment (HRA), be a required general education (GE) graduation requirement for all UWEC undergraduate students.
- Lastly, we recommend that the new Davies center have a dedicated space for completing HRA and promoting health and wellness.



References

1. AMERICAN COLLEGE OF SPORTS MEDICINE. *ACSM's Guidelines for Exercise Testing and Prescription* (7th ed.). Baltimore, MD: Lippincott Williams & Wilkins, 2006. pp. 22, 27, 39-61.

Acknowledgements

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