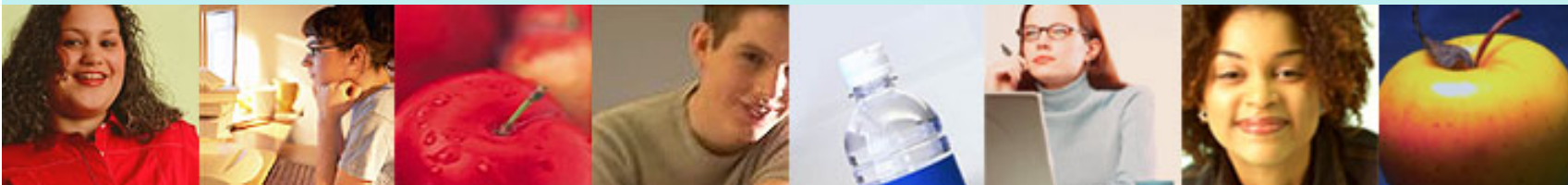


The Teen Weight Loss Club website

Its use in addressing obesity in adolescents

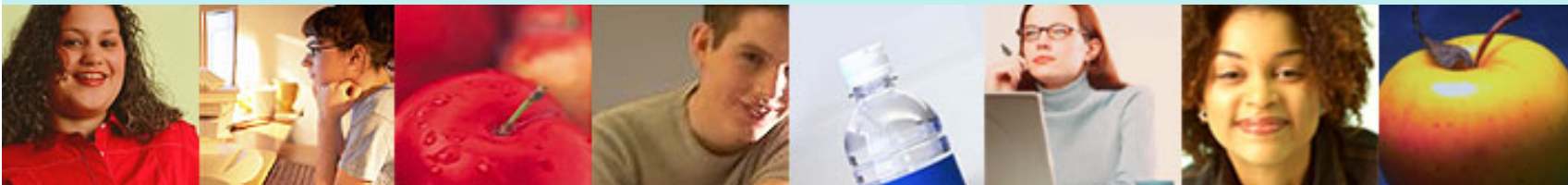
By Alexis Lieberman, MD
& Stevan Lieberman



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Teen barriers to acquisition of health information

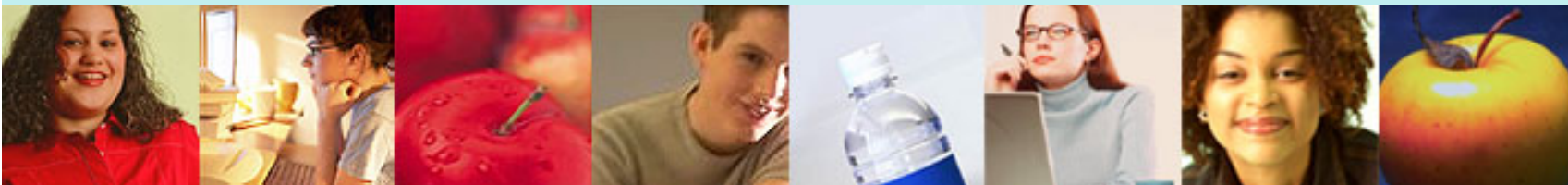
- **Seen as too old to need a pediatrician**
- **Not able to seek out services independently**
- **Can't negotiate complex medical systems**
- **Inconvenient hours and locations**



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Barriers for the obese

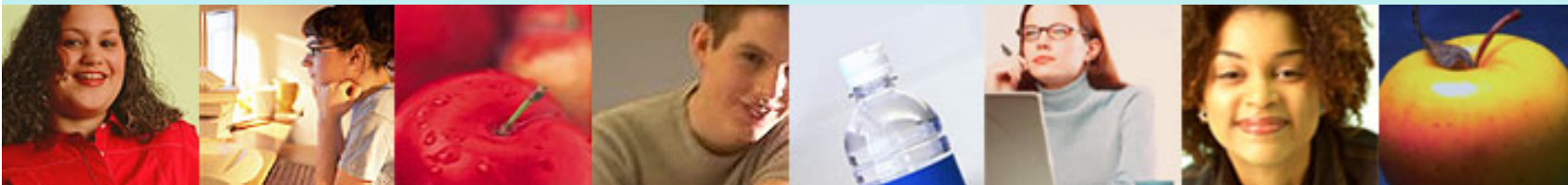
- **Denial**
- **Embarrassment**
- **Stigma**
- **Negative attitudes from health care providers**



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The Internet

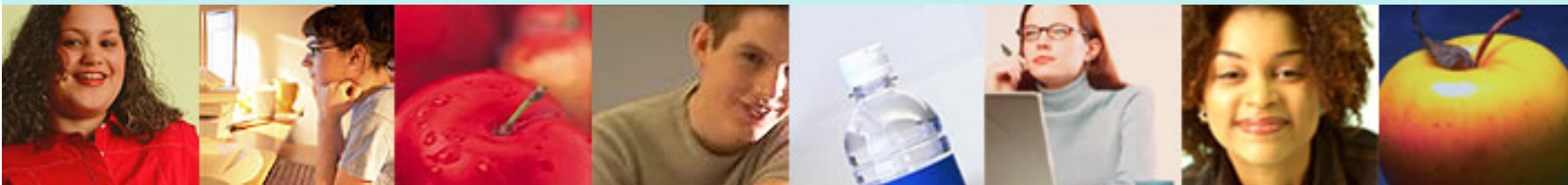
- **Allows users to find answers and seek support in their own time and place, without having to see a physician.**
- **Internet resources can overcome many access barriers.**



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“Digital Divide”

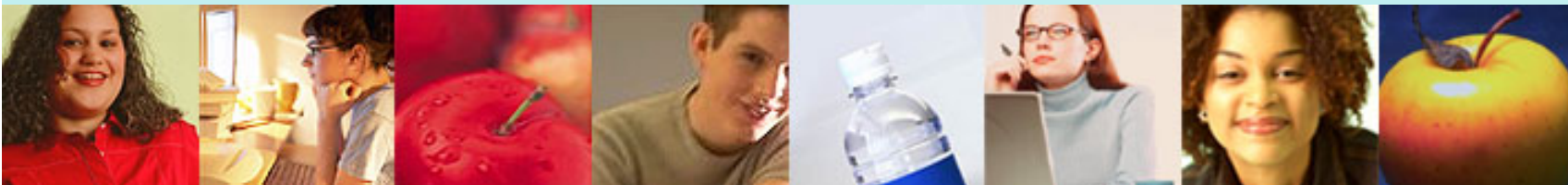
- **Low-income individuals are less likely to have access to the Internet.**
- **However, 62-69% of urban adolescents do have access to the Internet.**



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Objective:

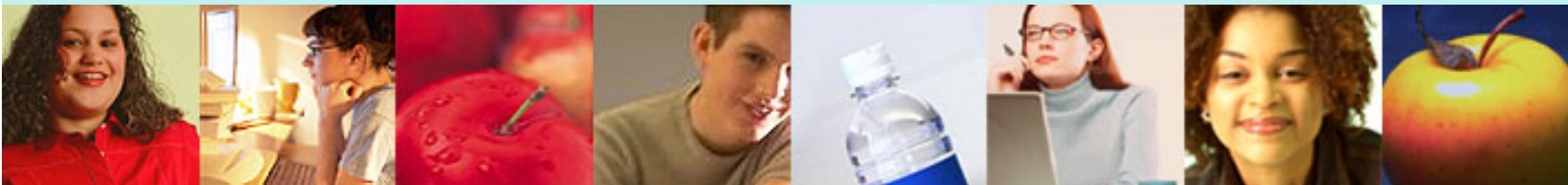
- To pilot a website,
Teenweightlossclub.com
- As a diagnosis and self-treatment modality
- For overweight teens



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Website Content

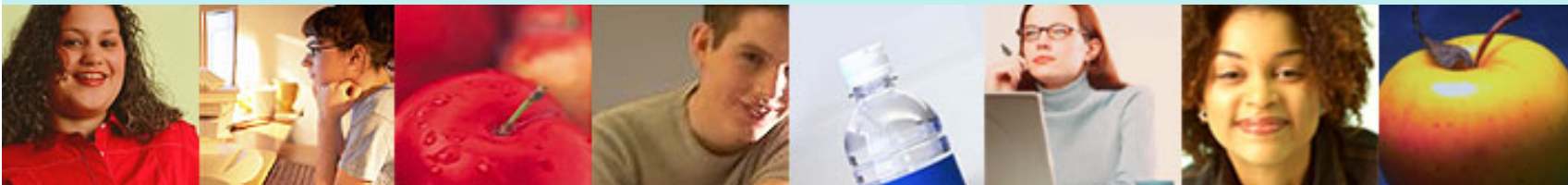
- **Step One: Quiz**
- **Personal Report**
- **Step Two: Set Goals**
- **Step Three: Logbook**
- **Diet Calculator**



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Types of Questions in the Quiz

- **Comorbidities**
 - diabetes, hypertension, PCOS, sleep apnea, hyperlipidemia
- **Habits, including screen time**
- **Diet**
- **Exercise**
- **Eating disorders**
- **Food insecurity**

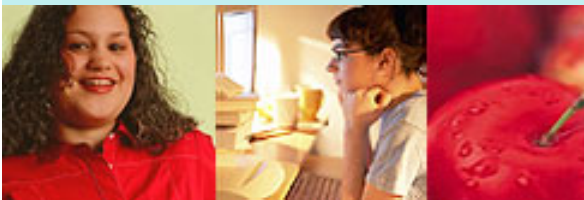


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Step One: The Quiz

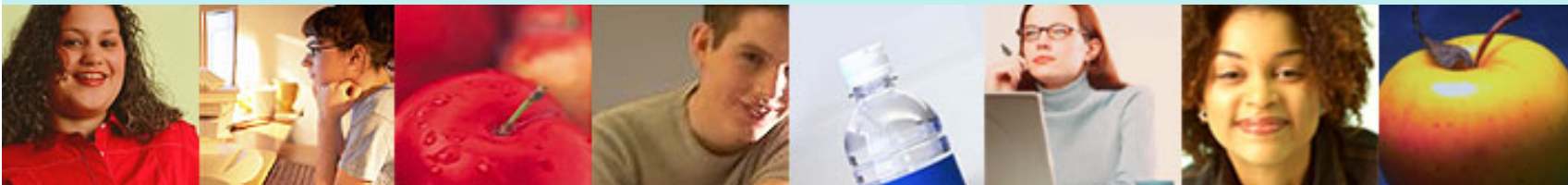
45 questions
with yes/ no
answers

8. Do you have to wake up at night to pee?	YES NO
9. Are you very thirsty, more than others?	YES NO
10. Do you watch more than 2 hours of TV (4 half-hour shows or 2 hour-long shows) a day?	YES NO
11. Do you play video games for more than two hours a day?	YES NO
12. Do you have a TV in your room?	YES NO
13. If you have a computer at home, do you use the computer more than two hours a day?	YES NO Not Applicable
14. Do you eat vegetables less than 4 times a week?	YES NO
15. Do you eat fruit less than 4 times a week?	YES NO
16. Fresh fruit and vegetables can be expensive; does your family ever have trouble affording them?	YES NO



Personal Report

- Letter addressed to user
- Content based on quiz answers
- Gives advice, encouragement and referrals



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Step Two: Setting Goals

c. I will make an appointment to have myself tested for diabetes and I will try to eat sugary foods only once a day from now on.

YES NO

h. I will watch television, play video games or use my computer 3 hours or less each day.

YES NO

i. I will eat 1 fruit or vegetable every day of the week for this week.

YES NO

j. I will have 3 low fat servings of dairy each day, whether it is low fat milk, low fat or non fat yogurt or low fat cheese.

YES NO

k. I will buy 1% or 2% milk instead of whole milk this week.

YES NO

r. I will eat in a fast food restaurant no more than 1 time this week.

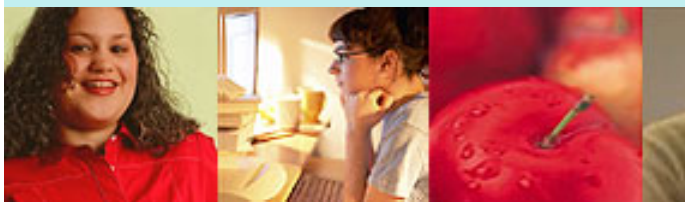
YES NO

s. I will shop for snacks at a corner store or convenience mart only 1 time this week.

YES NO

y1. I will figure out an activity that I can do that I don't usually think of as exercise, but might get my body moving a little, like vacuuming, cleaning my home, jumping rope, walking quickly to get someplace I need to go, or something similar. I will do that at least twice this week.

YES NO

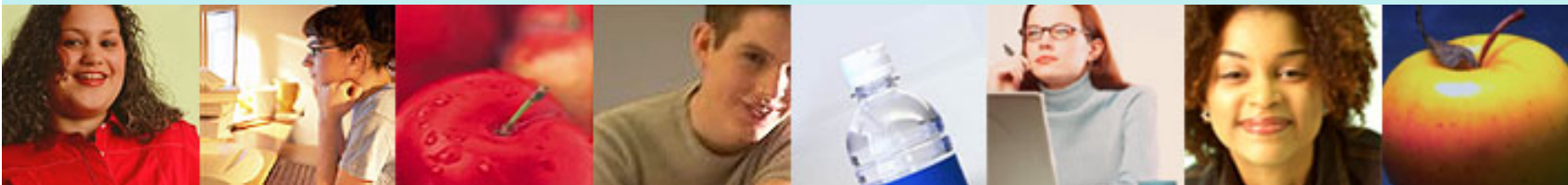


Step Three: Log Your Progress

Please come back next week, and log your progress in your logbook. You can see the logbook below. Good luck this week! See you next week!

Please [click here](#) to log out. Your goals have been saved.

h. I will watch television, play video games or use my computer 3 hours or less each day.	Currently Working to Meet This Goal.
hh. I watched television more than 3 hours a day most days this past week.	YES NO
hh2. I watched television/video games/computer time 3 or less hours most days this week.	YES NO



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Your current Weight: _____ pounds

The weight you want to be: _____ pounds

You need to lose:

to reach the weight you want to be. _____ pounds

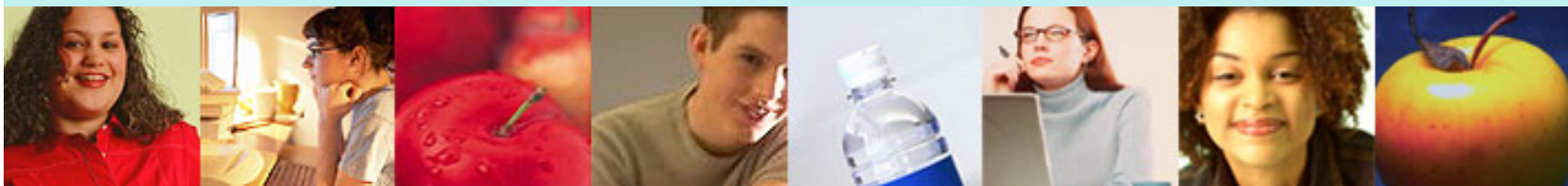
How many pounds do you want to lose this month?

Enter pounds to lose (no more than 12):

You need to cut: _____ calories each day

DIET CHOICES

Diet Calculator



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Teen Weight Loss Club

Your current Weight: 200 pounds

The weight you want to be: 140 pounds

You need to lose:

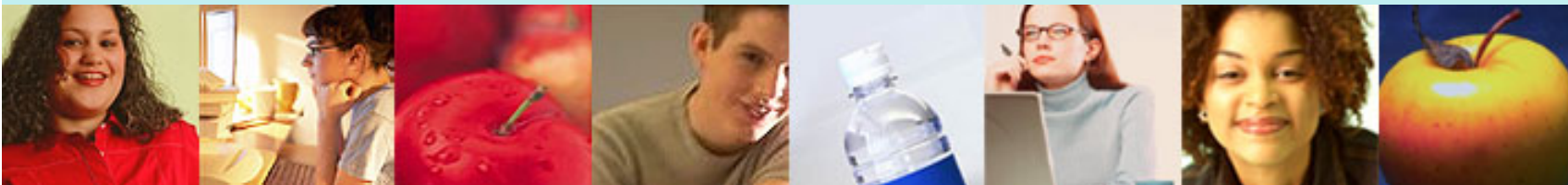
to reach the weight you want to be. 60 pounds

How many pounds do you want to lose this month?

Enter pounds to lose (no more than 12): 4

You need to cut: 400 calories each day

DIET CHOICES



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Teen Weight Loss Club

DIET CHOICES

Below is a long list of foods you can change or just give up. As you choose each one, click on it, and the counter will keep track of how many calories you'll save by making that choice. When you get to your goal, you're done!

Then, just keep making those choices each day, and you'll be able to lose the weight you want to lose!

Change from 2 glasses of whole milk a day to 2 glasses of 1% milk a day: Save 100 calories

Change from 1 glass of Juicy Juice a day to 1 glass of water: Save 120 calories

Change from 8 oz of Snapple a day to 8 oz of water: Save 100 calories

Change from 1 package of peanut butter crackers to 26 Cheese Its: Save 60 calories

Change from 2 Yodels to 1 Chips Deluxe cookie: Save 210 calories

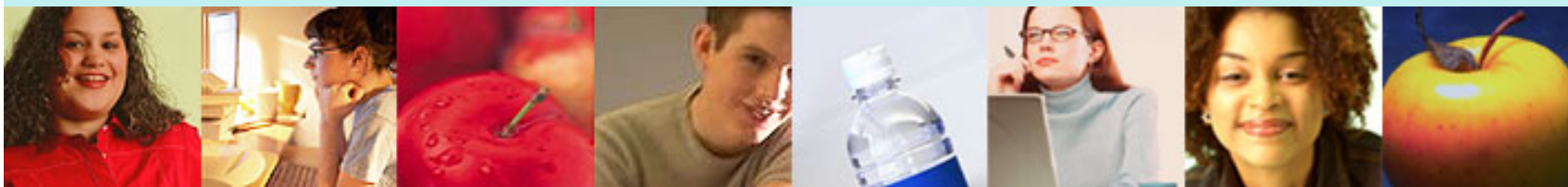
Change from a Dunkin Donut's muffin to a plain bagel: Save 190 calories

Change from a Coffee Coolatta at Dunkin Donuts with cream to one with skim: Save 180 calories

Change from a Burger King Double Whopper to a Whopper with no mayo: Save 270 calories

Change from a bacon cheeseburger at Burger King to a plain burger: Save 90 calories

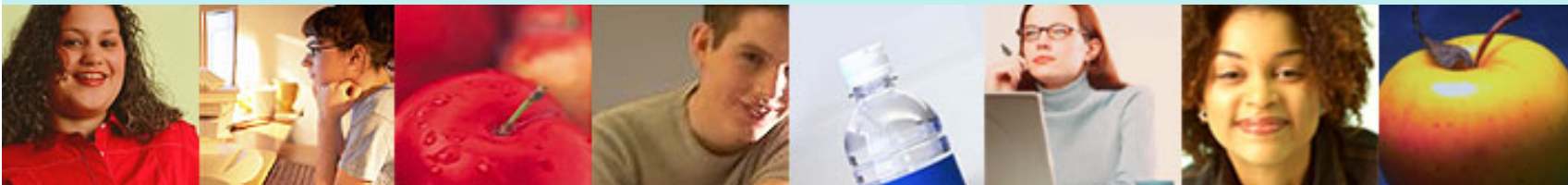
Skip 1 King size French fries at Burger King: Save 600 calories



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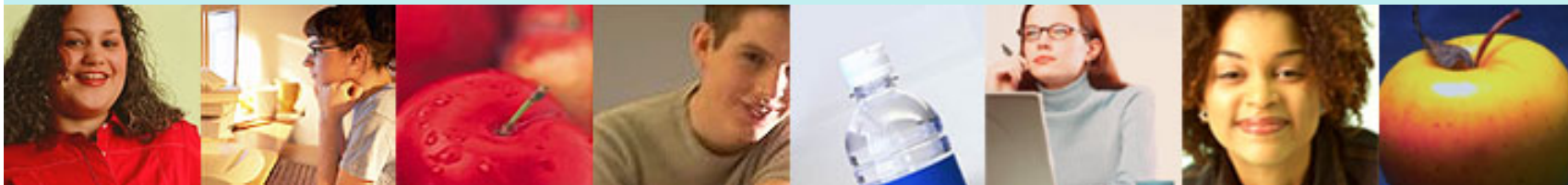
Outcome measurements

- **Primary: Rate of user acquisition**
 - That is, how many of the visitors to the website actually register and use the site.
- **Secondary: characteristics of the users.**



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Results

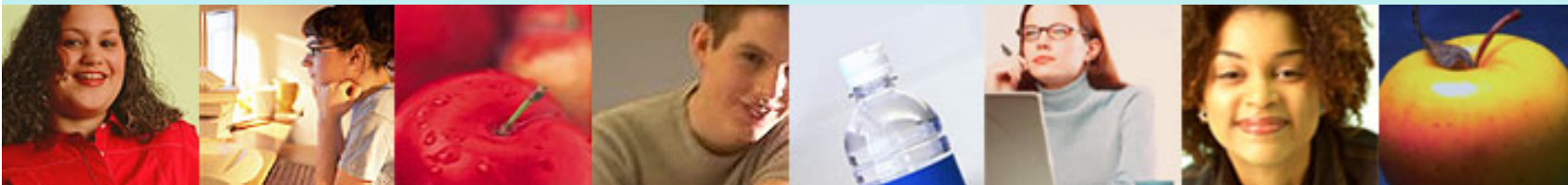


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Rate of User Acquisition

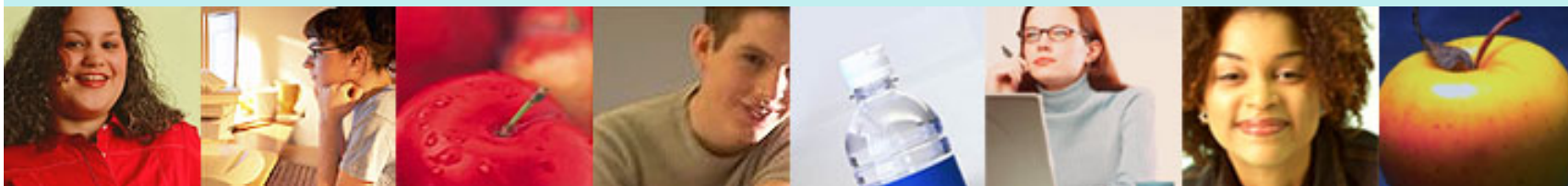
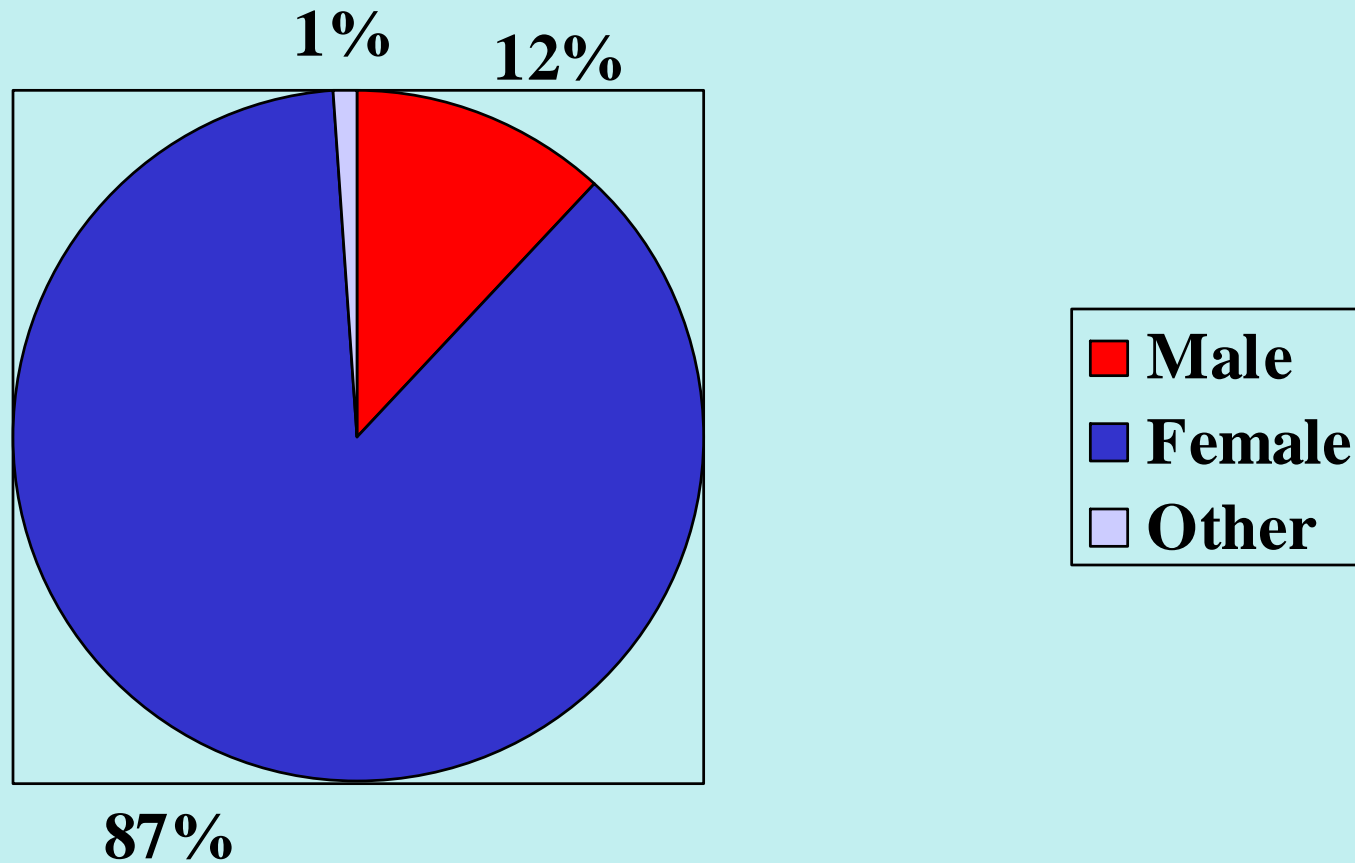
- **5047 visits to the website in the past year.**
- **473 total registered users**

- **323 users registered in the past year**
- **0.06 rate of user acquisition**
 - (typical: 0.02-0.04)



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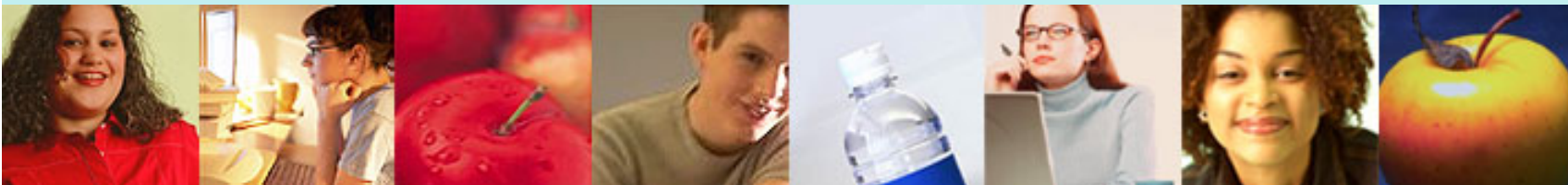
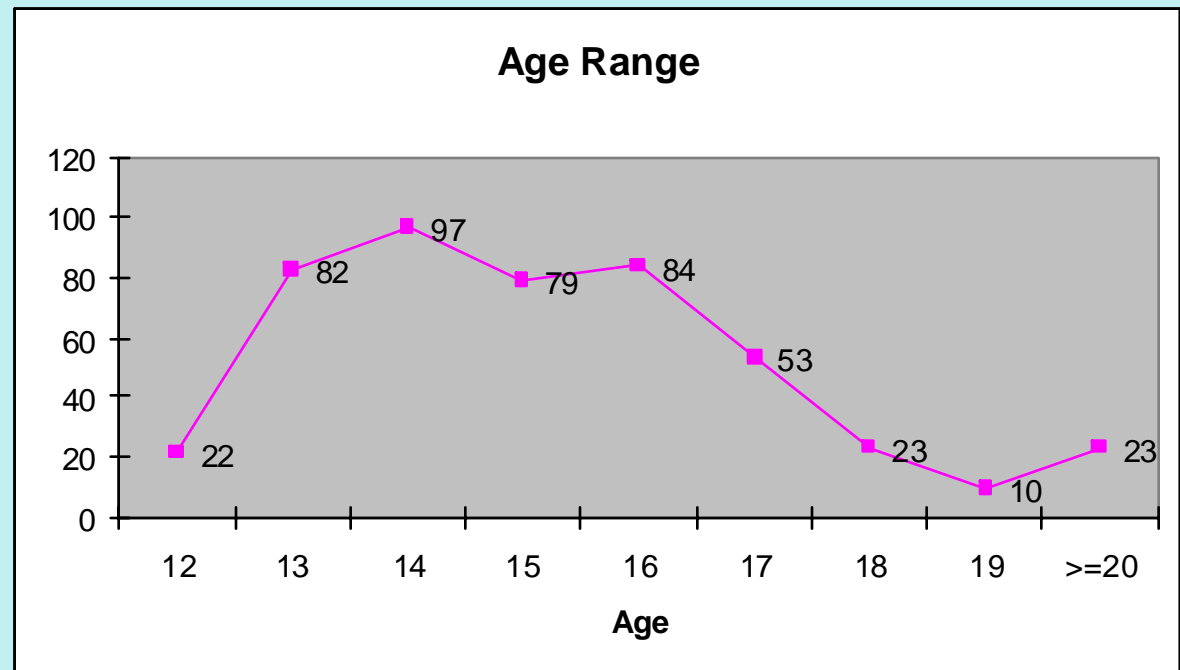
Demographics of Users



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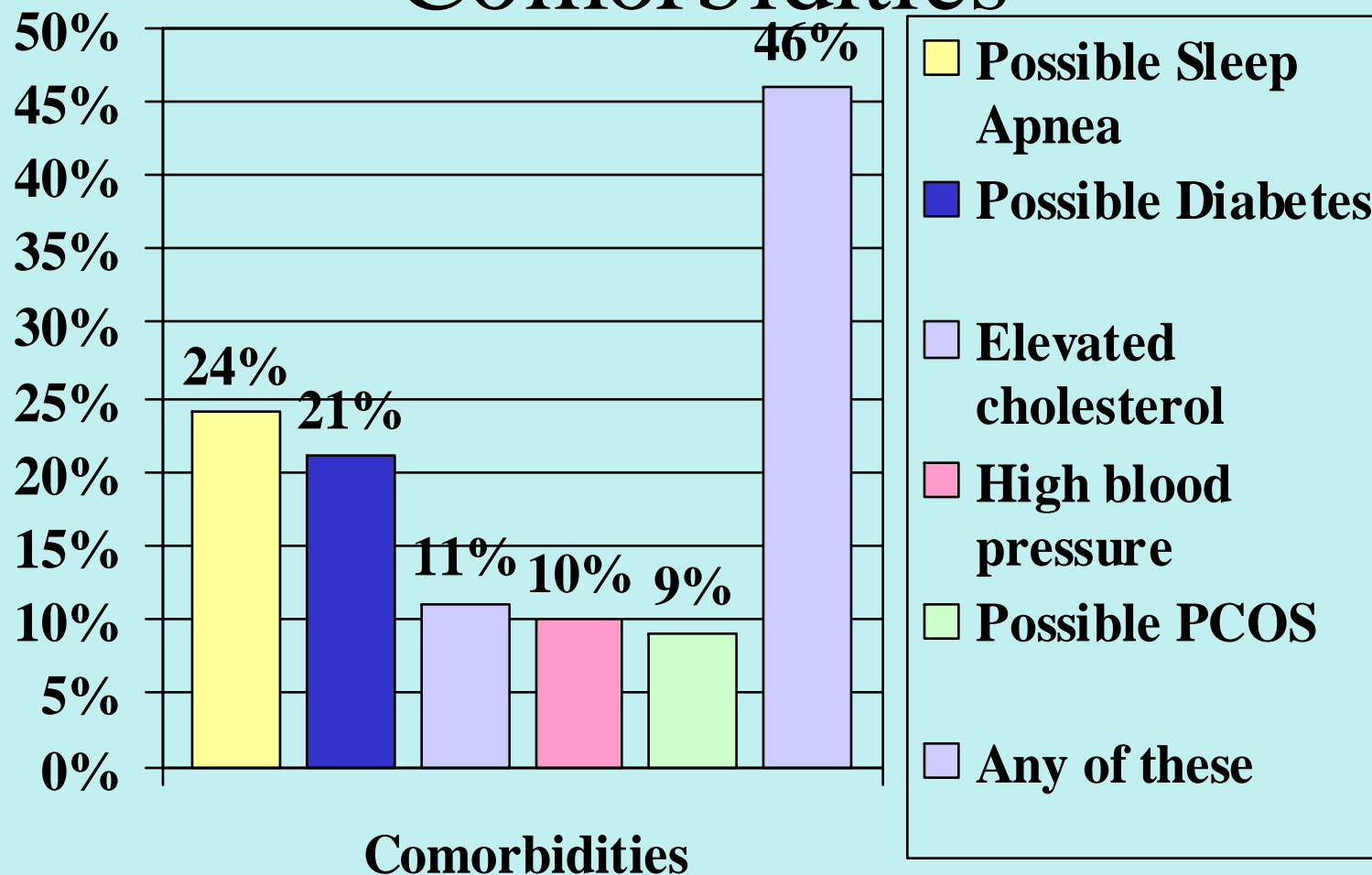
Demographics of Users

- **Age: 12-26 years old**
- **Average and median age 15 years old**



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Comorbidities

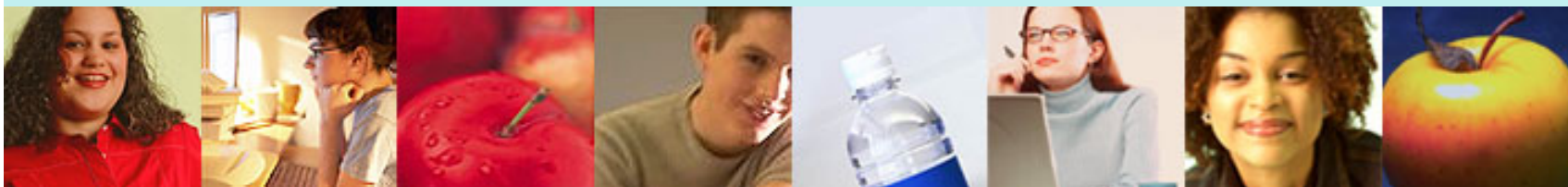


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Similar frequencies

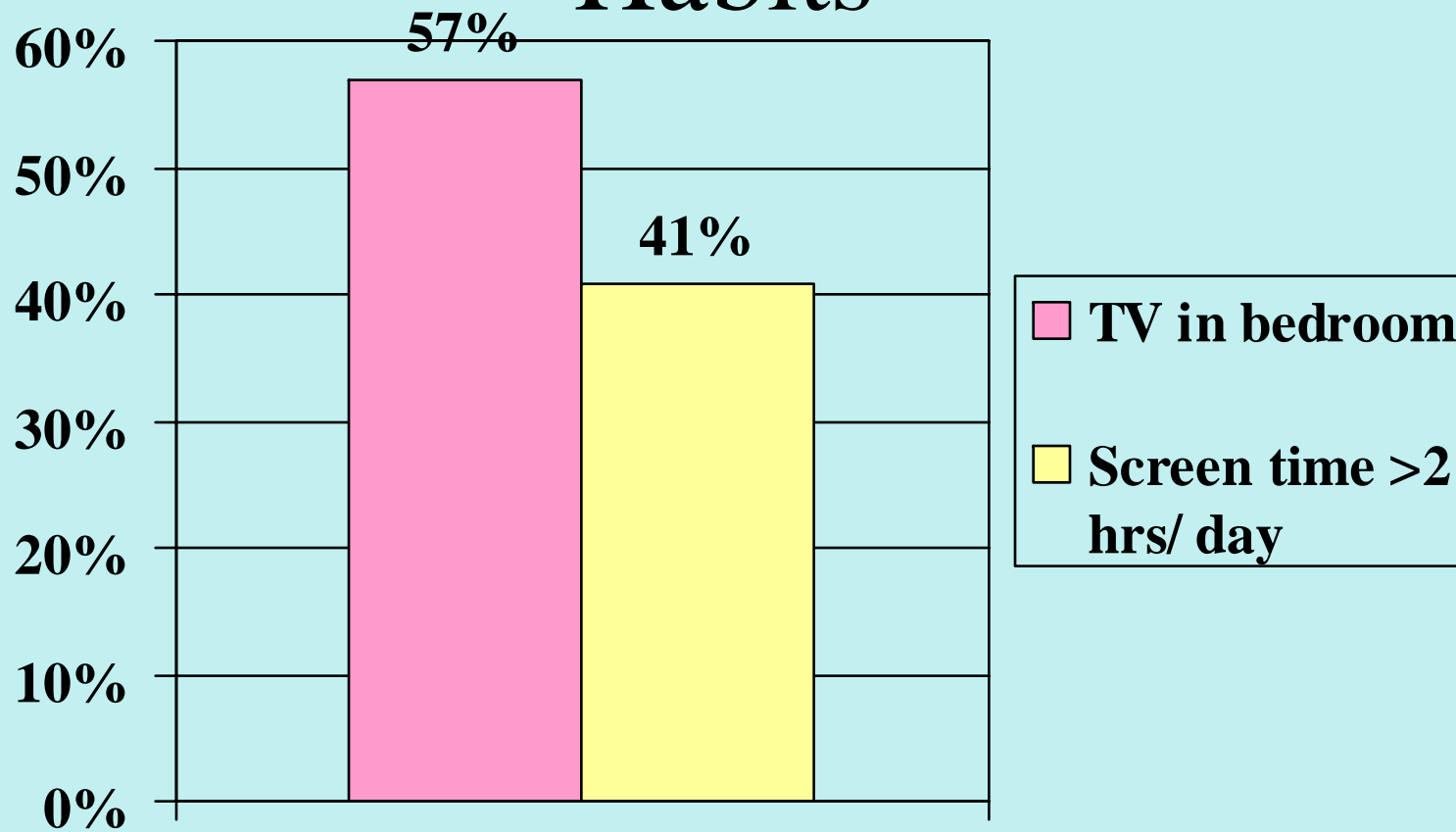
	Website users	General Overweight Population
Abnormal glucose metabolism	21% with sx c/w diabetes	25% ⁽¹⁾
Sleep apnea	24%	7-37% ⁽¹⁾
PCOS	9%	4-7% in genl pop ⁽²⁾

1. Wyllie, Cur Op in Ped. 17(5):632-635, 2005.; 2. Creatsas, Curr Op in Ob&Gyn. 19(5):420-426, 2007.

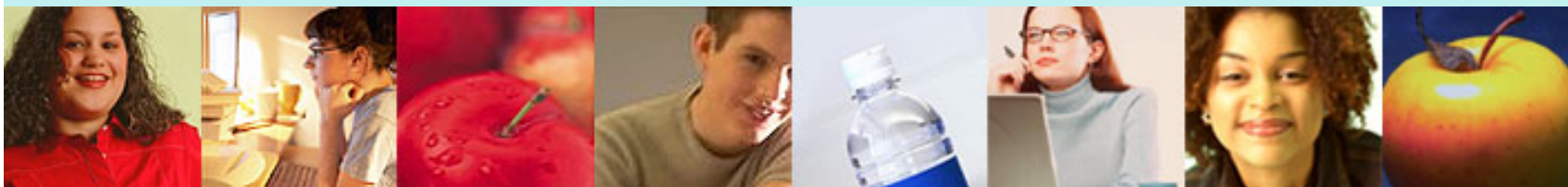


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Habits

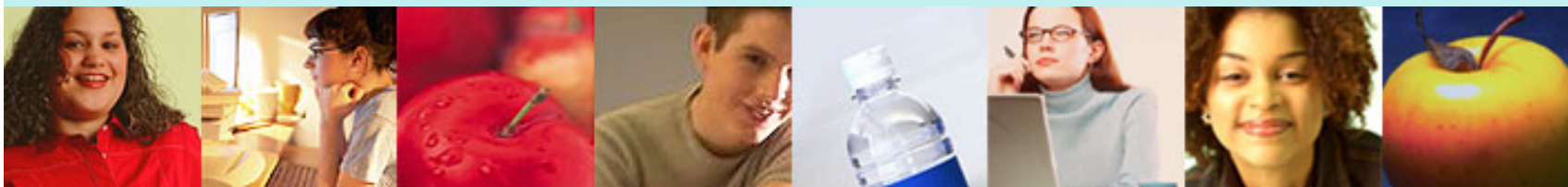
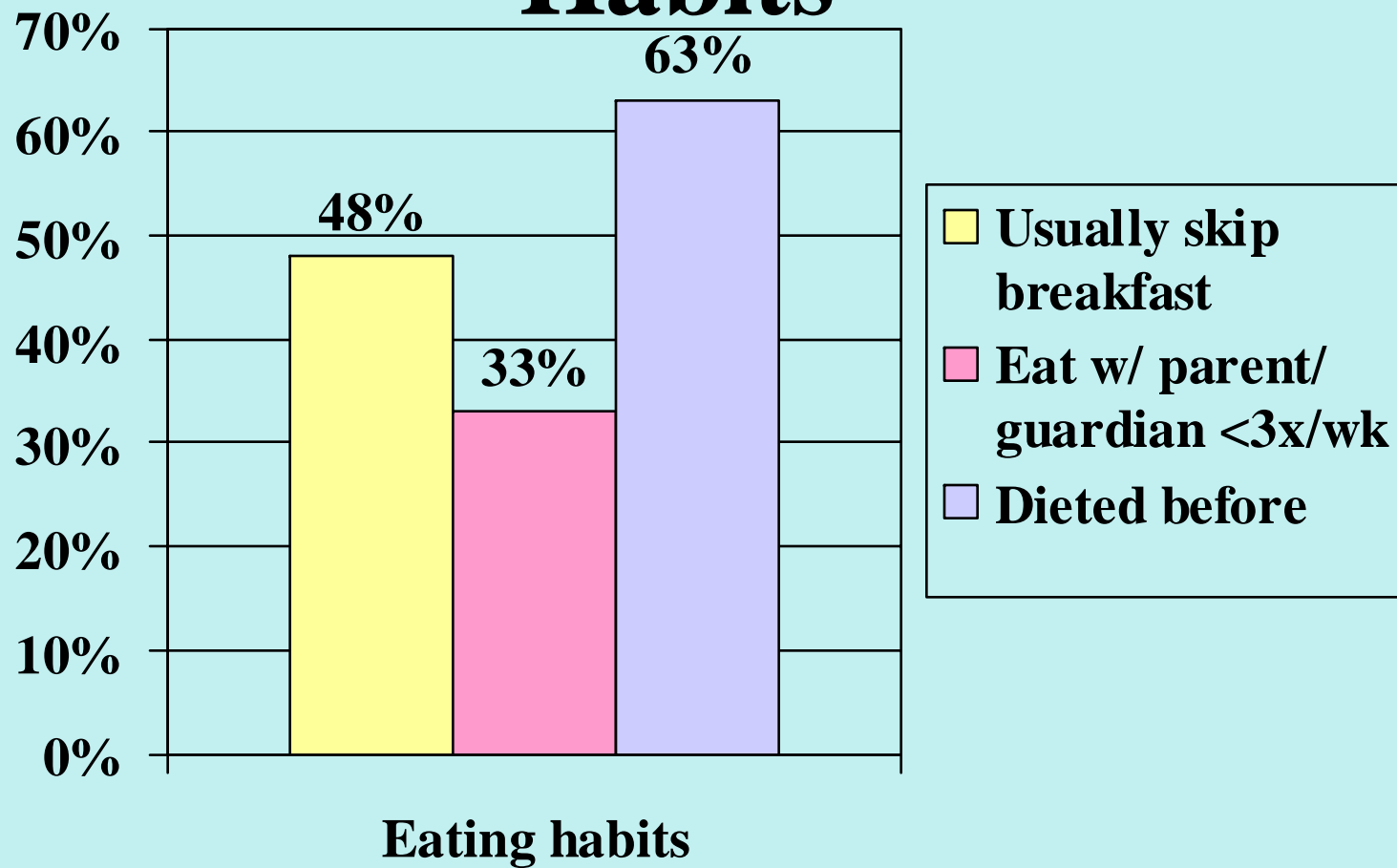


Screen Habits



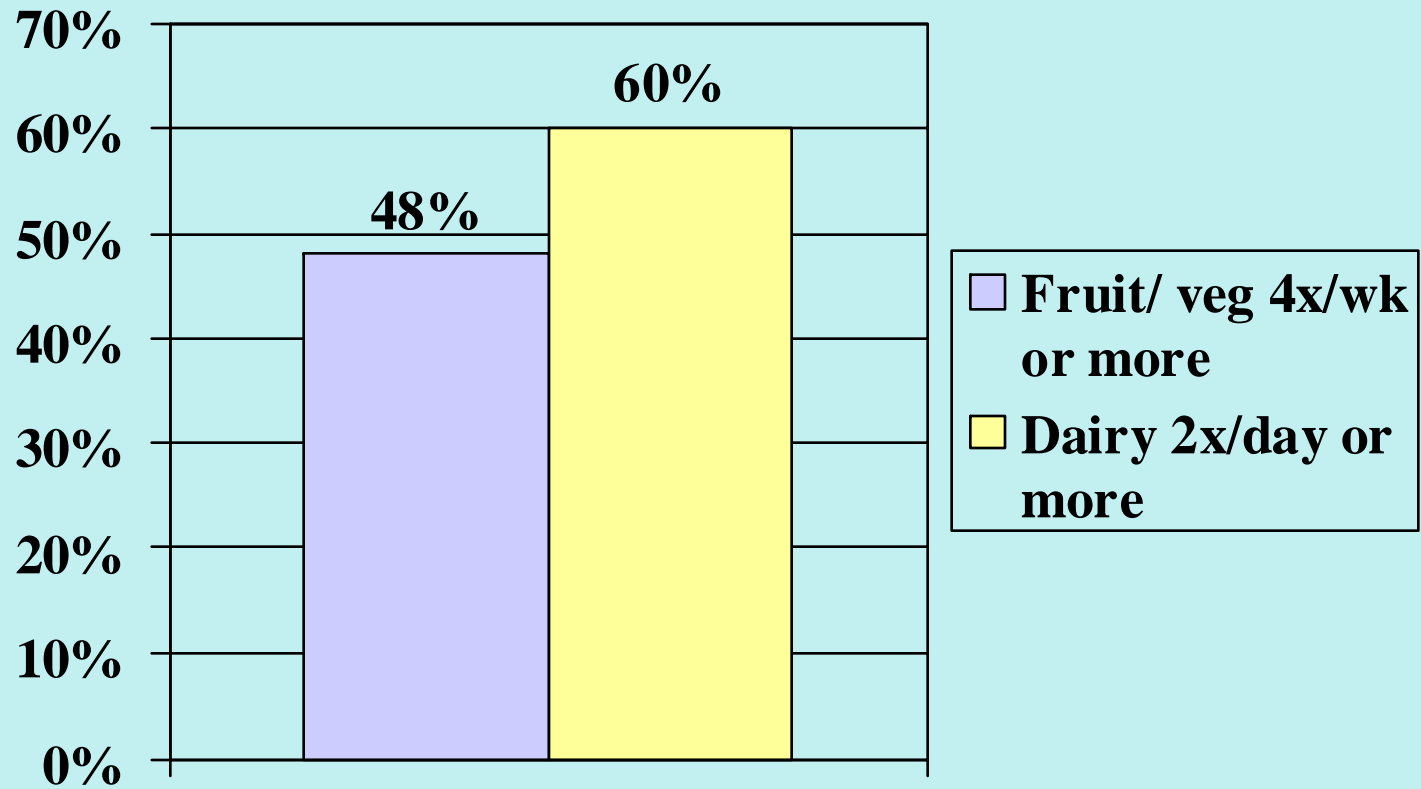
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Habits

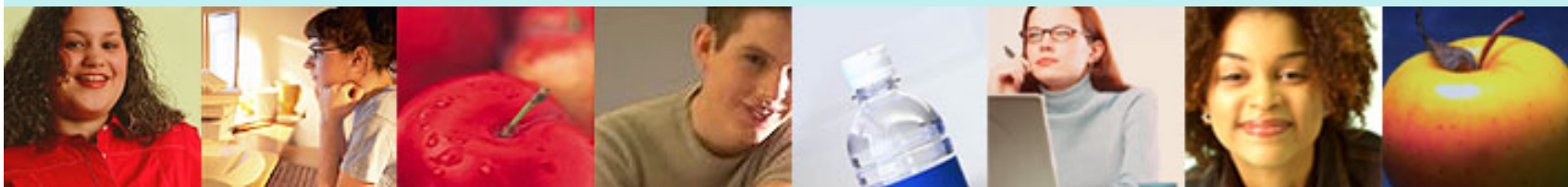


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Diet

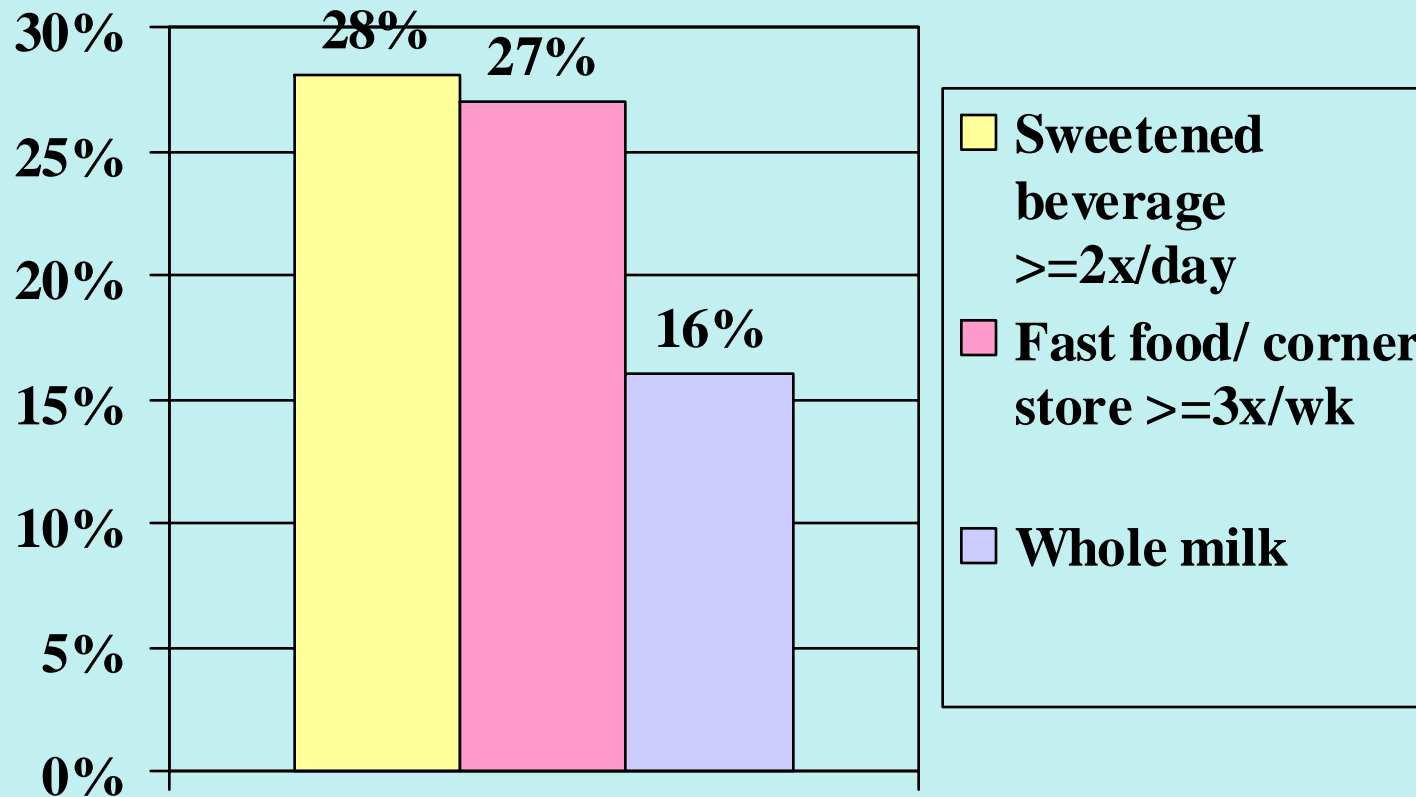


Positive dietary habits

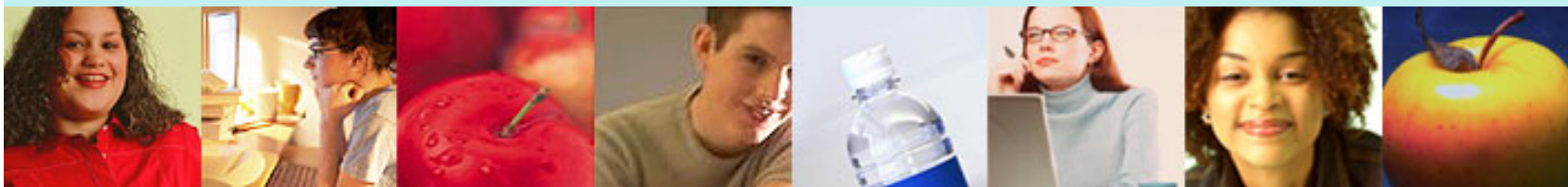


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Diet

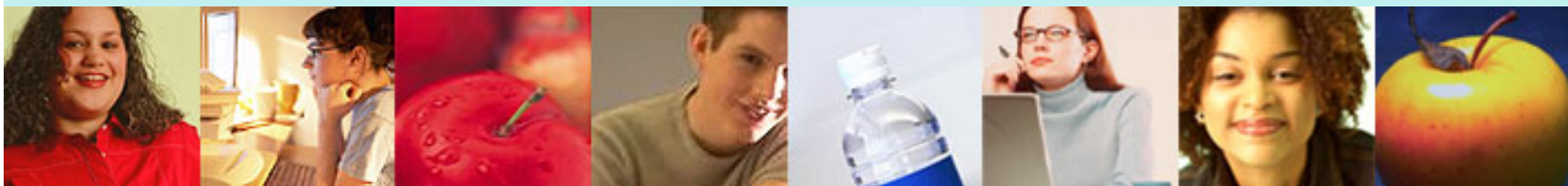
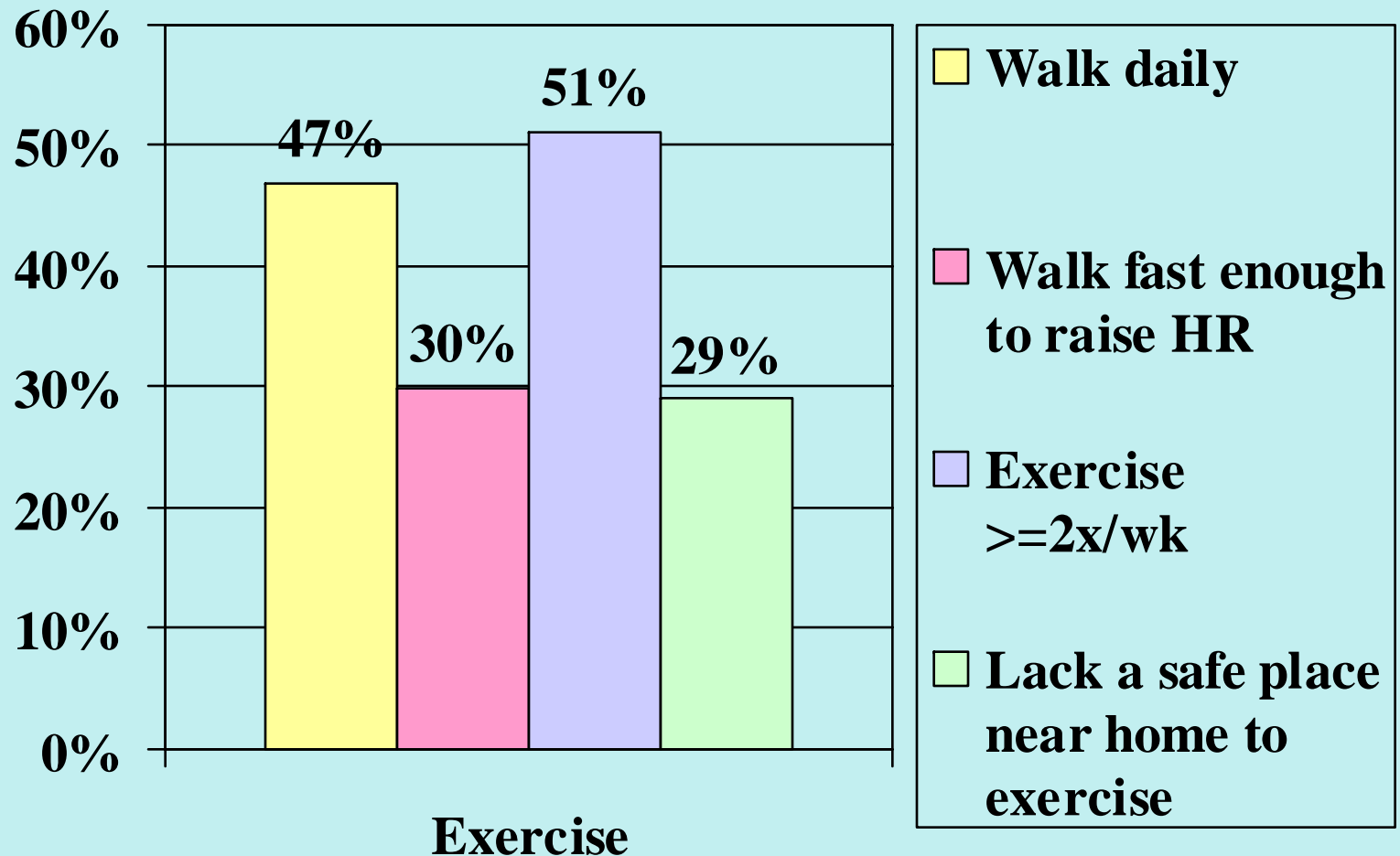


Non-beneficial dietary habits



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Exercise

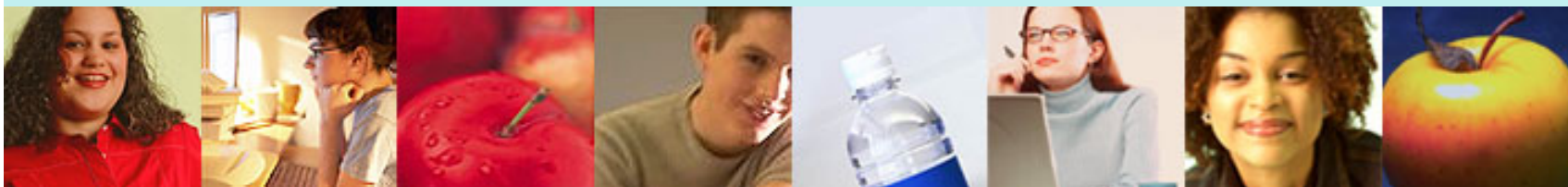


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National Data Comparision

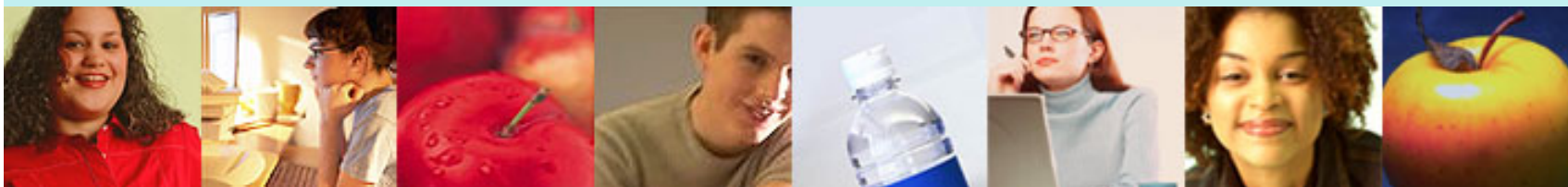
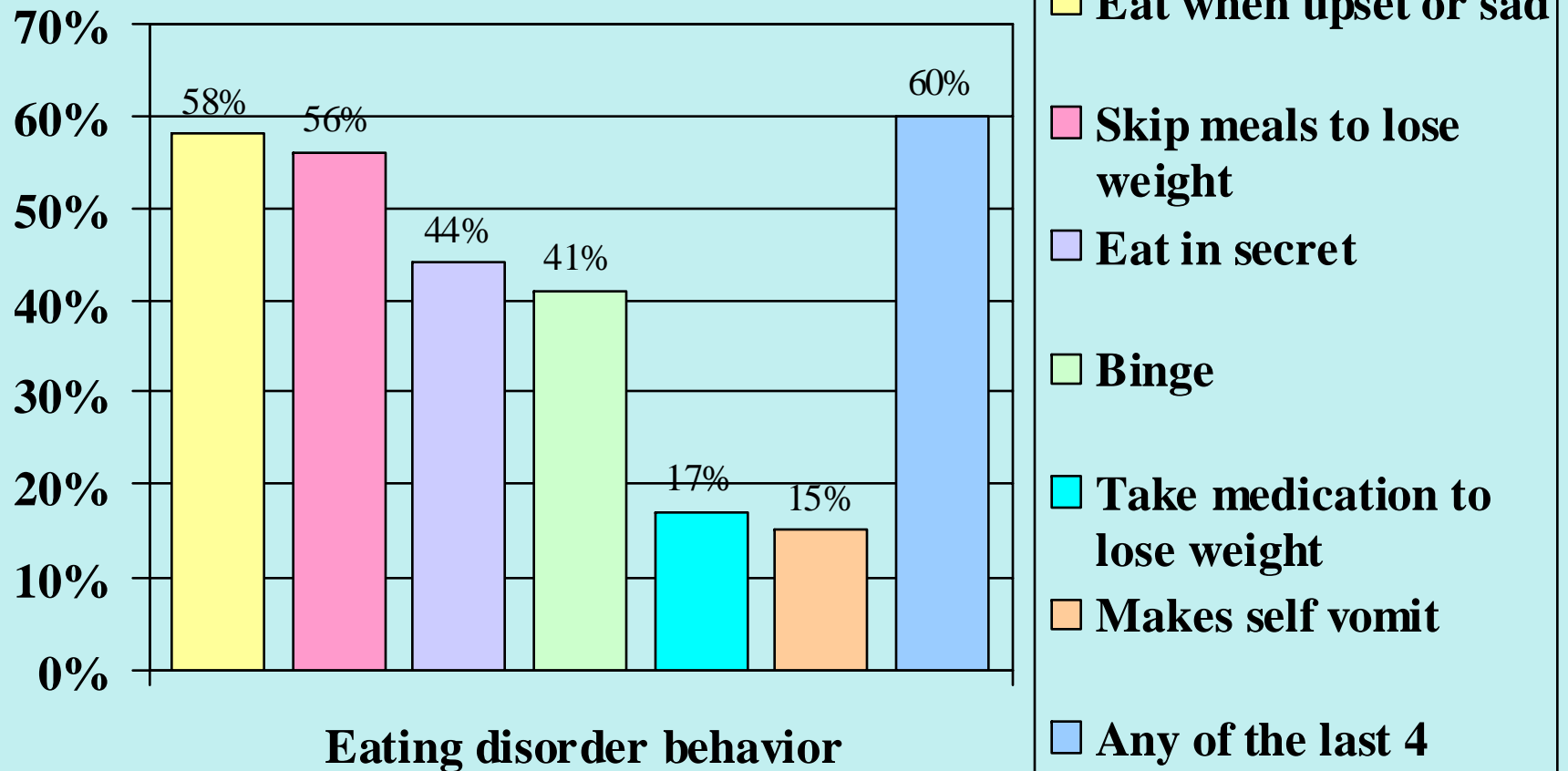
	Website users	General Population
Milk	$\geq 2x/day$: 60%	$\geq 3x/day$: 16%
Screen time	> 2 hrs/day: 41%	> 3 hrs TV: 37%
Exercise	$\geq 2x/wk$: 51%	$\geq 3x/wk$: 64%

Source: Youth Risk Behavior Surveillance System, CDC, 2005



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Eating Disorders

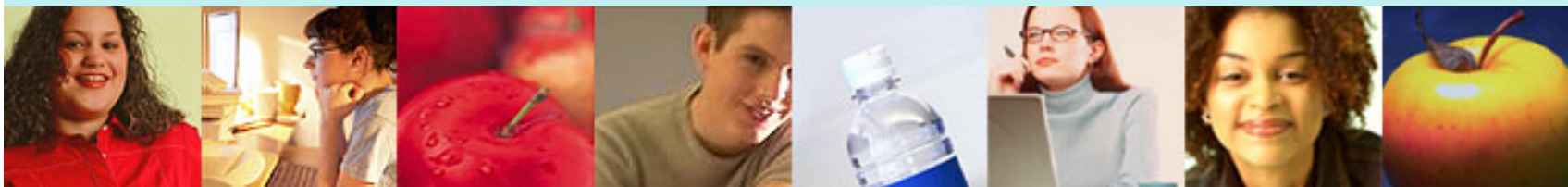


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Increased frequency

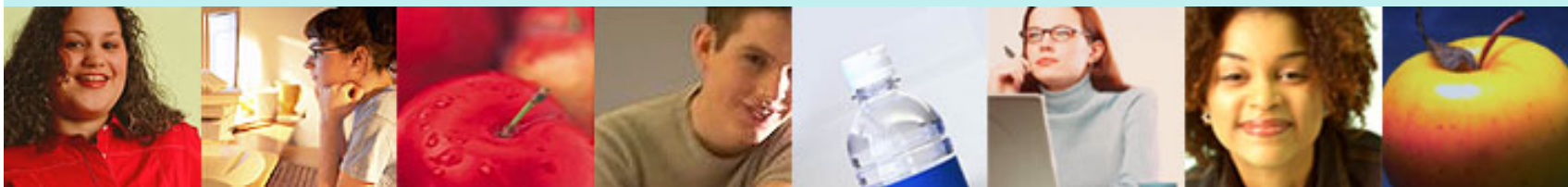
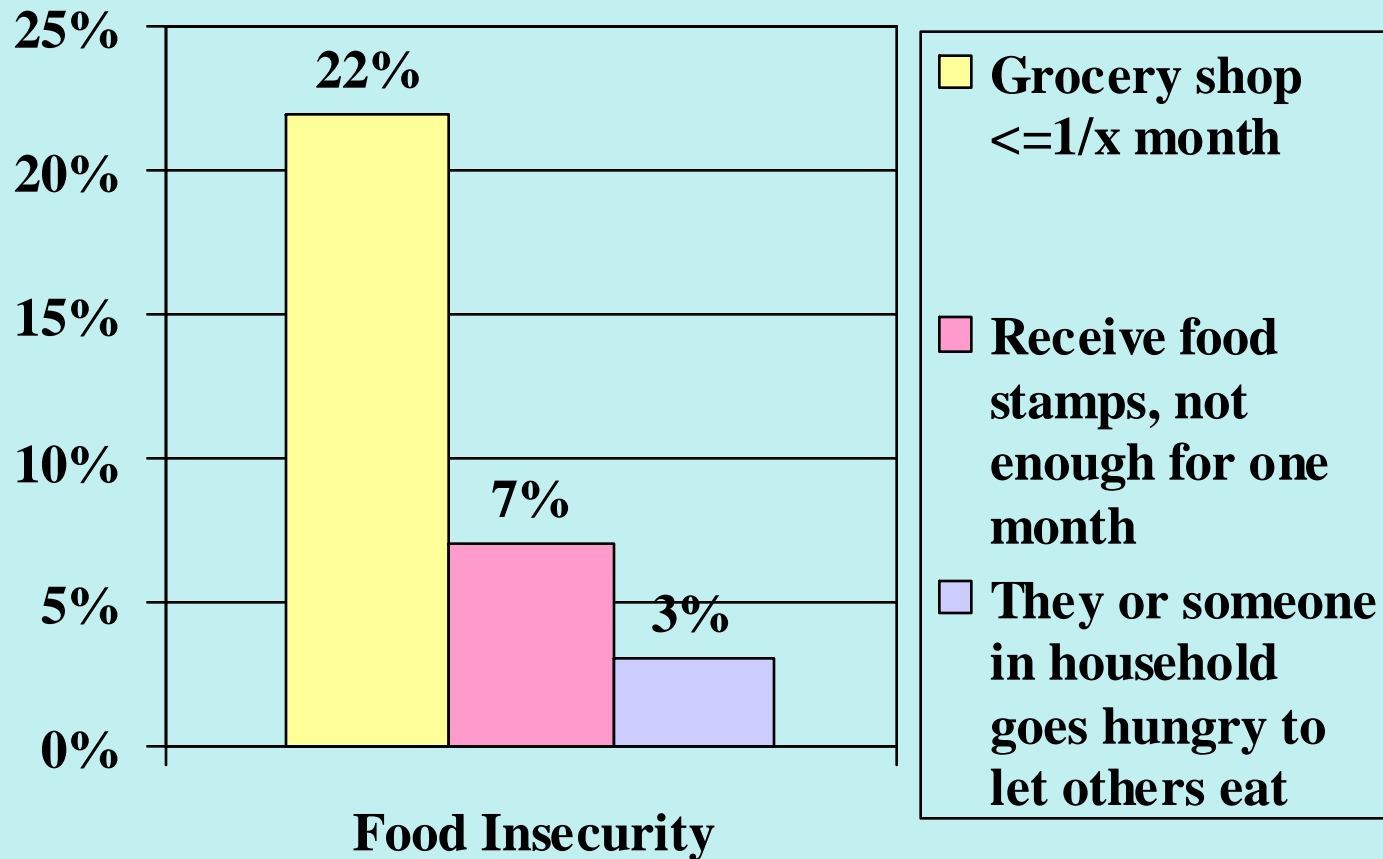
	Website users	General Population
Make themselves vomit	15%	5% (vomited or took laxatives) ⁽¹⁾
Medicine to lose weight	17%	6% ⁽¹⁾
Binge eating disorder	41%	30% of women who seek to lose weight ⁽²⁾

1. YRBSS, 2005; 2. Murphy, LPN. 3(5):19-23, 2007



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Food Insecurity

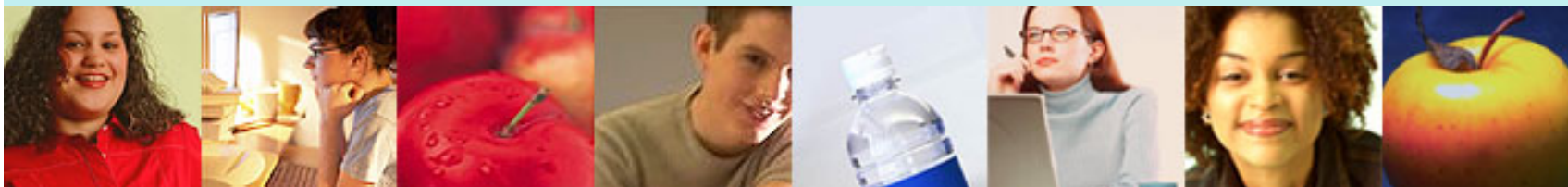


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Lower rate

	Website users	General Population
Food insecurity	3-7%	16% of households with children (1)

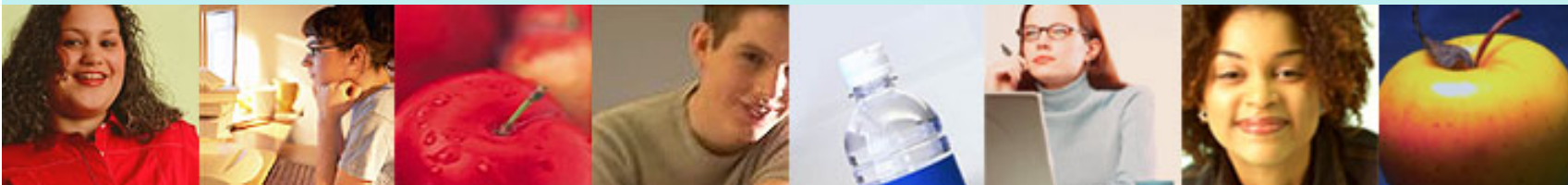
1) Kaiser, Topics in Clin Nut. 20(4):313-320, 2005.



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Conclusions

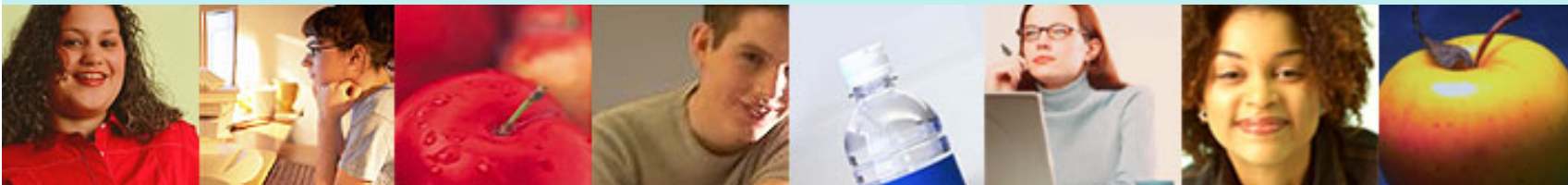
- **High rate of user acquisition:**
- **Suggests this tool is useful and appealing to its audience**



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Conclusions

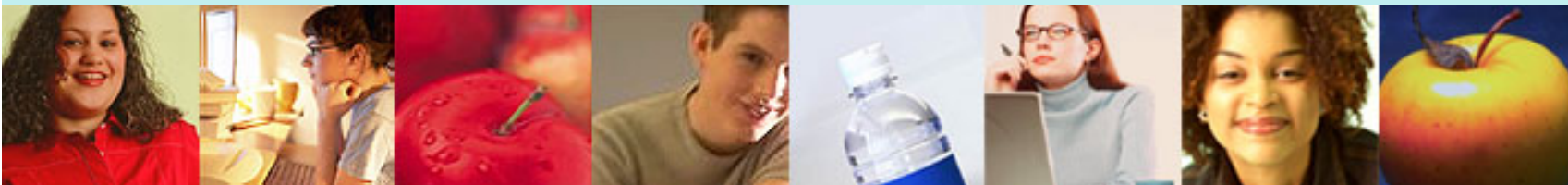
- **The users are those for whom the website was intended: overweight adolescents**
- **Primarily female, with expected level of comorbidities to overweight, & poor dietary and exercise habits**



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Eating Disorders

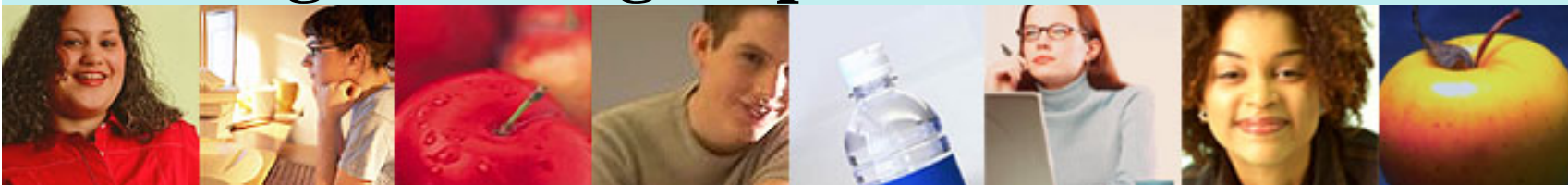
- **A rate of possible eating disorders that surpasses that seen in the general population**
- **Suggests that eating disorder patients may seek out anonymous sources of health information at a higher rate than other groups**



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Food Insecurity

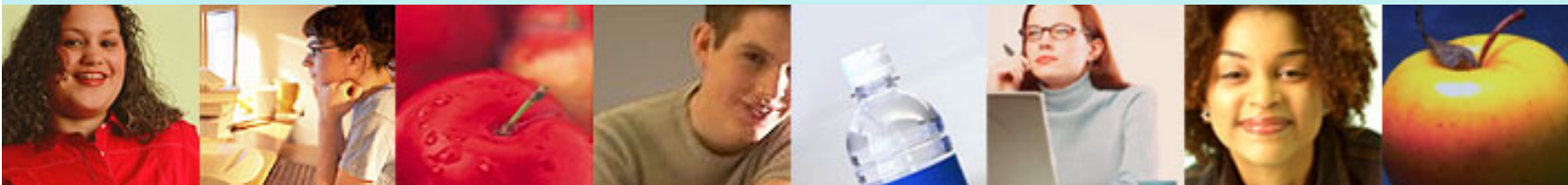
- **Lower rate of food insecurity than seen in general population**
- **While the website users are an economically diverse population,**
- **Not as as much poverty as general population**
- **Computer-ownership more common in higher SES groups**



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Next Steps

- **Collect data on goals set by website users**
- **Collect data on logbook by website users**
- **Augment website with:**
 - **Links for eating disorder sites**
 - **Exercise calculator**
 - **Links for obtaining health insurance**



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