



OFFICE OF
DIETARY
SUPPLEMENTS

Who Is Using Dietary Supplements and What are They Using?



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DSHEA assured American consumers access to products



OUTLINE

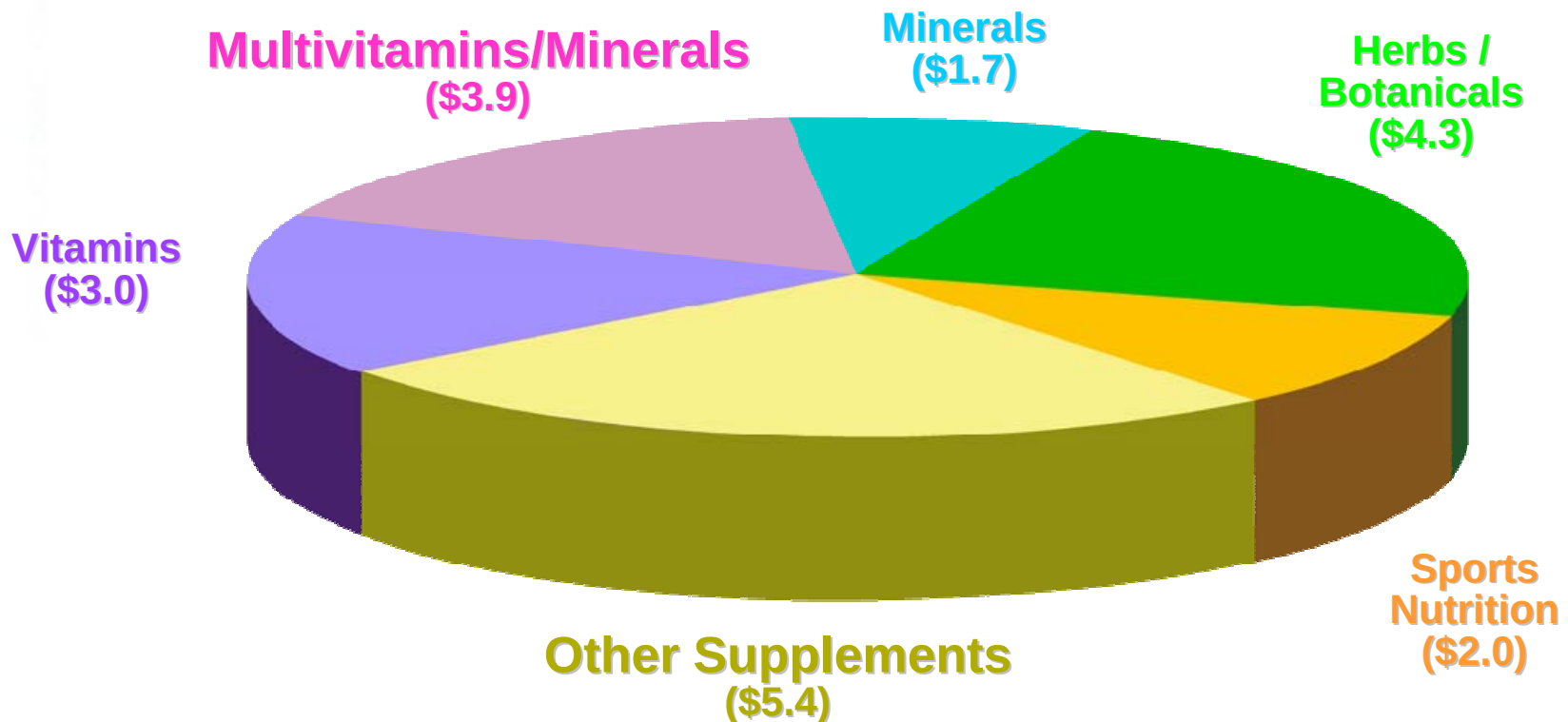
- US expenditures on dietary supplements
- Recent national findings of dietary supplement use by Americans
 - Who, What, How many, How often, How long
- Case study illustrating importance of assessing total nutrient intake and challenges
- Tools on the horizon for nutrition professionals



How much money do Americans spend on dietary supplements?



Dietary Supplement Sales in 2004: \$20.3 Billion



Source: NBJ, derived from
a variety of sources



How Many Americans Use Dietary Supplements Today?

- **Nationally representative data are available from the National Health and Nutrition Examination (NHANES) Surveys**
- **NHANES is a continuous survey of about 5,000 people per year from 15 communities to assess the health and nutritional status of adults and children in the United States**



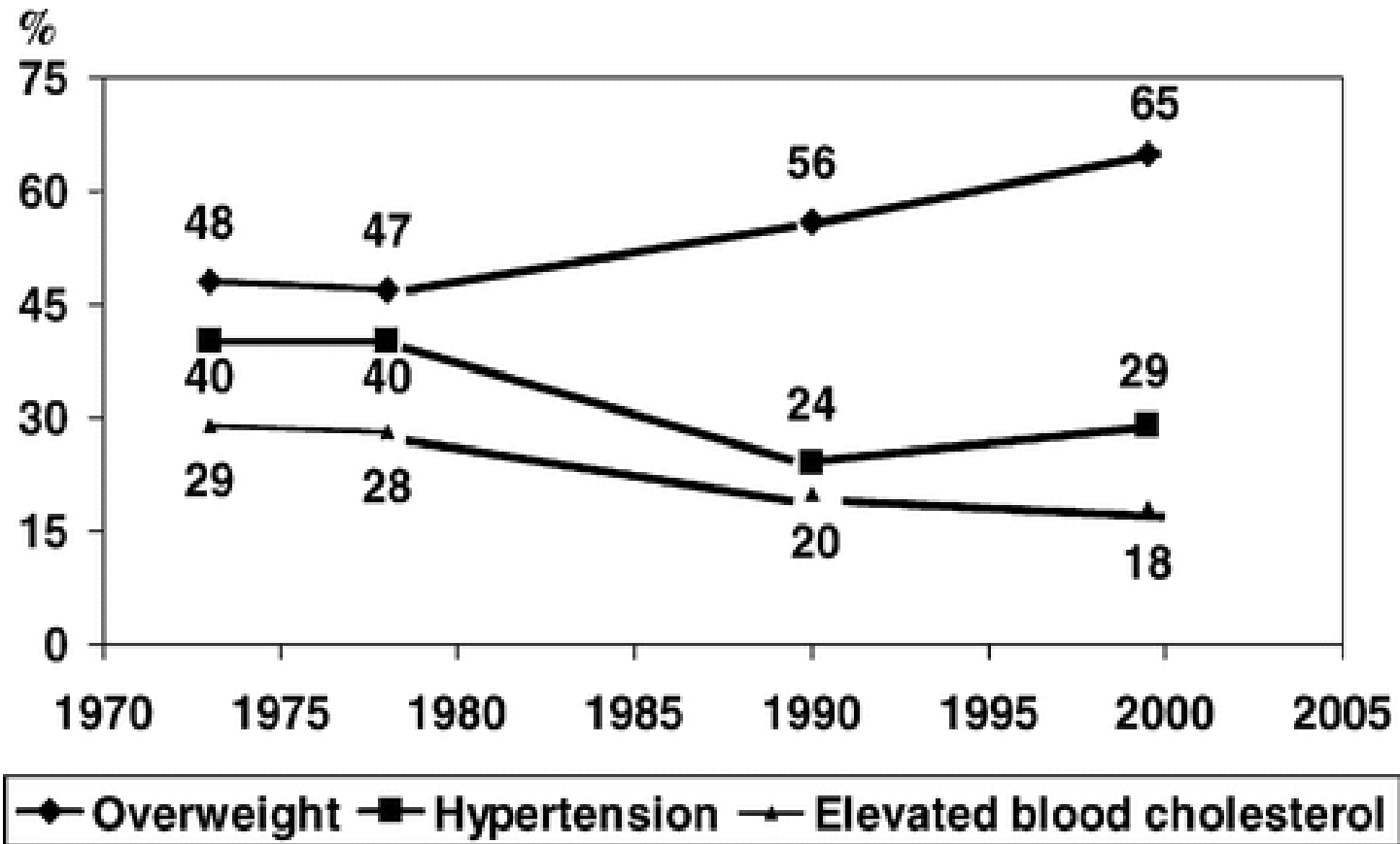
NHANES Data are used to

- Estimate the population prevalence and distribution of health conditions and related risk factors
- Monitor trends in health over time
- **Study the relationship of nutrient intake, nutritional status indicators, and health over time**



Trends in the age-adjusted prevalence of diet-related health conditions in U.S.

(adults age 20 to 74)



Data source: National Health and Nutrition Examination Surveys (NHANES); data are plotted at the midpoint of the NHANES survey period.



In NHANES surveys dietary supplement use is recorded

Participants are asked

- **if they have taken any vitamins, minerals, or other dietary supplements in the past month?**
- **to include prescription and non-prescription supplements**
- **if they have taken any antacids (for calcium intake)**
- **to furnish supplement containers (not seen 1/3 of time)**
- **to provide details of use: how long, how often, how much?**



Dietary Supplement Database available for approximately 5000 products

- Labels are obtained from manufacturers, retailers and the internet
- Currently available at <http://www.cdc.gov/nchs/nhanes.htm>
 - scroll to [Data Sets and Related Documentation](#)
 - Click on either
[NHANES 1999-2000](#)
[NHANES 2001-2002](#)

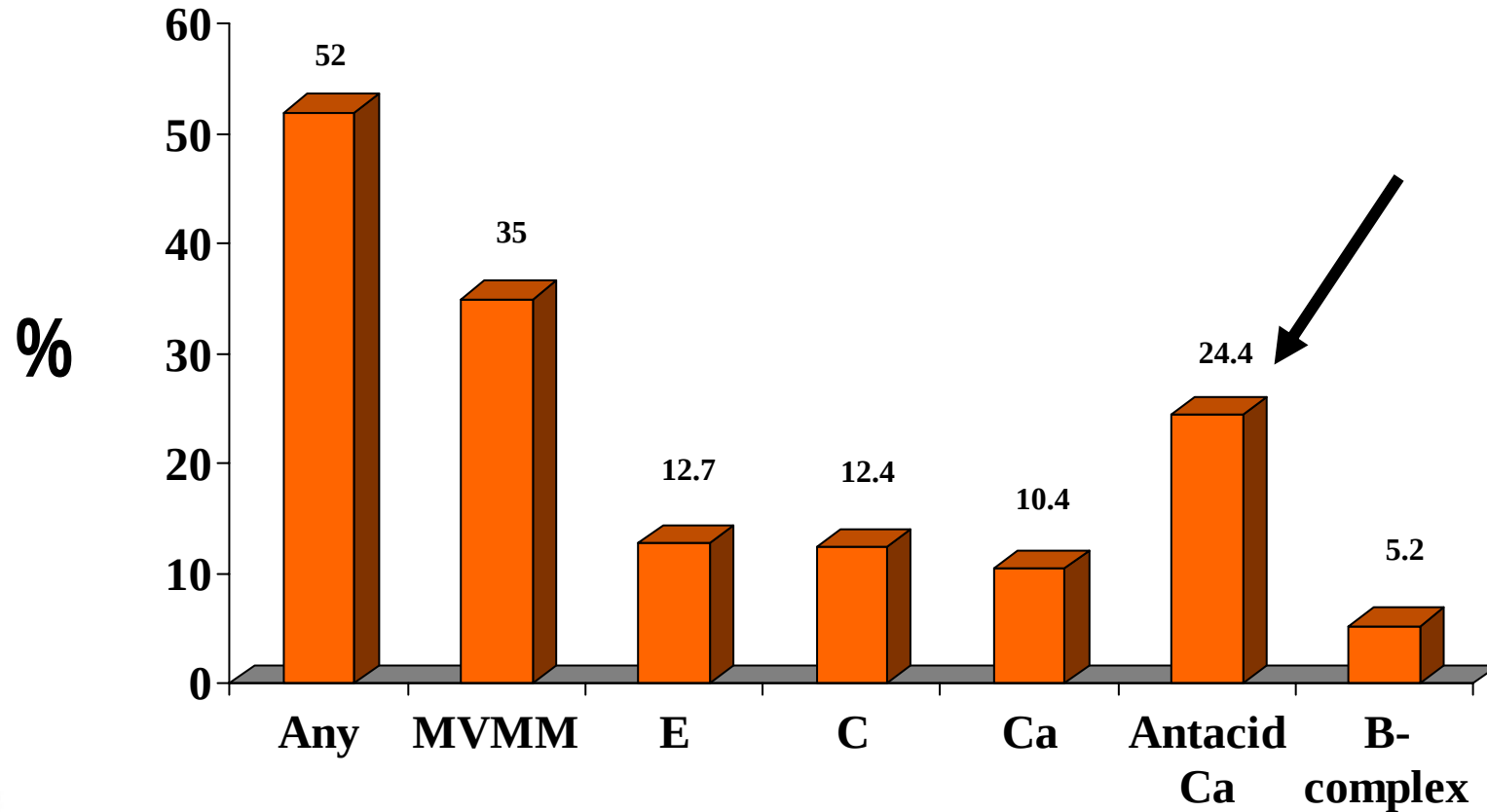


How many Americans use Dietary Supplements?

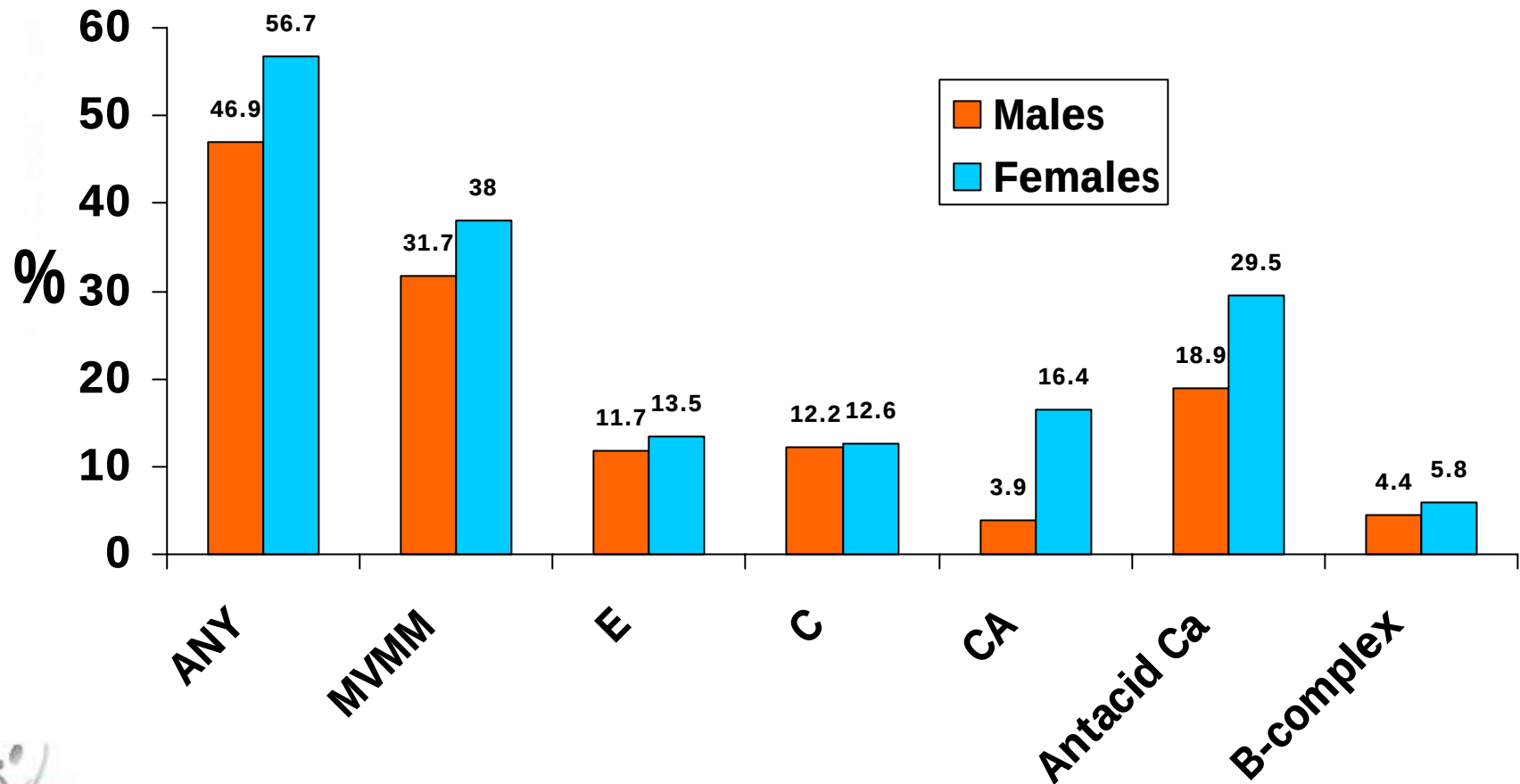
What Dietary supplements are used most often?



Prevalence of Dietary Supplement Use Among US Adults ≥ 20 yrs NHANES 99-00 (n=4862)

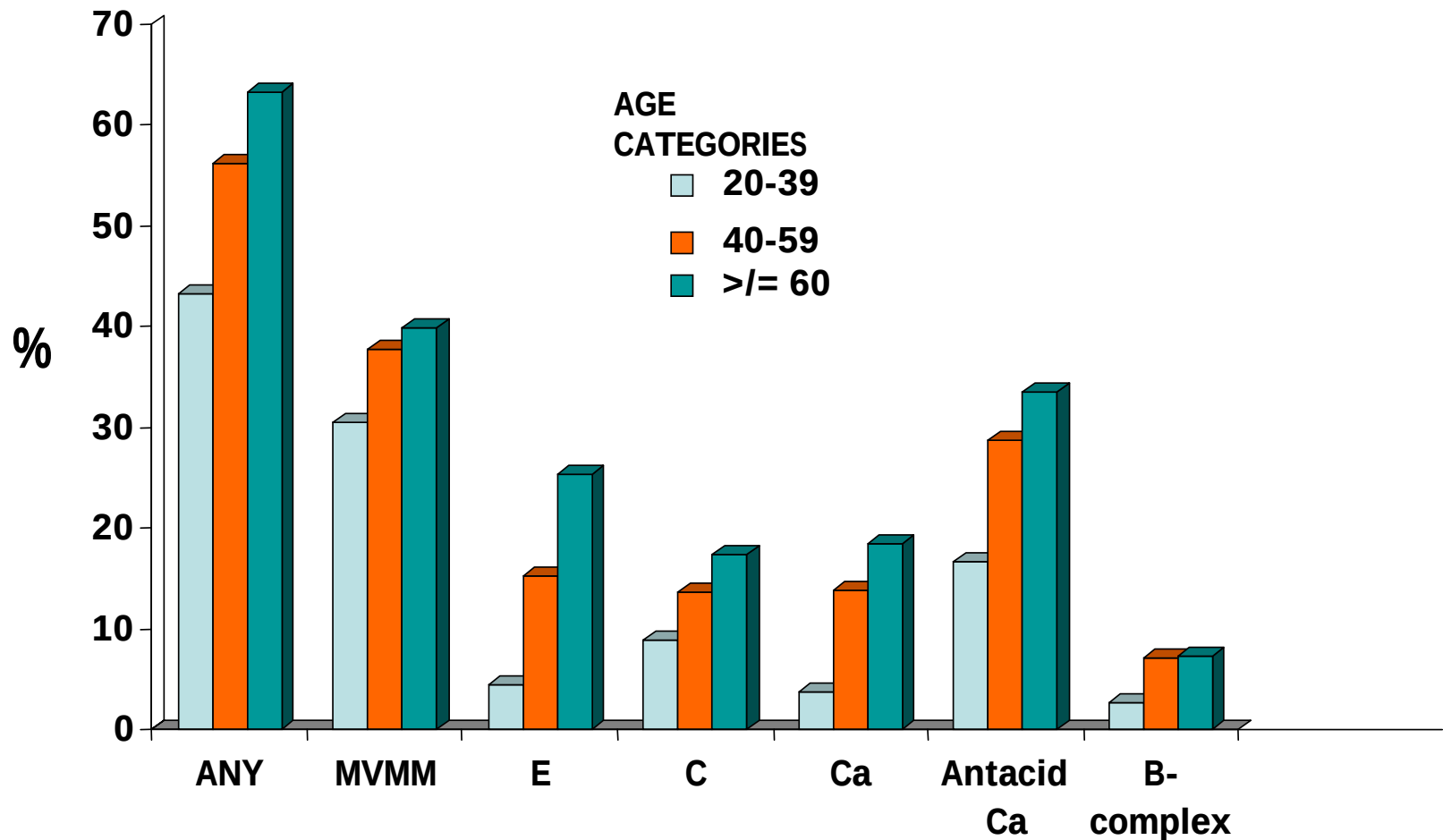


Prevalence of Dietary Supplement Use Among US Adults ≥ 20 yrs by Gender NHANES 99-00 (n=4862)



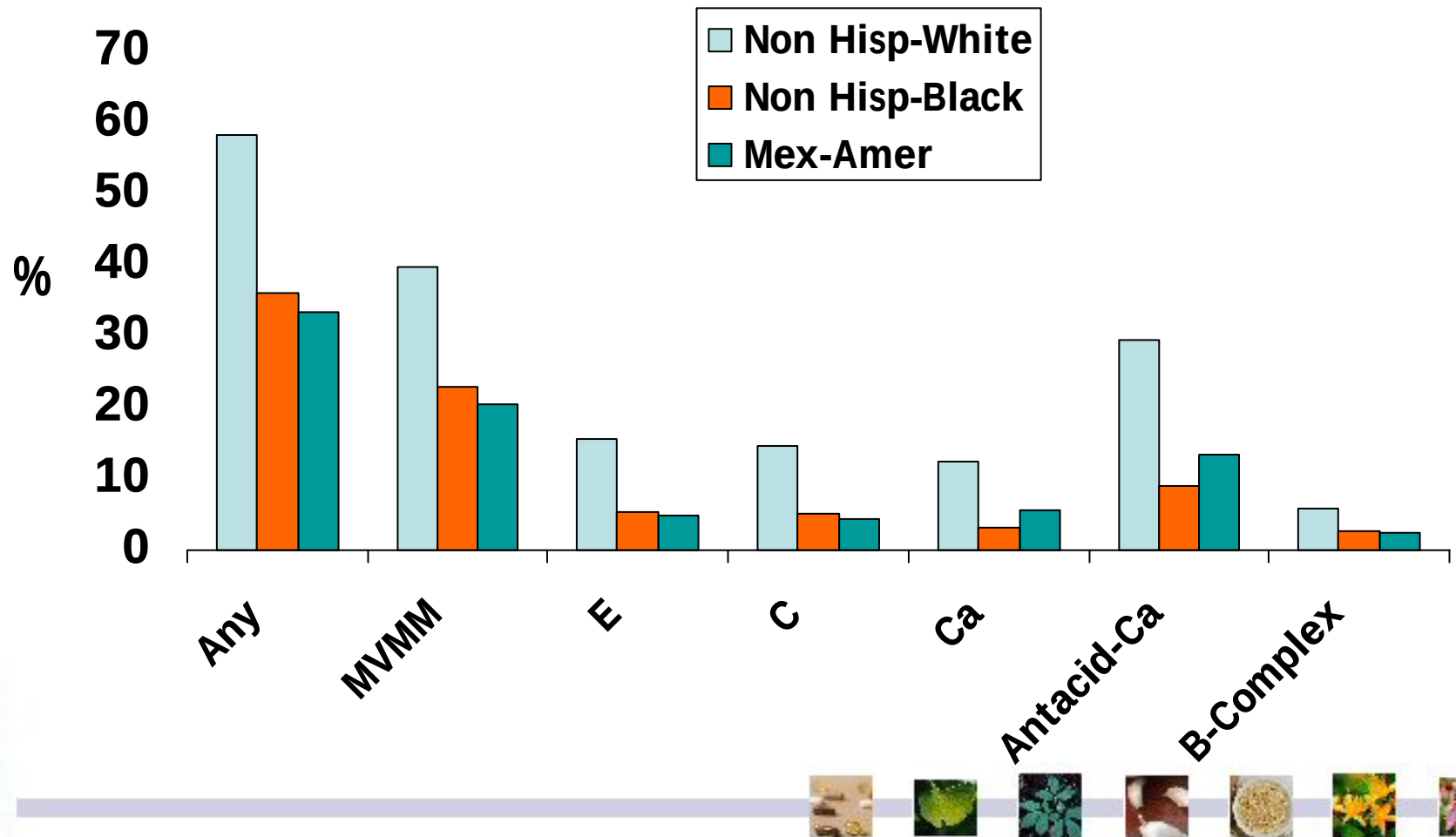
Prevalence of Dietary Supplement Use Among US Adults by Age

NHANES 99-00 (n=4862)



Prevalence of Dietary Supplement Use Among US Adults by Race/Ethnicity

NHANES 99-00 (n=4427)



Demographic/Lifestyle Variables Associated with Dietary Supplement Usage (NHANES 99-00)

For use of any and most commonly taken supplements, associations were positive for

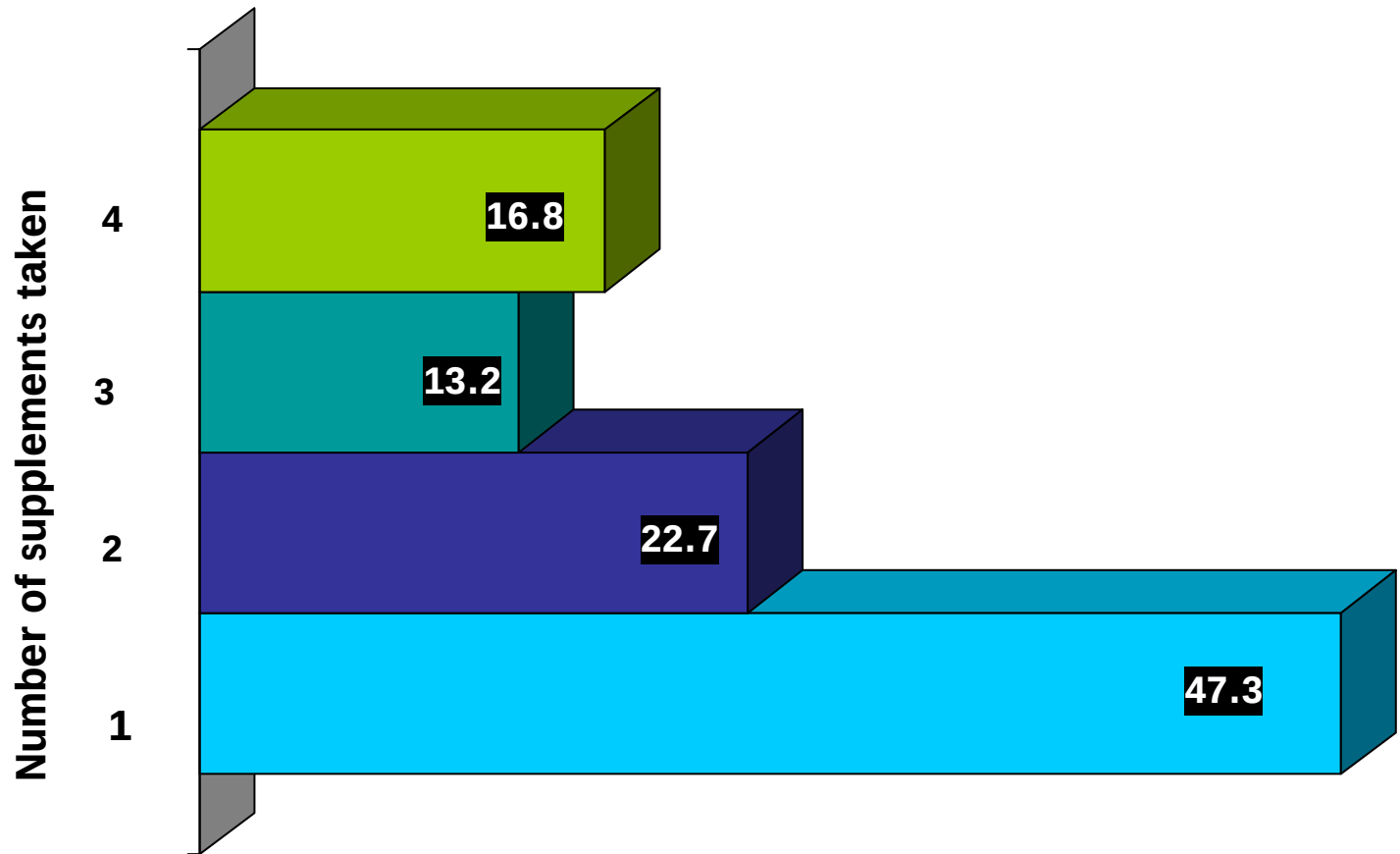
- **BMI < 25**
- **greater physical activity**
- **Health status reported as excellent or very good**
- **Never or former smokers**
- **alcohol users (wine)**



How many supplements do Adult Supplement Users take?



Percentage Distribution of Number of Supplements taken by U.S. Adult users NHANES 99-00(n=2399)



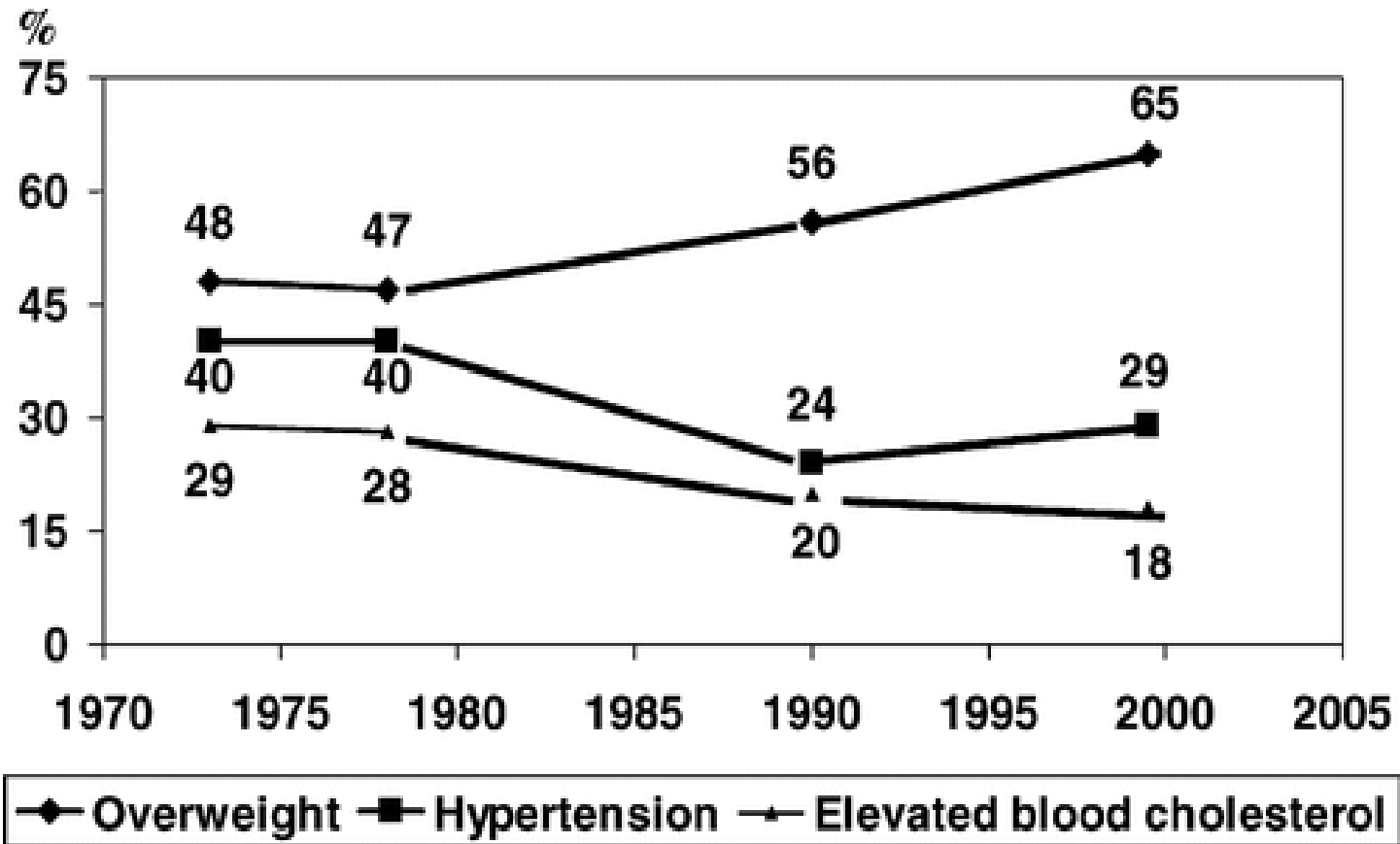
How often and how long have adult users taken dietary supplements?

- ➡ **At least 89% of the most common supplement types were reported to be taken daily**
- ➡ **Over 1/2 of users for most supplement types had taken them for 2 years or more**
- ➡ **Over 1/5 of users had taken Vitamins C and E and antacids containing Ca for over 10 years**



Trends in the age-adjusted prevalence of diet-related health conditions in U.S.

(adults age 20 to 74)



Data source: National Health and Nutrition Examination Surveys (NHANES); data are plotted at the midpoint of the NHANES survey period.



Case Study

- **Is Ca intake related to national trends in prevalence rates for hypertension?**
 - To assess this possibility, Ca intakes must be compiled from
 - food sources
 - dietary supplements &
 - antacids



Approach

- Collect and analyze for food sources
+
 - Collect and merge data on supplement use
+
 - Collect and merge data on antacid use
-
- **Total dietary intake of calcium**



Challenges

- **Food sources**

- Collected in NHANES from 24 hour recall
- Calcium fortified sources need to be identified

- **Supplement use**

- Collected in NHANES, but past 30 days

- **Antacid Use**

- Collected in NHANES, may not be in other surveys

- **Total dietary intake of calcium**

- Merging data not straight forward
- Two different methods over different periods of time are used to collect data on food and supplement and antacid intakes



Help is on the way: NOADS

- NHANES online analysis of dietary supplements (NOADS)
- ODS is developing a web-based data analysis program for NHANES data on nutrient intakes
 - Real time and user friendly
- Total Intake Nutrient intakes from foods, dietary supplements, and OTC and prescription products and the relative contribution of each will be possible



Summary

- **Dietary supplement usage is widespread in the US**
- **Contributions of nutrient intakes from dietary supplement may exceed intakes from foods**
- **Nutritional assessment should include intakes from dietary supplements and other potential sources of nutrients (i.e. antacids)**
- **Databases and Tools for their use in practice are being developed**



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**Visit the ODS Web site
<http://ods.od.nih.gov>**

or e-mail to ods@nih.gov

