

Why Care about Walking?

A Celebration of the NHTS

by

Matthew A. Coogan

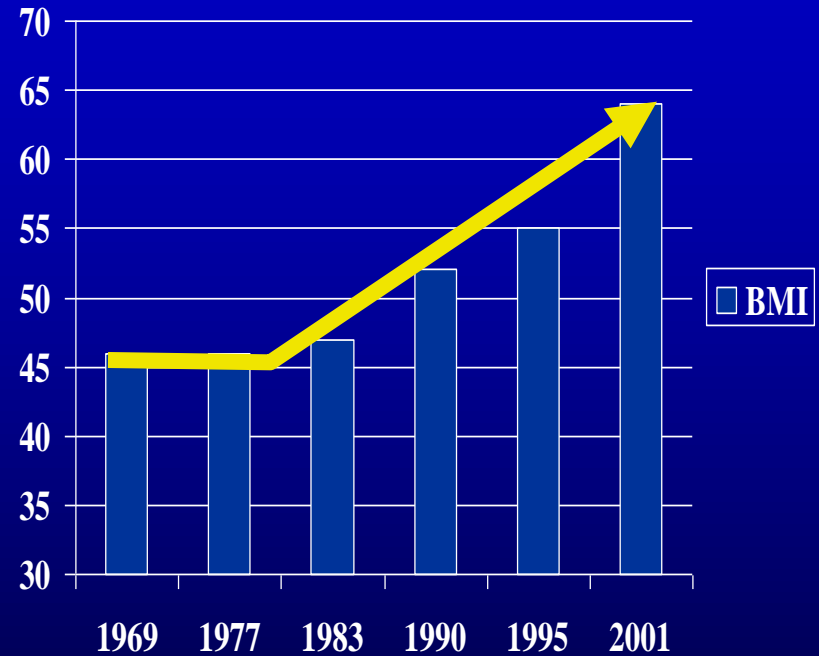
Consultant in Transportation

January 12, 2003

A Caution

- This PowerPoint presentation was developed by the author based on preliminary data being reviewed for acceptance by the FHWA and the BTS. The information has not been peer-reviewed nor published and should be considered a work in progress. It is a *draft*, and *not for circulation*.

Growth in “Overweight”

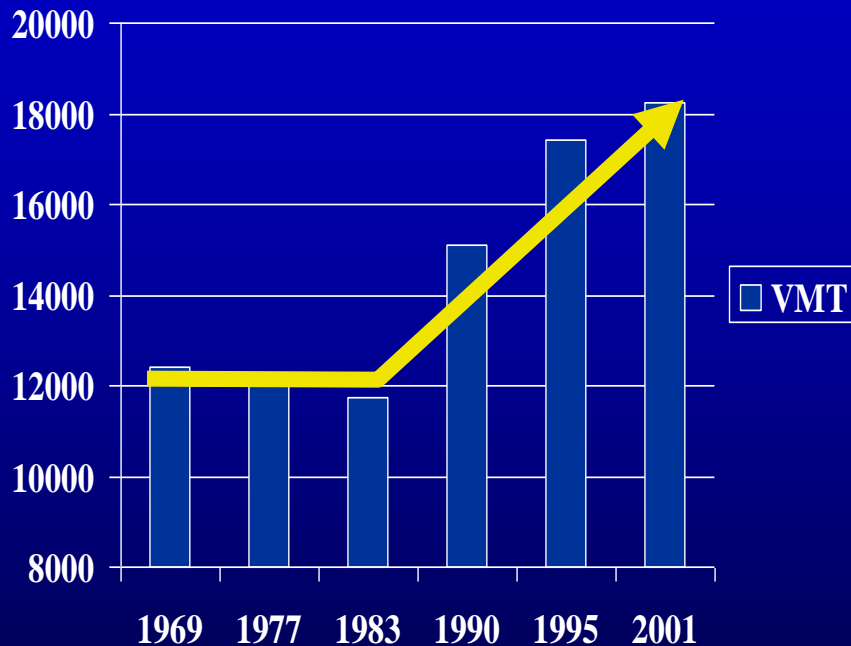


Growth trend for percent of
Americans 'overweight'

(40% overall growth)

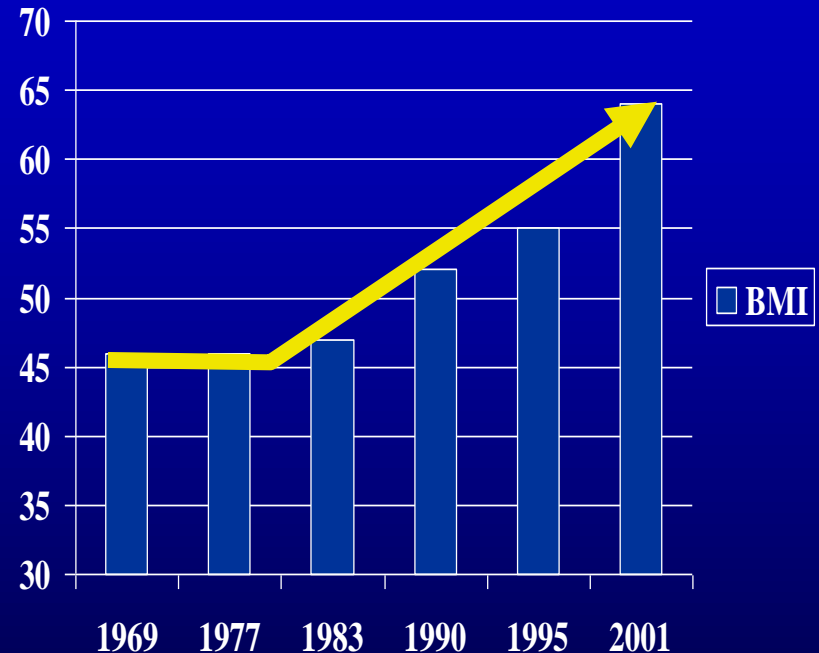
Growth in VMT

Growth in “Overweight”



Growth trend for annual household vehicle miles of travel

(50% overall growth)



Growth trend for percent of Americans 'overweight'

(40% overall growth)

The Role of Walking

Why Should We Care?

- As transportation patterns change, we can see major shifts in VMT
- As patterns change, VMT and vehicle dependence increases, and the role of walking decreases
- There are massive public health implications of this

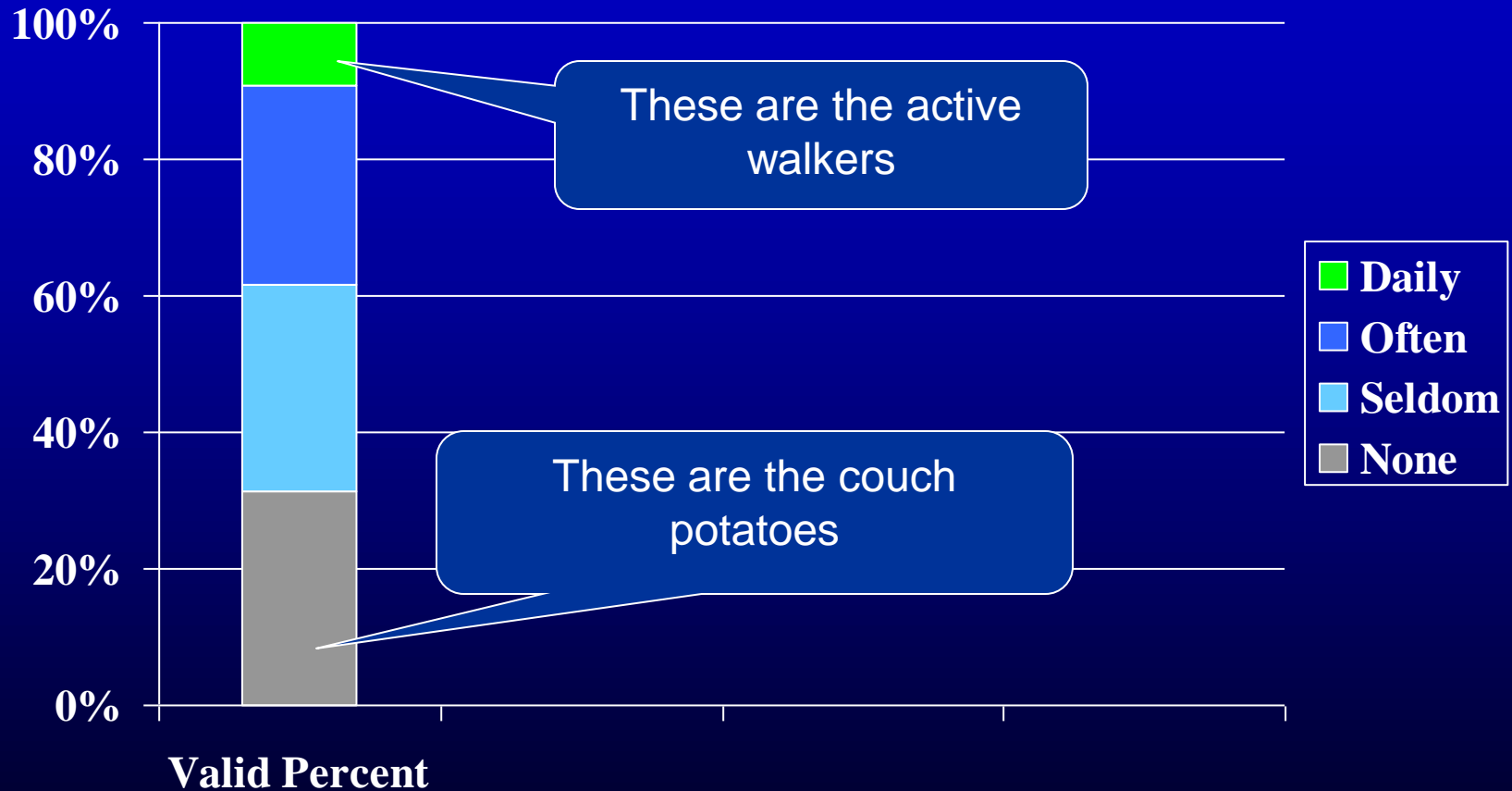
A Short Agenda

- Part One: Looking for Couch Potatoes and for Active Walkers
- Part Two: Looking for variables that DO explain change in walking patterns
 - Establishing the theory
 - Looking for exceptions
 - Suggesting implications

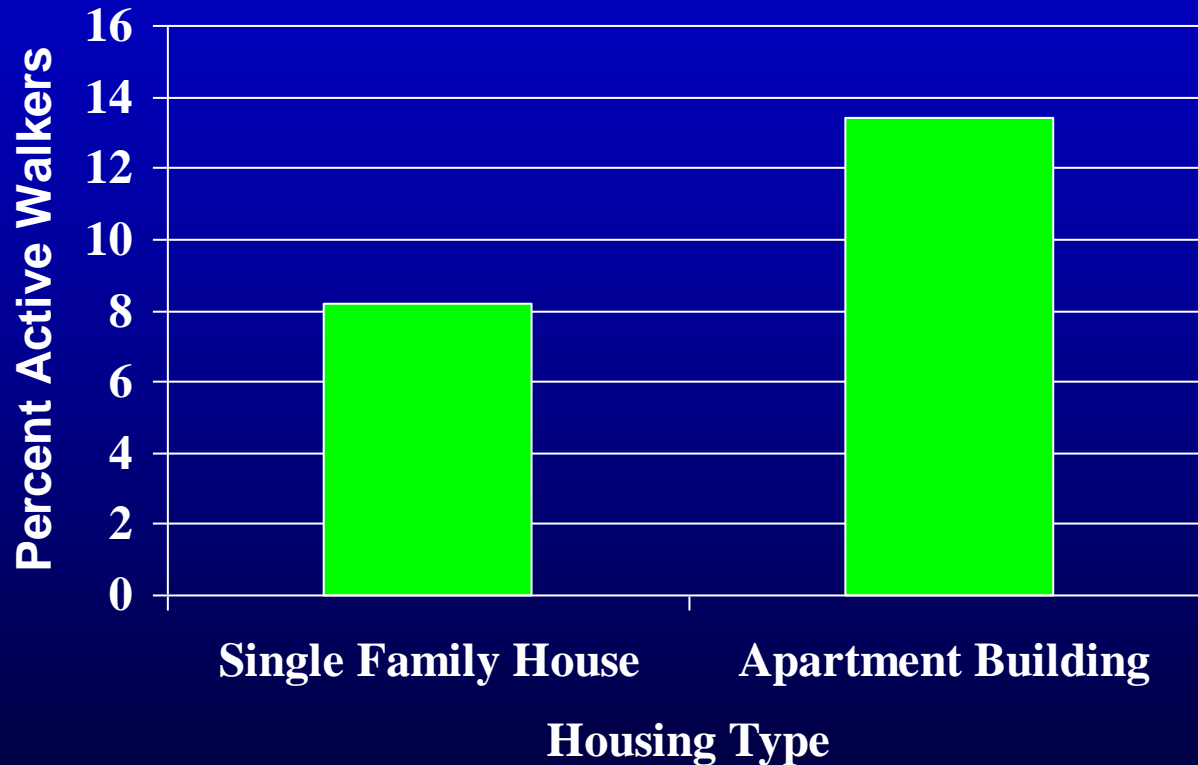
Variables that Influence Taking a Walk

- Most variable did not influence the propensity
 - To be an “Active Walker”
 - Or to be a “Couch Potato”
- Variables examined included
 - Gender
 - Female strong in utilitarian walking
 - Male strong in exercise walking
 - Income
 - Race

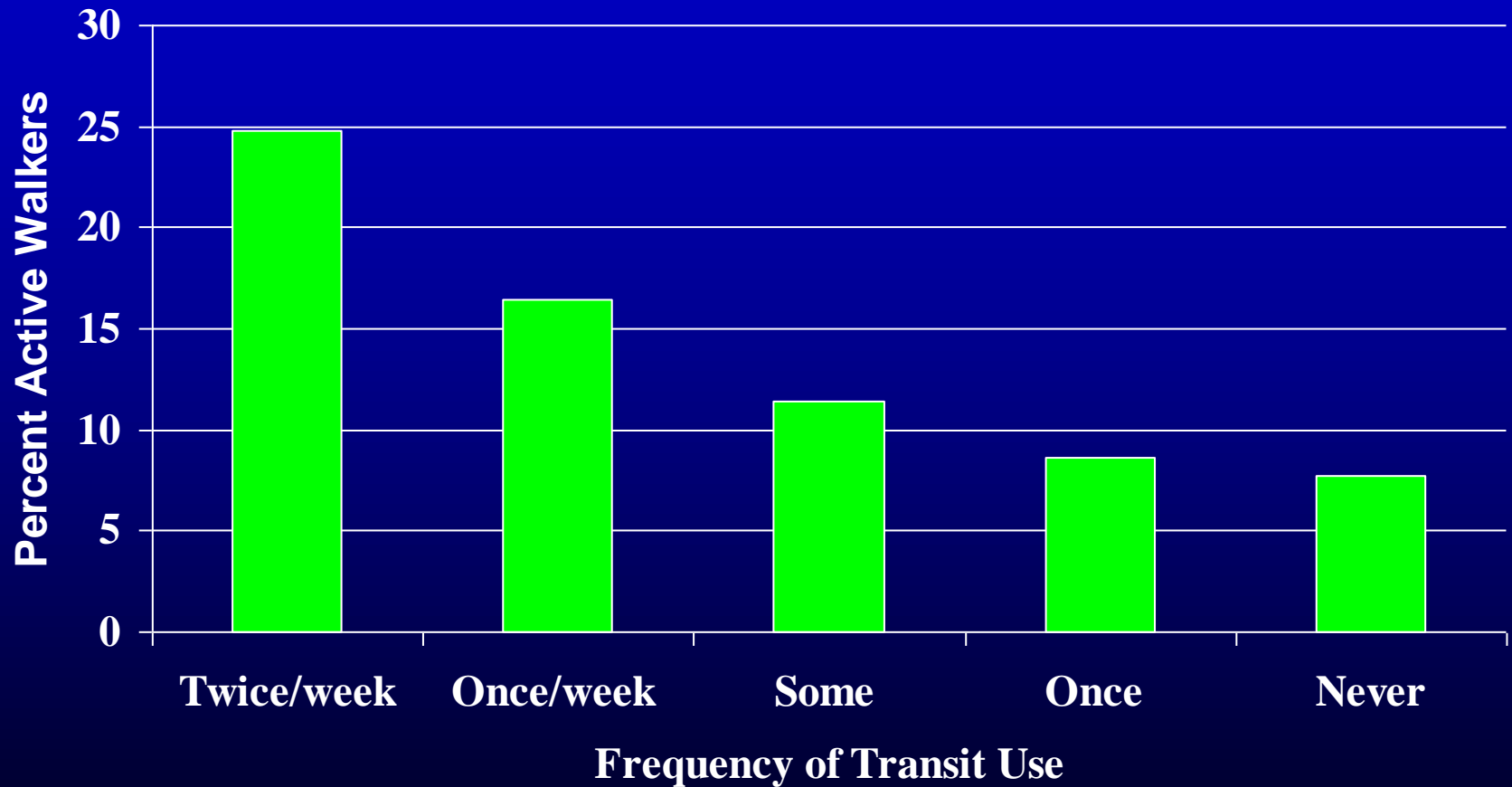
We are *all* supposed to walk once a day



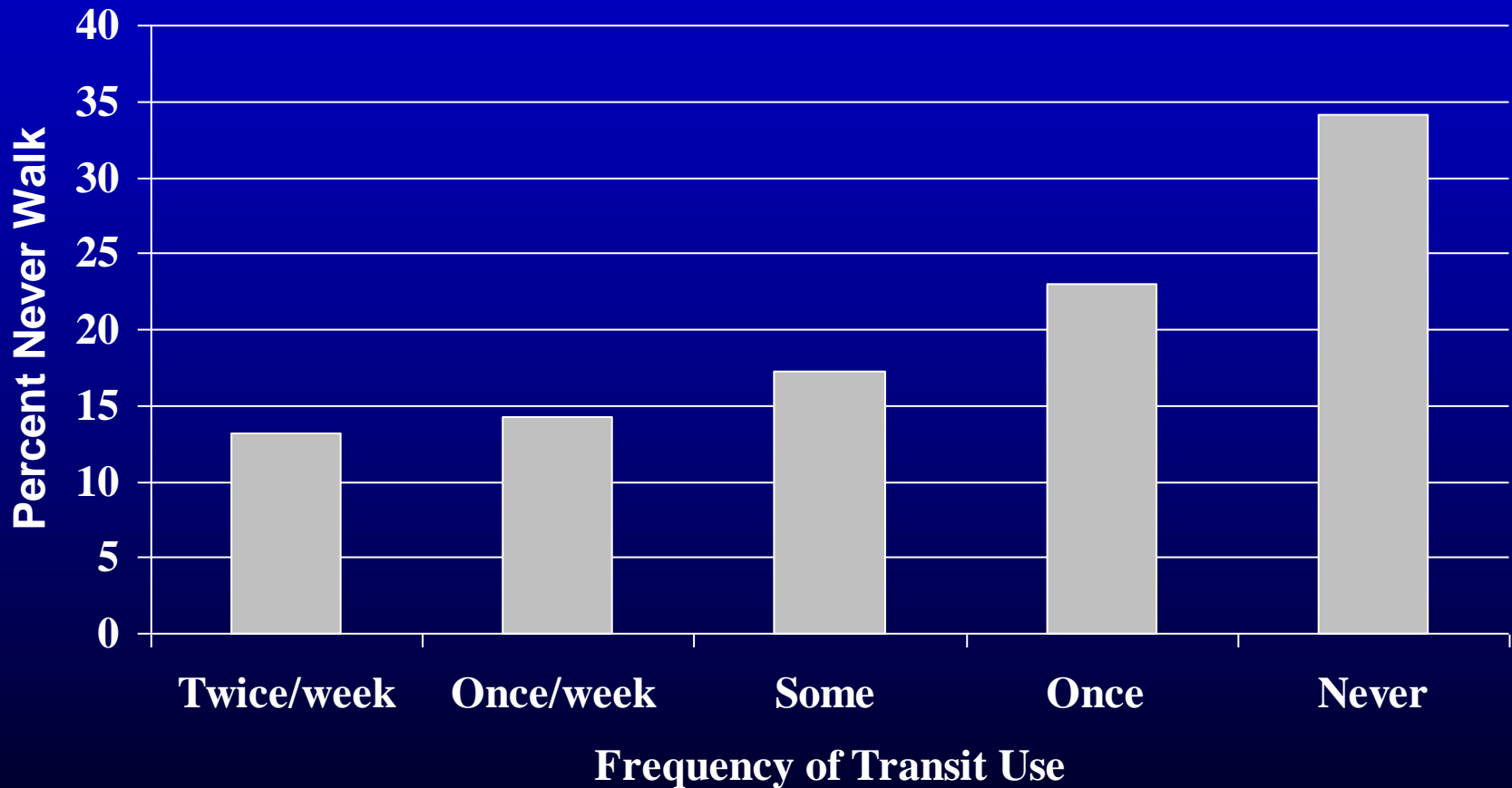
Some variables were explanatory: Housing Type and 'Active Walkers'



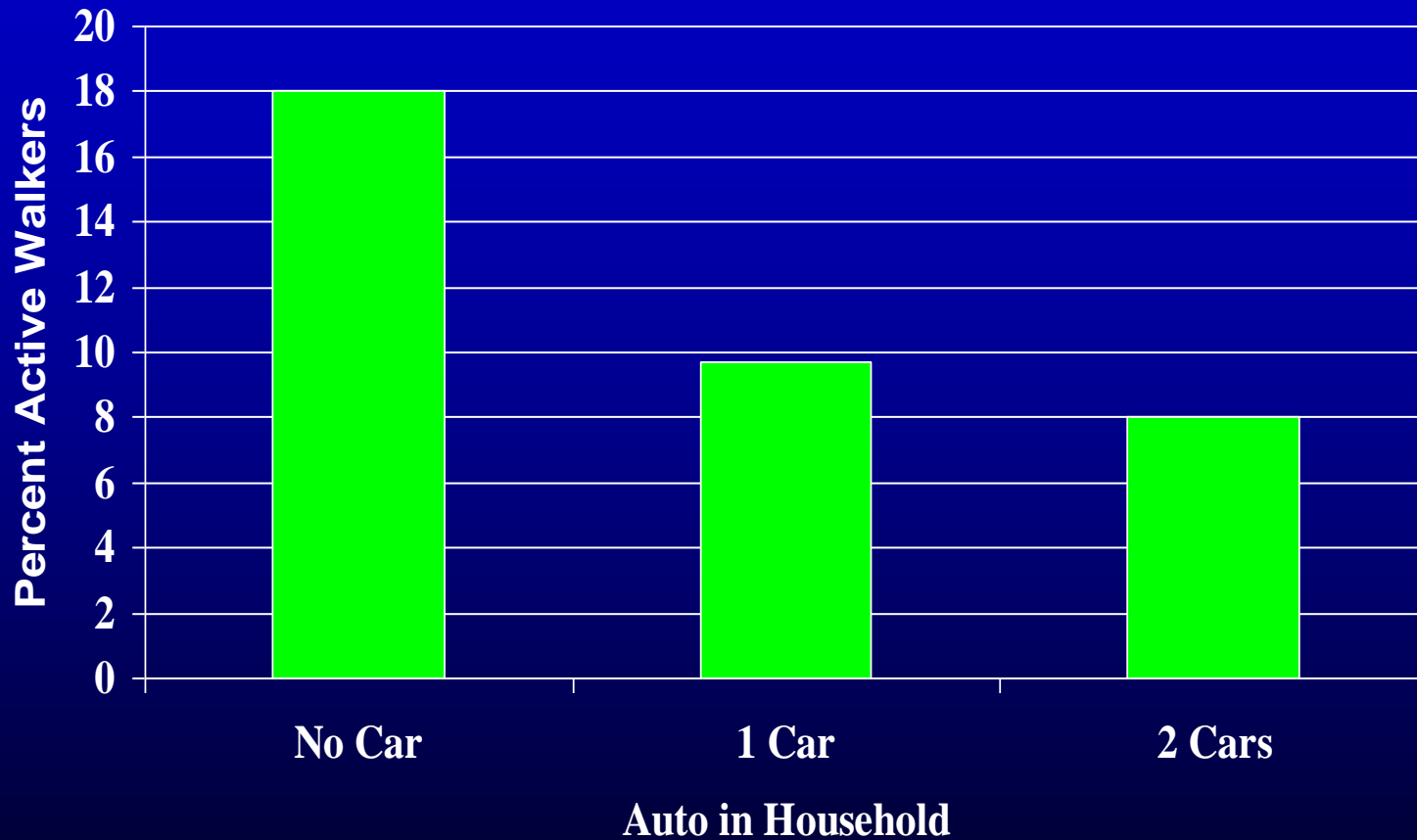
Transit Ridership and Percent 'Active Walkers'



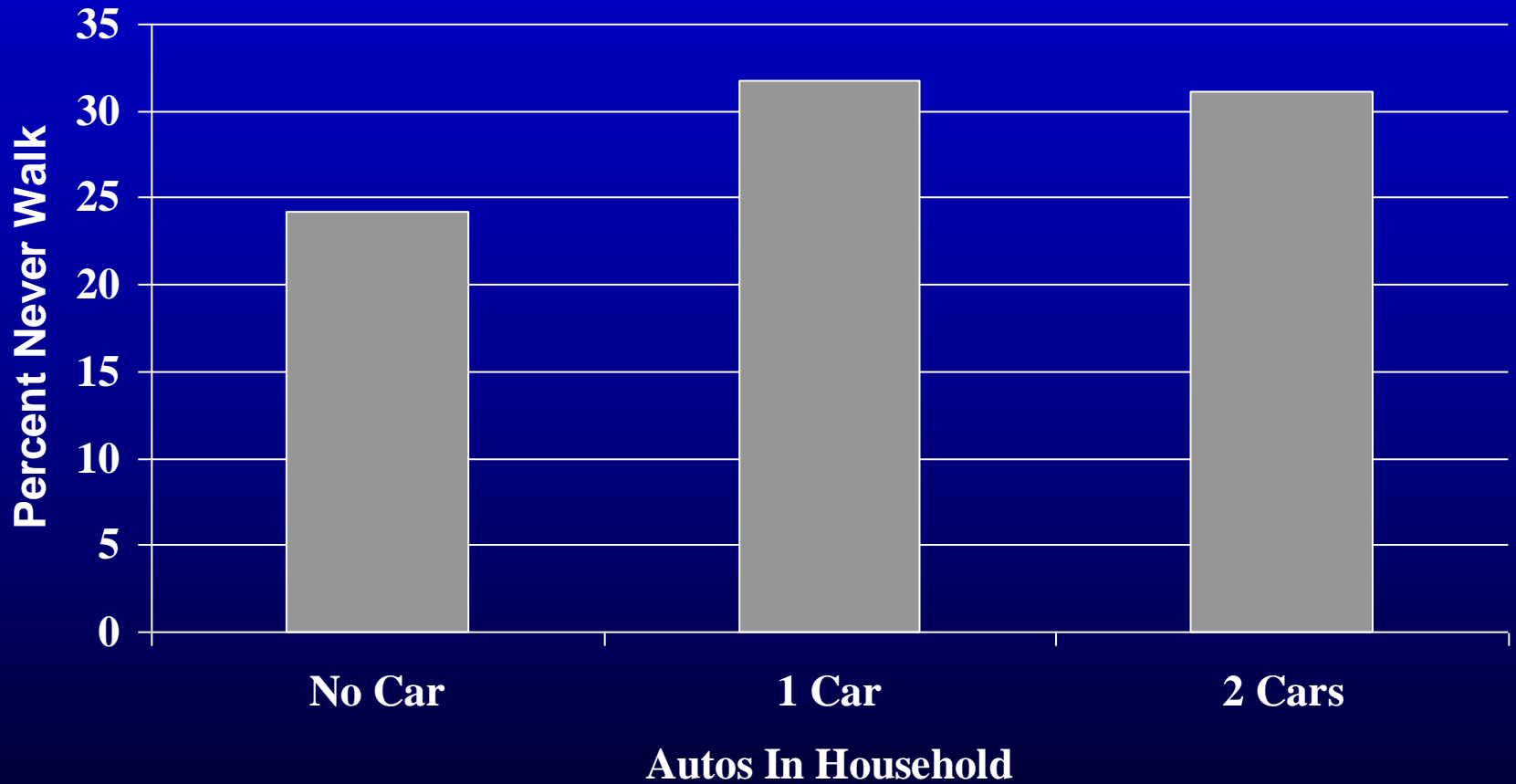
Transit Ridership and Percent 'Couch Potatoes'



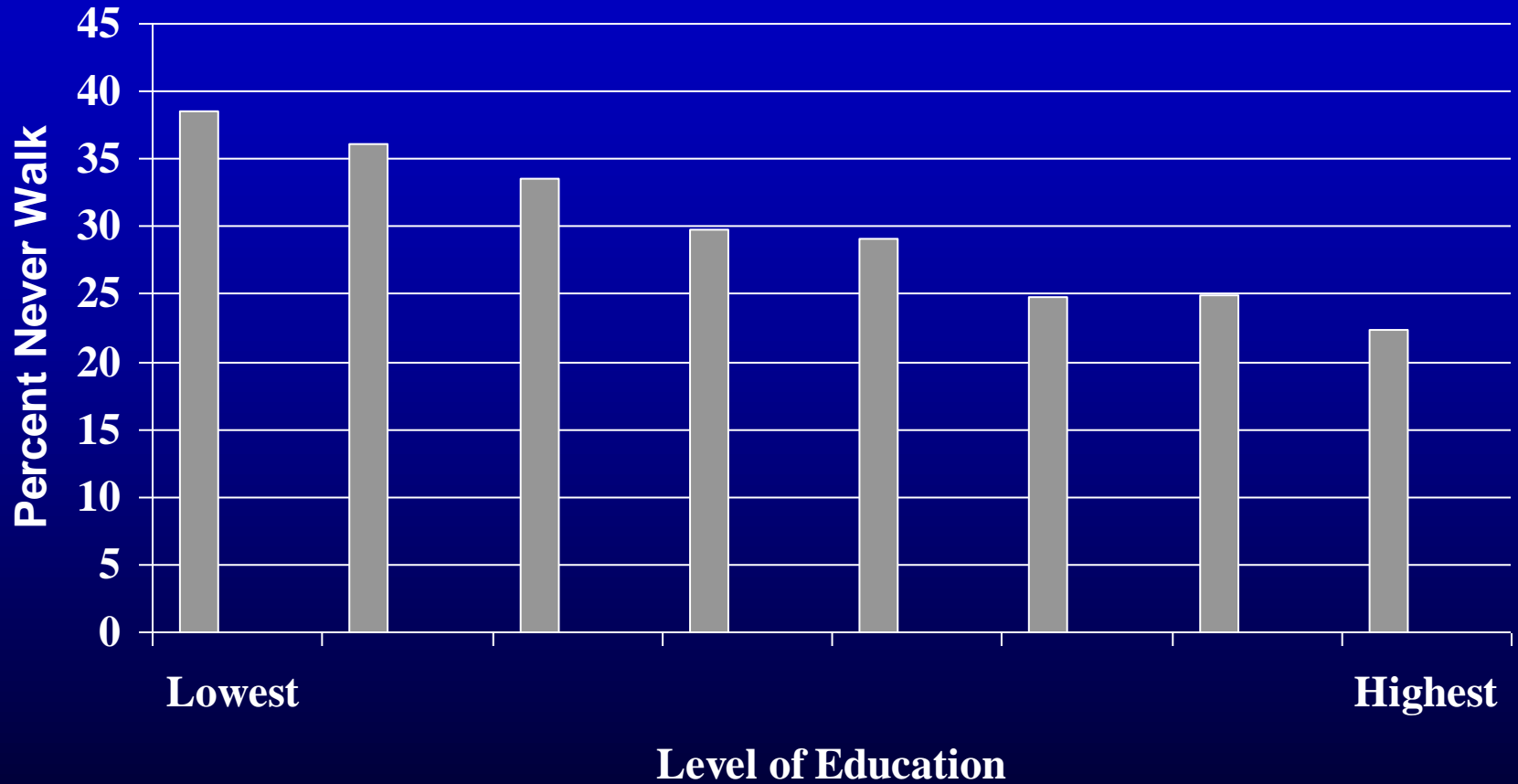
Car Ownership and Percent 'Active Walkers'



Car Ownership and Percent 'Couch Potatoes'



Education Level and Percent 'Couch Potatoes'

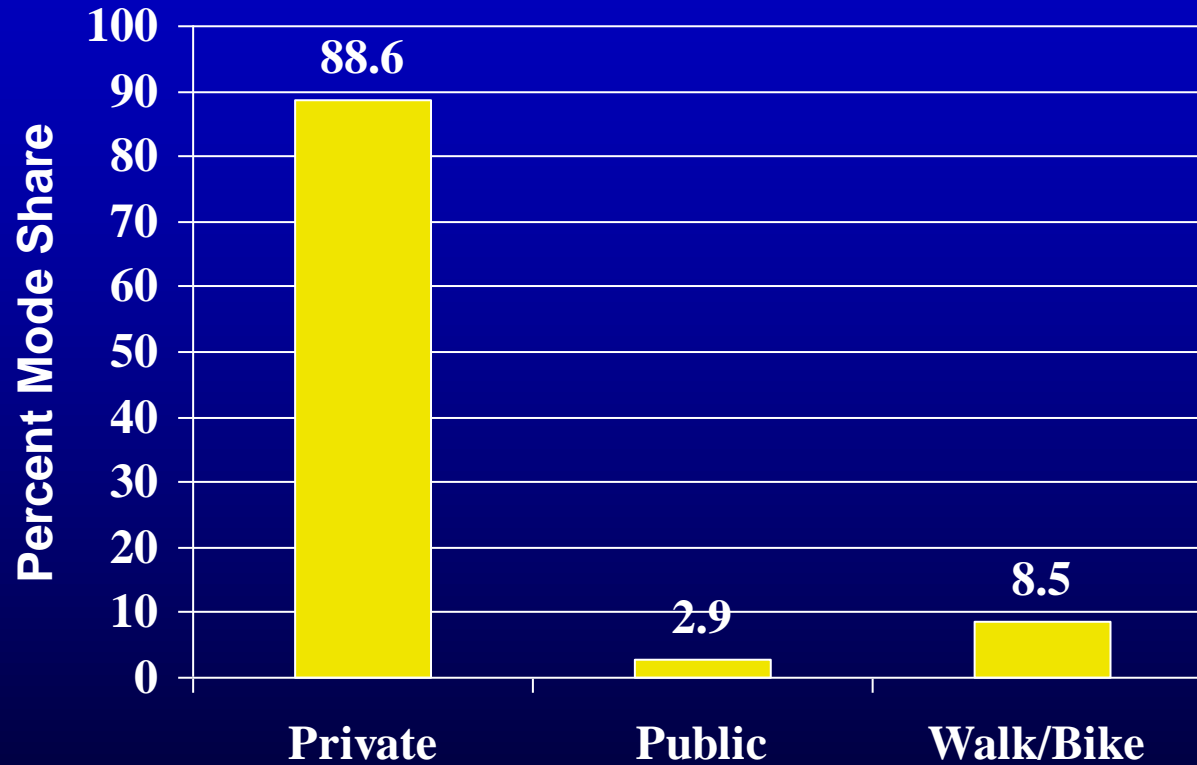


Part Two:

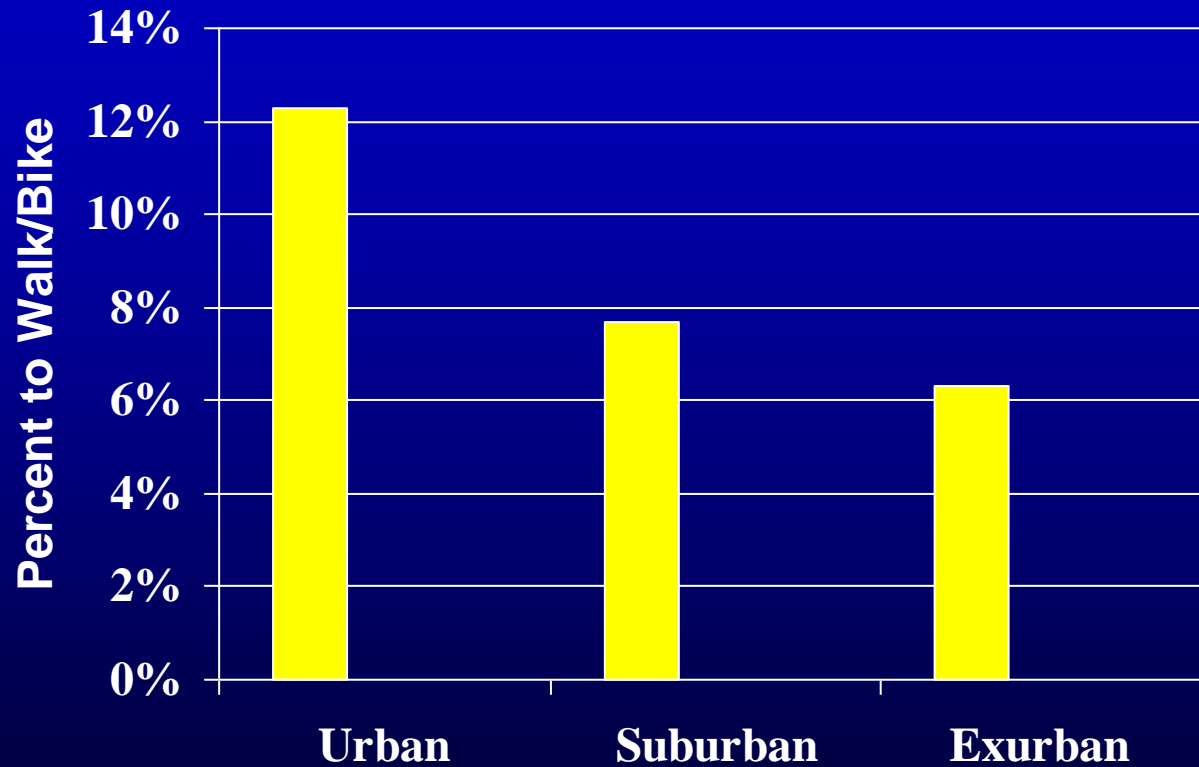
Variables Which Affect Utilitarian Walking

- The previous section was based on a question which encouraged answering concerning
 - “Just taking a walk”
 - Walking for exercise
 - And allowed for other walk trips to be reported
- Now, we look at walk trips taken for a purpose, and recorded as a ‘mode share’ of total trip making

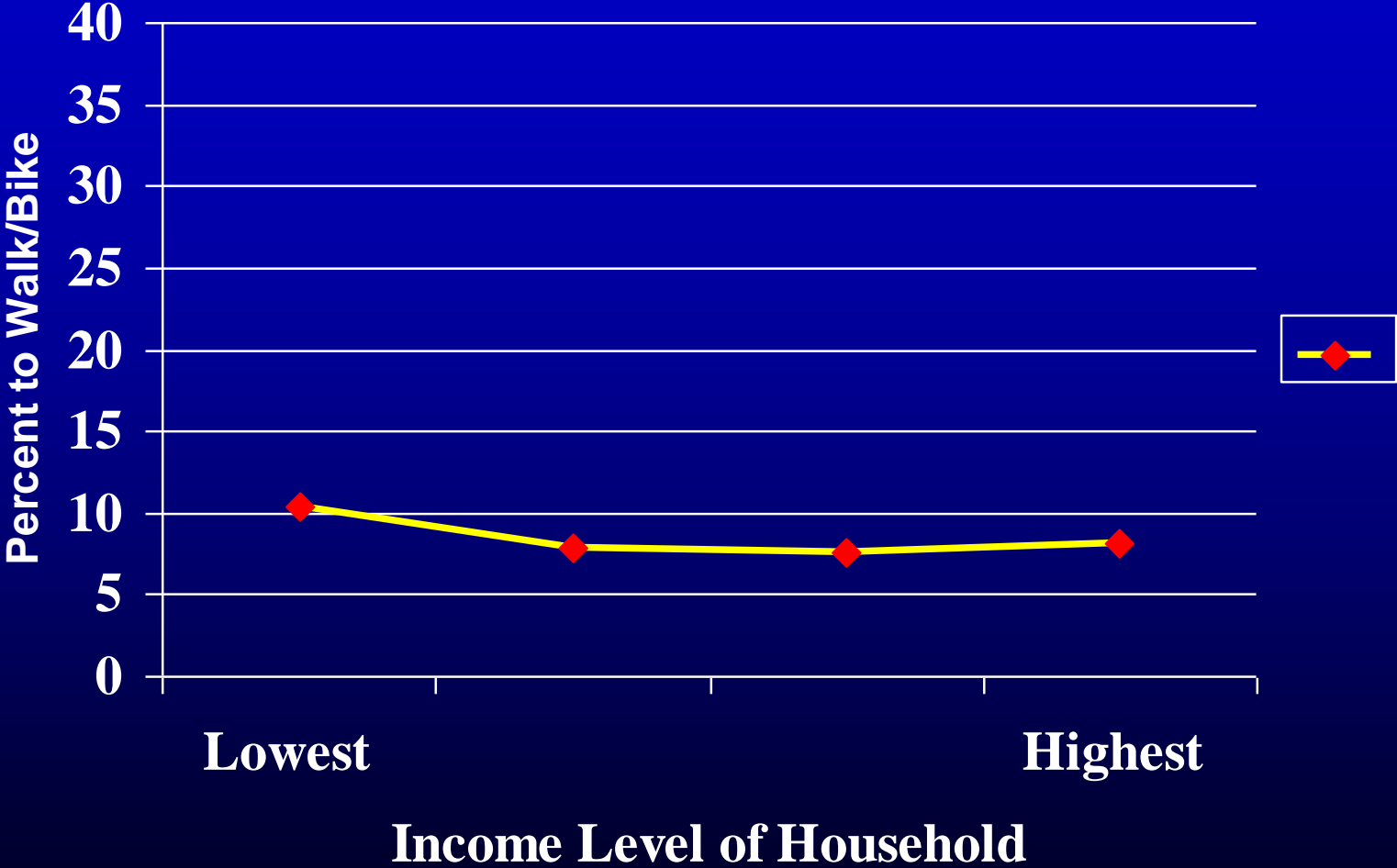
The Basic Relationships



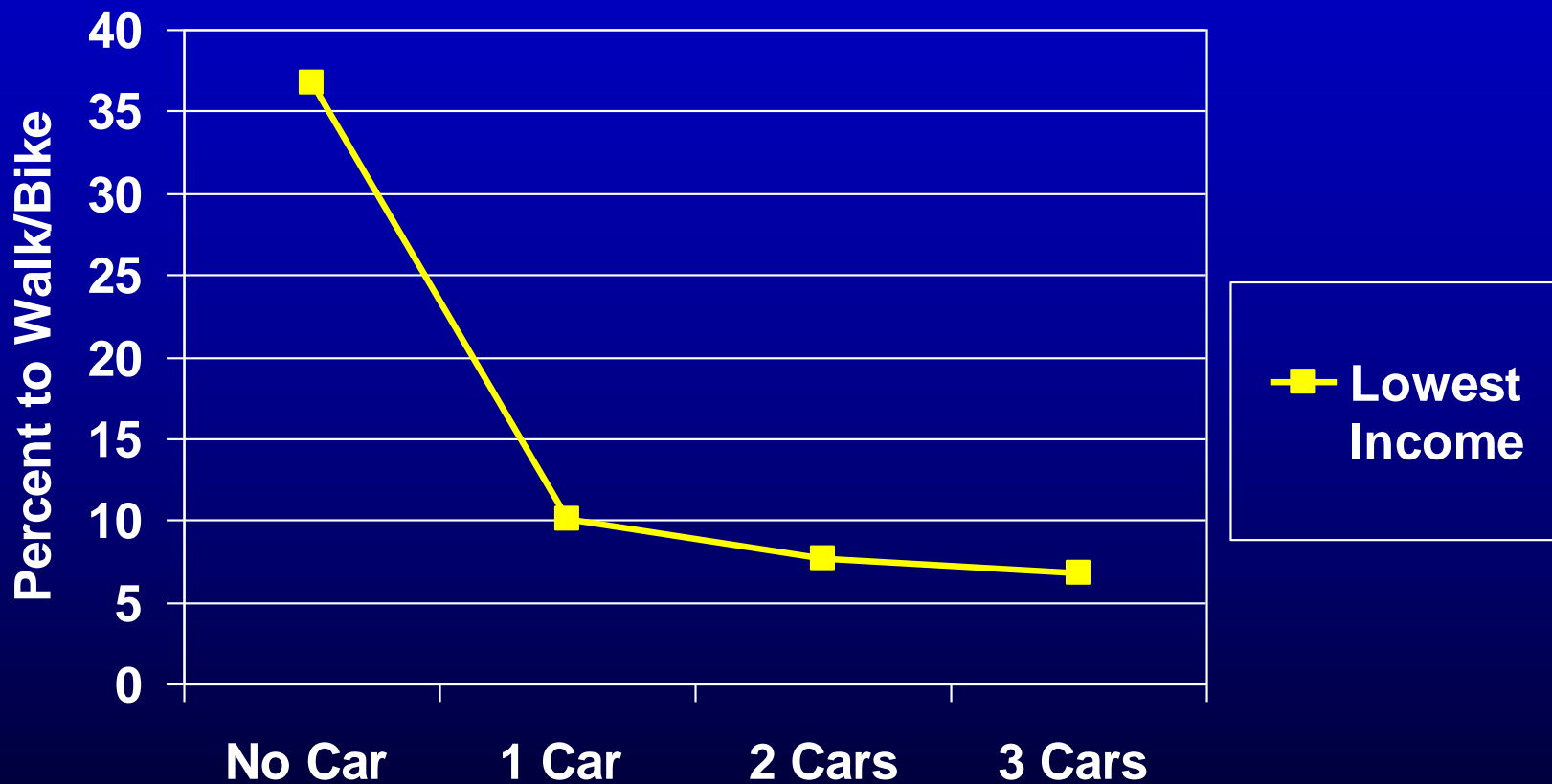
Utilitarian Walking By MSA



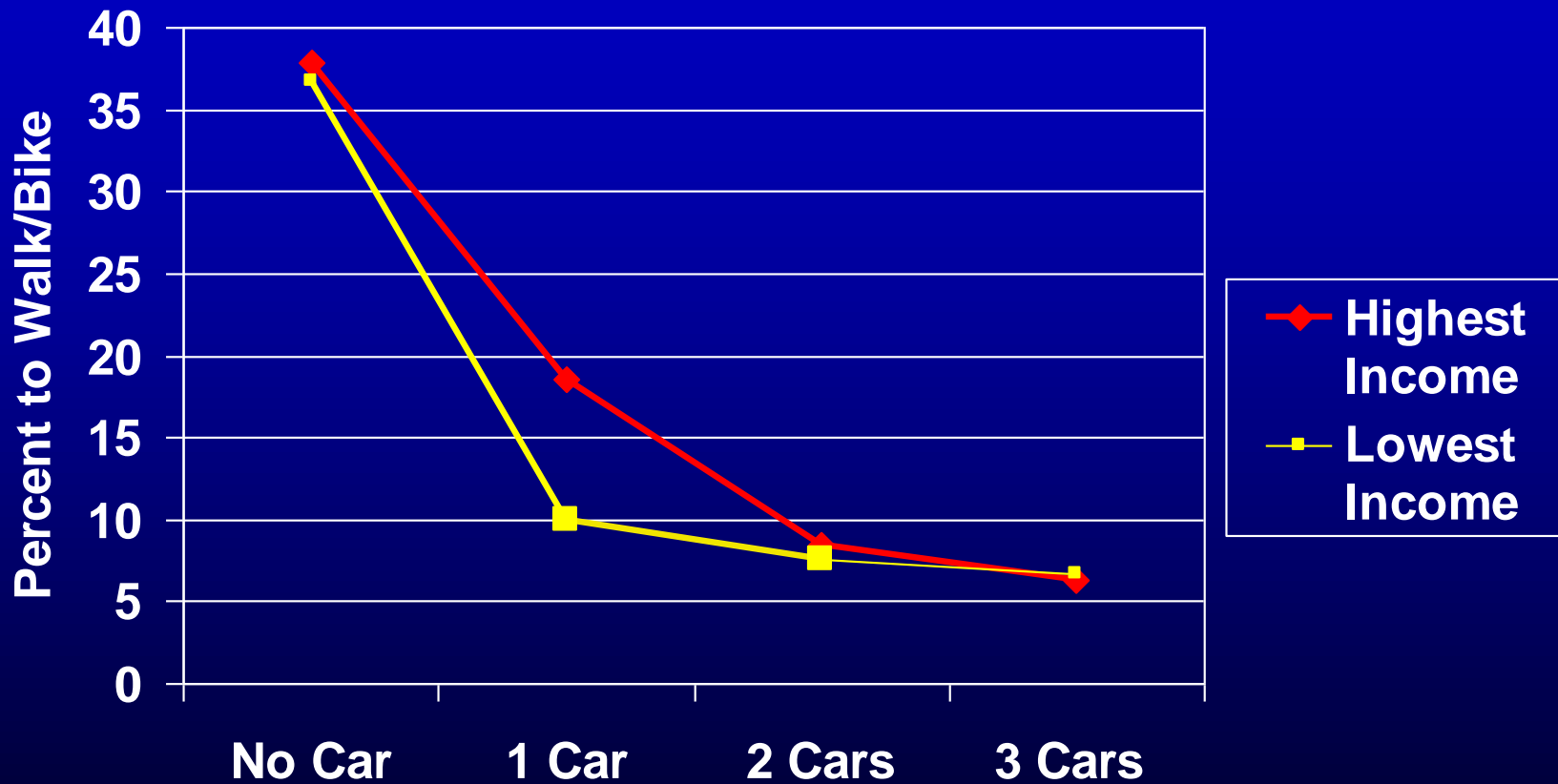
Effect of Income Level on Walking



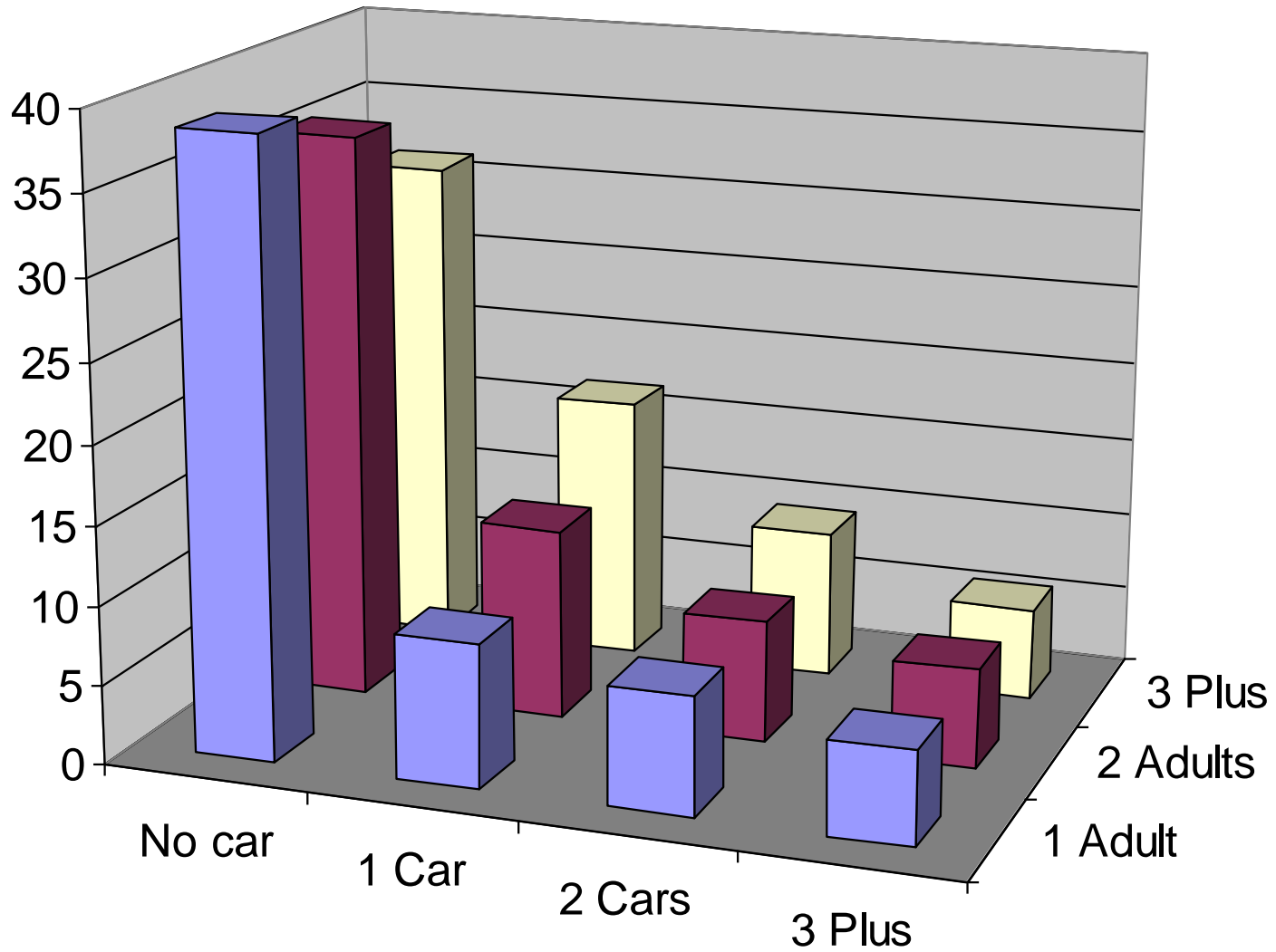
Effect of Auto Ownership on Walking



Effect of Auto Ownership on Walking, by Income Level

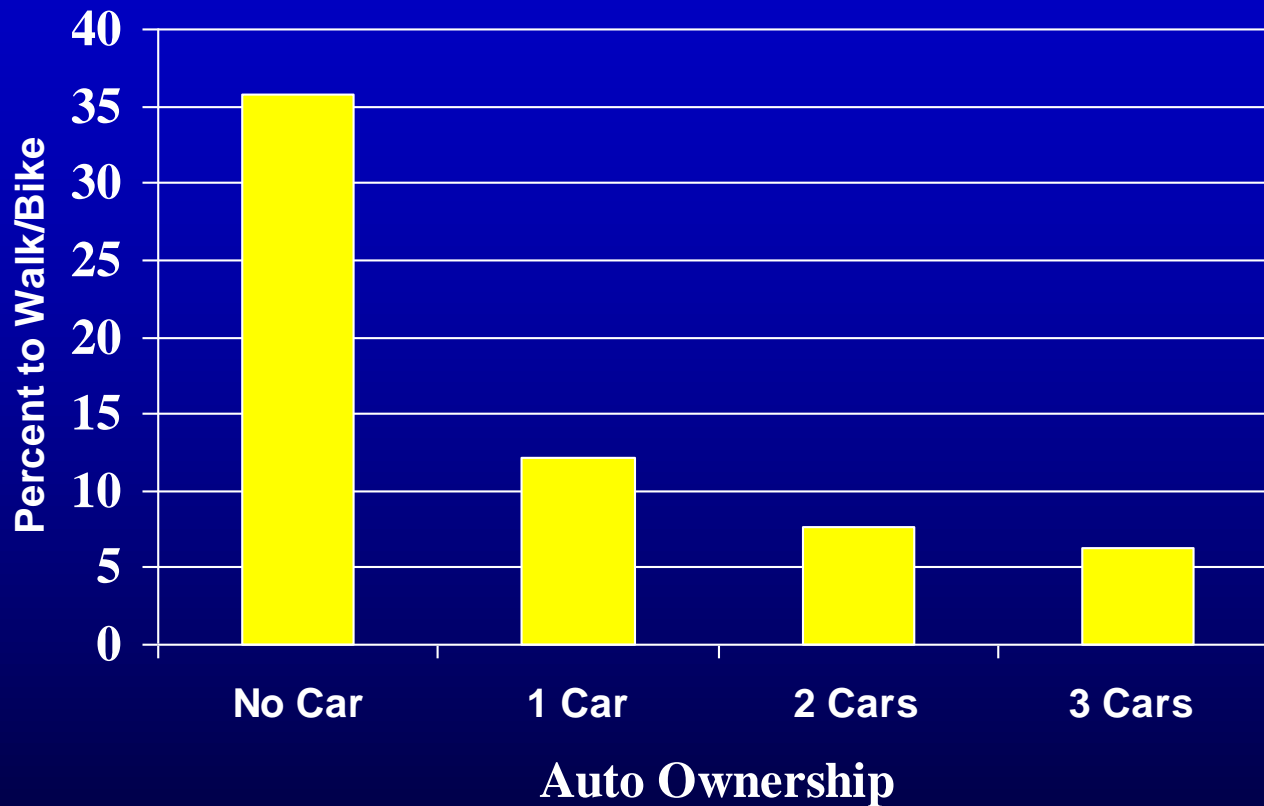


Walk by Car Availability

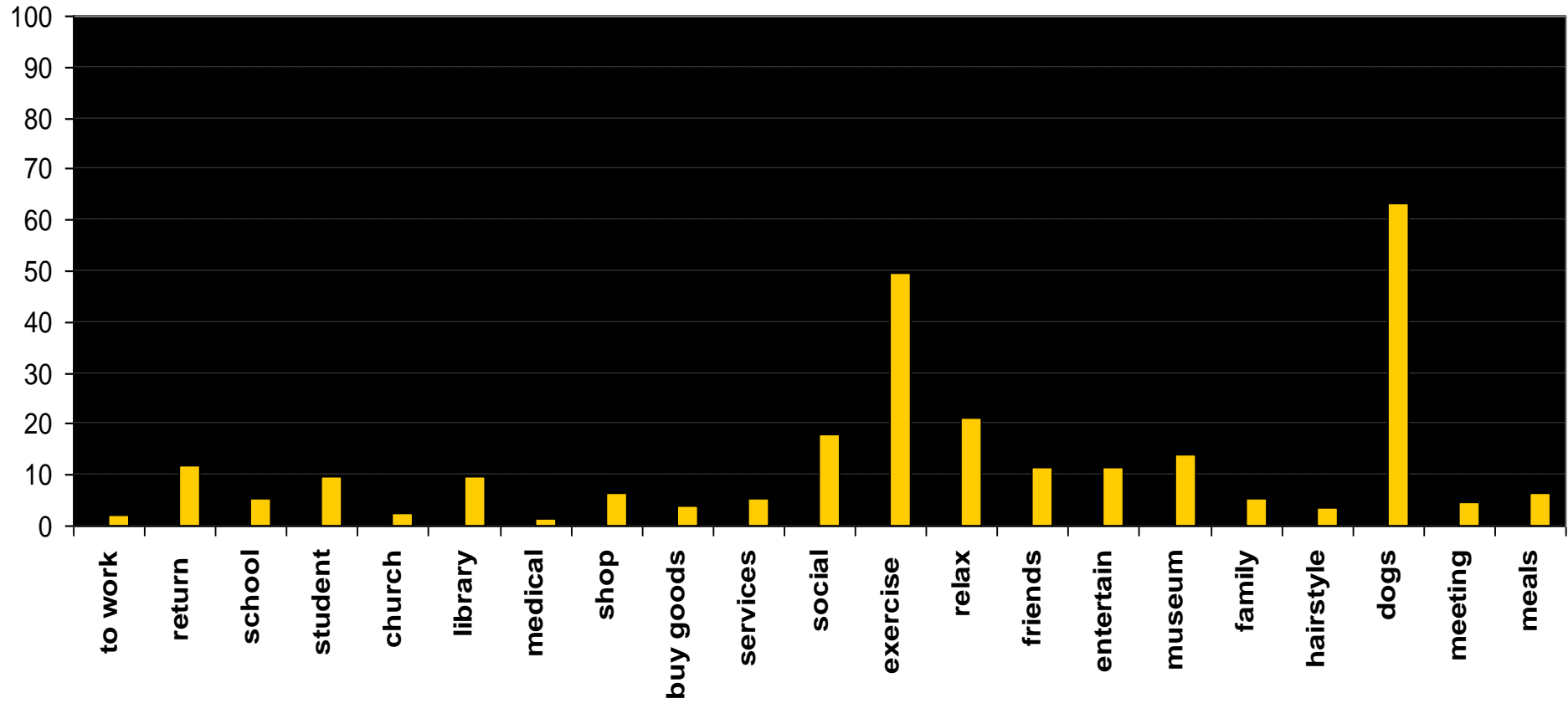


Effect of Car Ownership on Walking

Holding Household Size Constant at Two Adults

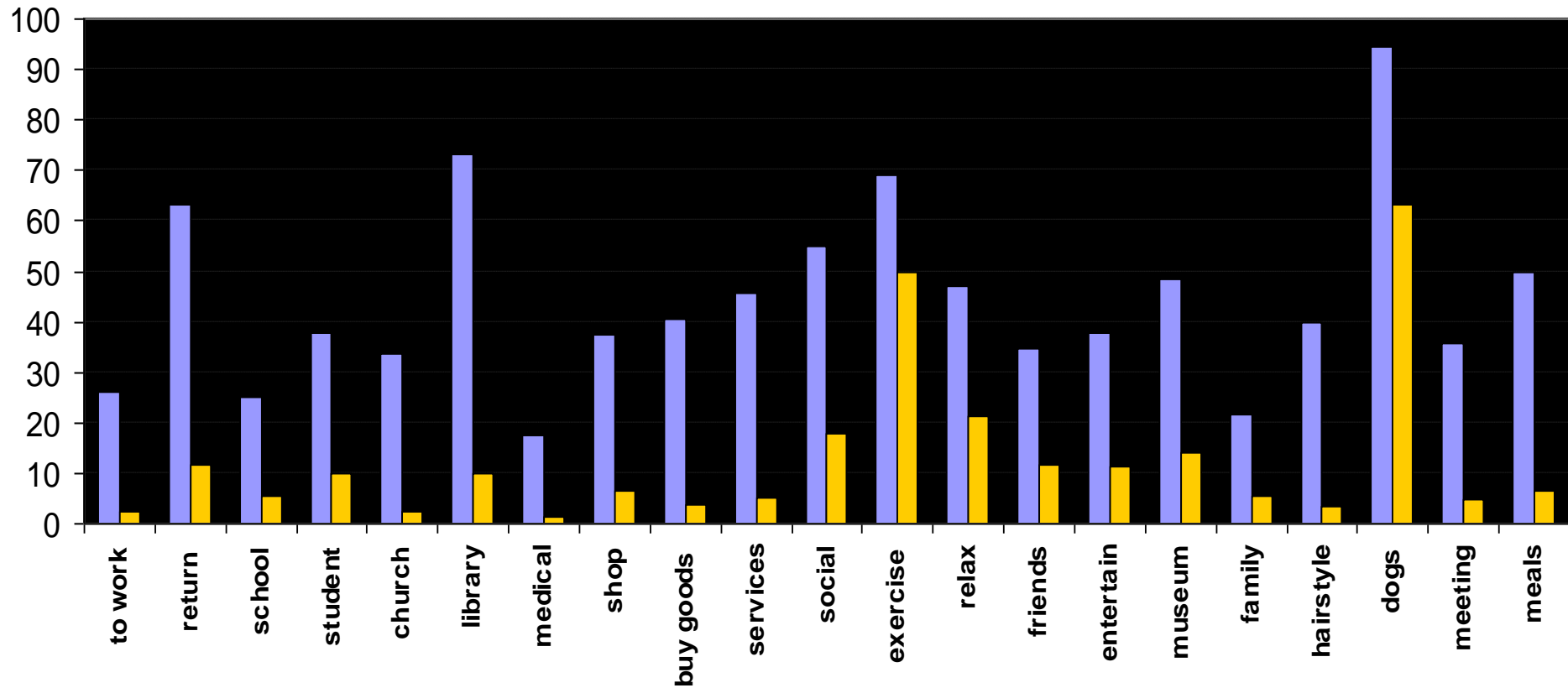


Mode Share to Walk by Trip Purpose



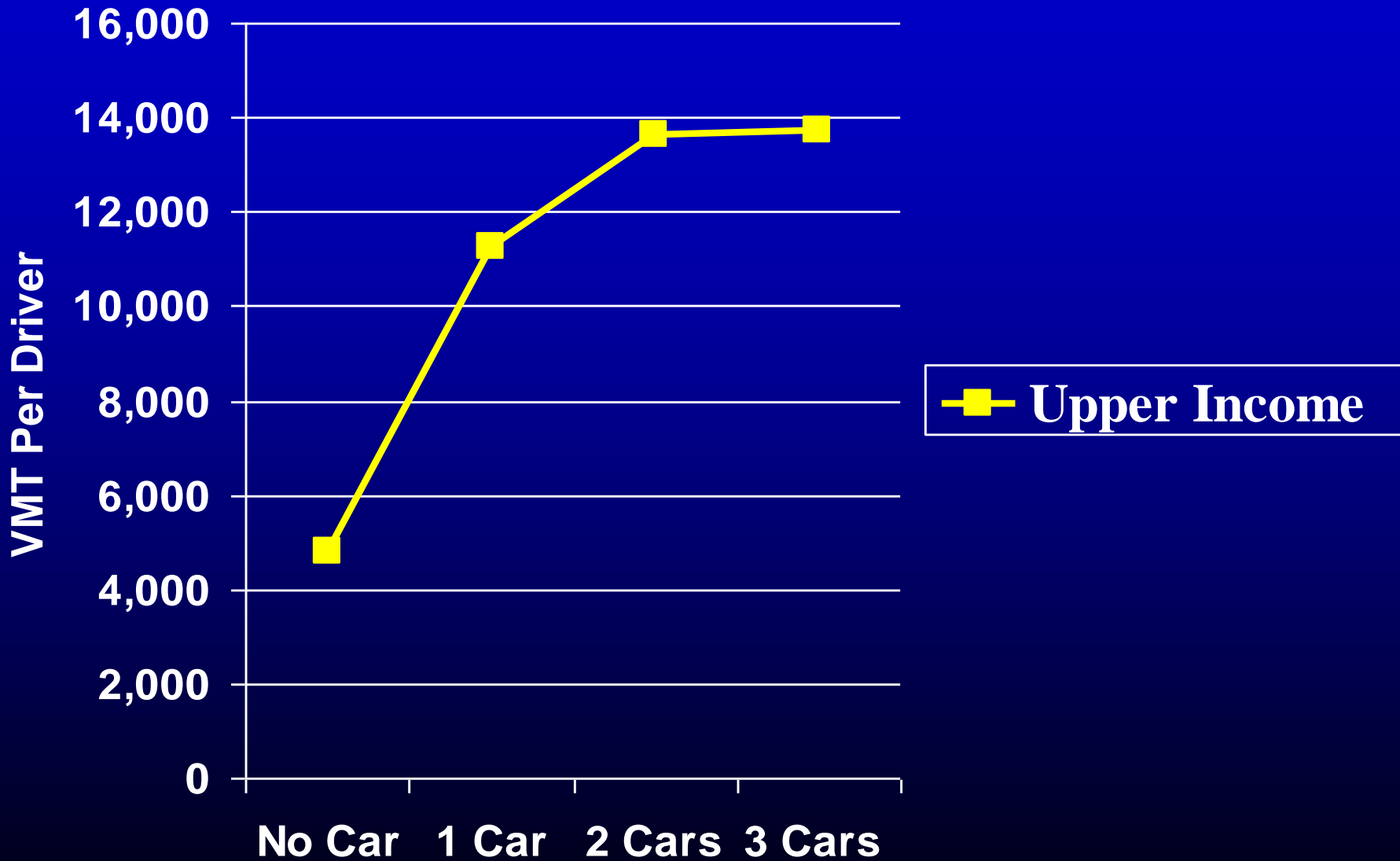
Legend: Mode share to walk/bike by households with auto

Effect of Auto Ownership on Mode Share to Walk



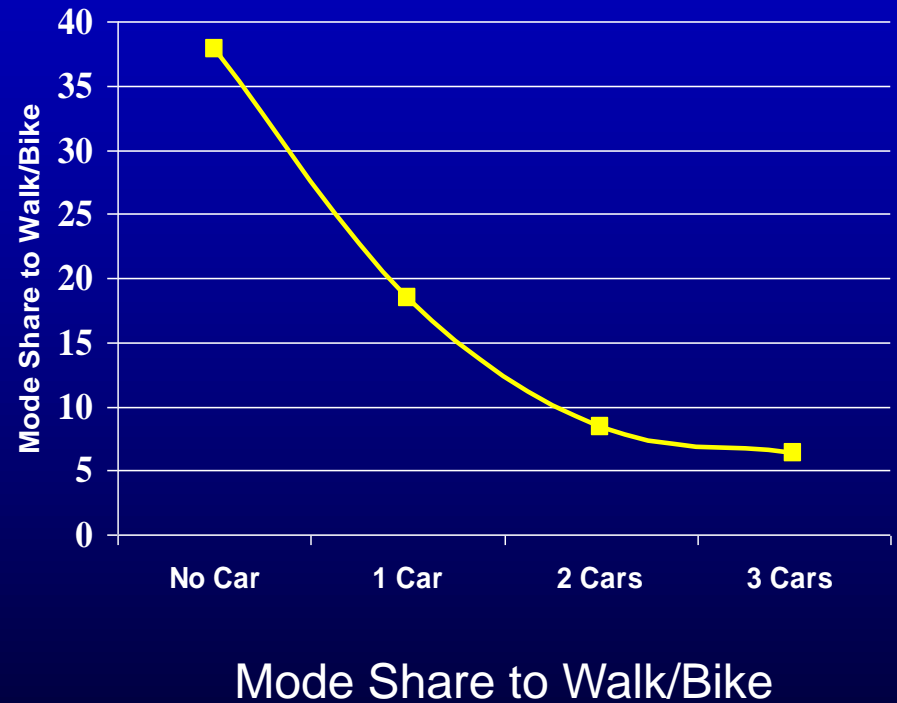
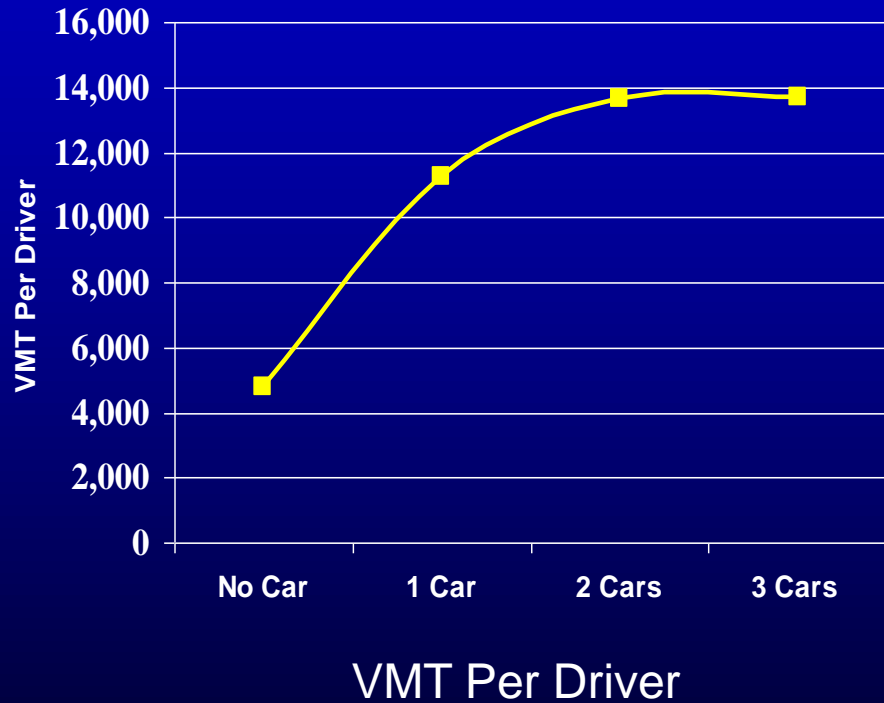
Legend: Mode share to walk/bike by households with and without auto

Auto Ownership, VMT and Walking



Increase in Walking is Associated with Decrease in VMT

VMT production is inversely related to mode share to walk/bike



References/Sources

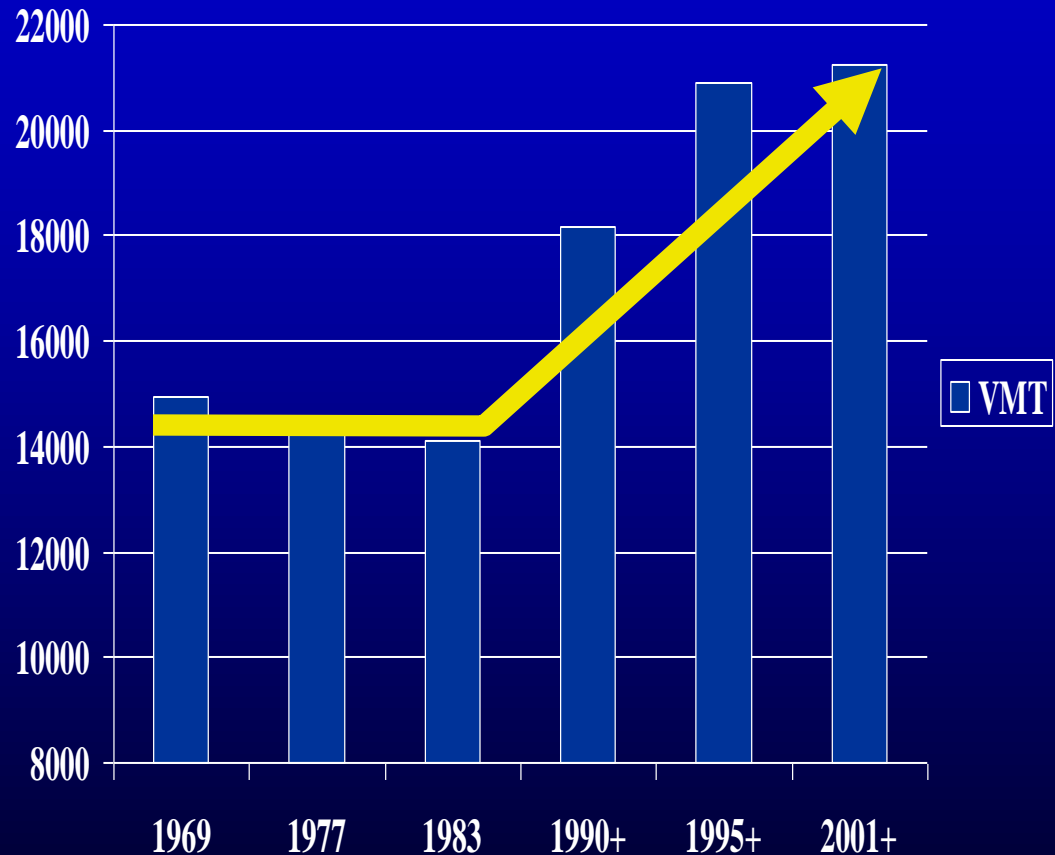
- All data from the 2001 National Household Travel Survey, except as follows:
- Slide 3. The concept of a curve showing percent of Americans overweight with a sharp jump in the very 1980s was presented by Crister, in *Fat Land*, 2003. It was adapted from the American Journal of Clinical Nutrition. The data points between 1993 and 2001 were taken from the CDC website. The scale should be described as the percent of Americans with a body-mass index of over 25.
- Slide 4. The curve showing the percent increase in household VMT was calculated by the author based on a trend of data between 1969 and 1990 as reported by Hu and Young, in *Summary of Travel Trends, 1995 National Personal Transportation Survey*, page 13. VMT per household reported in 1995 and 2001 were adjusted down by the author to be consistent with the reporting system utilized between 1969 and 1990, which is the primary time focus of the chart. The reader is cautioned not to use the scale of the chart literally for the VMT levels of 1995 and 2001. The chart as it would look based on the present reporting system is presented on the following slide.
- Slide 25. The VMT calculations were drawn from the 1995 NTPS Survey, examining an urbanized population. They are being reviewed and updated with 2001 data at this time.

VMT Trends

Scaled to 1995/ 2001 Reporting System

This table shows the trend in Vehicle Miles of Travel per household, expressed in a scale based on the reporting system used in years 1995 and 2001.

In 2001, the survey revealed that VMT risen to 2189 per household



Special Thanks to

- The NHTS Team...
- The TCPR Project, *“A New Vision of Mobility: Guidance to Foster Collaborative Multimodal Decision-making”*