MIDUS
Midlife in the U.S.

Broad Objectives:

❖ Investigate role of long-term, cumulative psychosocial influences on mid- and later-life health (mental and physical)

❖ Identify neurobiological mechanisms through which psychosocial factors contribute to health

❖ Advance knowledge of psychosocial factors as protective (i.e., promoting positive health and resilience)

"Integrative Pathways to Health and Illness"

History
Midlife in the U.S.

Timeline:

❖ 1995/96 – **MIDUS I** launched

➤ Conceived by multidisciplinary team

➤ Funded by MacArthur Foundation

➤ Recruited 7,108 participants (25-74), including national RDD sample, siblings, twins

❖ 2002-2008 – **MIDUS II** follow-up

➤ 5-Project P01

➤ Funded by NIA

➤ Added biomarkers & neuroscience

Advancing Knowledge of Factors That Promote Positive Health and Resilience

MID-LIFE IN THE UNITED STATES
A National Study of Health and Well-Being

Unique Strengths of the MIDUS Study

In-depth multidisciplinary content *achieved via 5 separate data collection projects*

Wide age range (25–74) *facilitates focus on life course transitions*

MIDUS (Midlife in the U.S.) is a national longitudinal study of how many factors (behavioral, social, psychological, biological, neurological) come together to influence health and well-being as people age from early adulthood into midlife and old age. It was conceived by a multidisciplinary team of scholars interested in understanding aging as an integrative process.
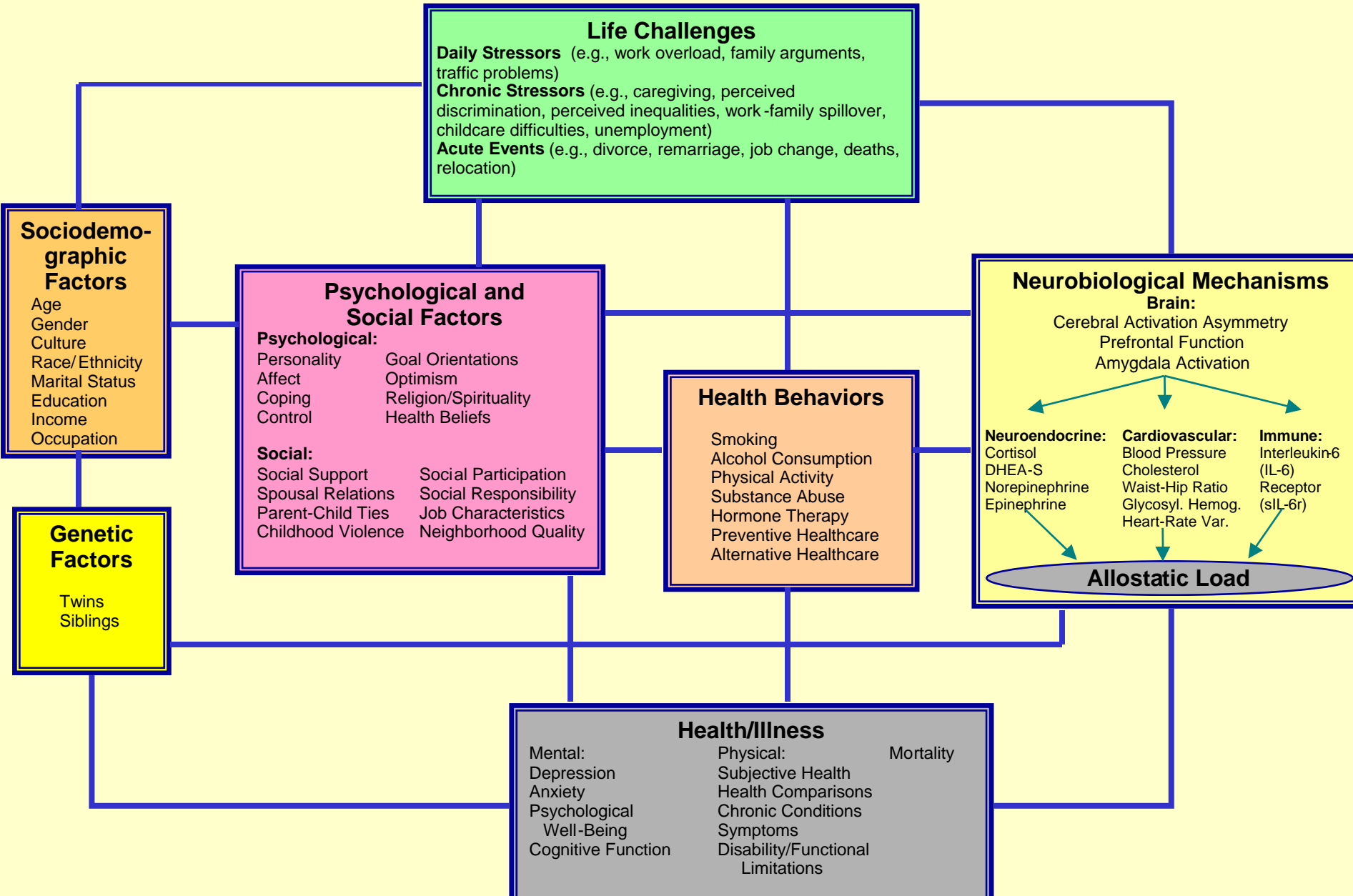
MIDUS Samples

In 1995, MIDUS survey data were collected from a total of 7,108 participants. The baseline sample was comprised of individuals from four subsamples: (1) a national RDD (random digit dialing) sample (n=3,487); (2) oversamples from

In addition, the twin subsample was administered a short screener to assess zygosity and other twin-specific information.

With funding provided by the National Institute on Aging, a longitudinal fol-

MIDUS
Midlife in the United States

"Integrative Pathways to Health and Illness"
Primary Assessment Domains

Life Challenges
Daily Stressors (e.g., work overload, family arguments, traffic problems)
Chronic Stressors (e.g., caregiving, perceived discrimination, perceived inequalities, work-family spillover, childcare difficulties, unemployment)
Acute Events (e.g., divorce, remarriage, job change, deaths, relocation)

Sociodemo-graphic Factors
Age
Gender
Culture
Race/Ethnicity
Marital Status
Education
Income
Occupation

Genetic Factors
Twins
Siblings

Psychological and Social Factors
Psychological:
Personality   Goal Orientations
Affect   Optimism
Coping   Religion/Spirituality
Control   Health Beliefs

Social:
Social Support   Social Participation
Spousal Relations   Social Responsibility
Parent-Child Ties   Job Characteristics
Childhood Violence   Neighborhood Quality

Health Behaviors

Smoking
Alcohol Consumption
Physical Activity
Substance Abuse
Hormone Therapy
Preventive Healthcare
Alternative Healthcare

Neurobiological Mechanisms
Brain:
Cerebral Activation Asymmetry
Prefrontal Function
Amygdala Activation

Neuroendocrine:
Cortisol
DHEA-S
Norepinephrine
Epinephrine

Cardiovascular:
Blood Pressure
Cholesterol
Waist-Hip Ratio
Glycosyl. Hemog.
Heart-Rate Var.

Immune:
Interleukin-6 (IL-6)
Receptor (sIL-6r)

Allostatic Load

Health/Illness

Mental:
Depression
Anxiety
Psychological
  Well-Being
Cognitive Function

Physical:
Subjective Health
Health Comparisons
Chronic Conditions
Symptoms
Disability/Functional
  Limitations

Mortality

THE MIDUS II PROJECTS
(data collection for Projects 2-5 ongoing)

MIDUS Midlife in the United States

Project 2 (daily diary)

Drawn from:

National (RDD), Twins

Milwaukee African Americans

Project 4 (biomarkers)

Drawn from:

National RDD, Twins, Metro OS

Milwaukee African Americans

Project 1 (survey)

Samples: National (RDD)
Siblings, Twins
Metro Over-Samples (OS)
Milwaukee African Americans (NEW)

Project 3 (cognitive functioning)

National (RDD), Siblings, Twins

Metro OS, Repeat Boston OS,

New Boston OS

Project 5 (neuroscience)

Drawn from:

National (RDD), Twins

Milwaukee African Americans

Project 1 – National Survey

- Includes 30-min Phone Interview (all respondents)
- 2 fifty-page questionnaires

Strengths:
- *first national longitudinal* assessment of diverse psychosocial variables (e.g., personality traits, well-being, sense of control, work/family conflict, perceived discrimination)
- newly recruited *African American subsample* (n=592)

MIDUS Samples and Longitudinal Response Rates (9-10 yrs)

MIDUS
Midlife in the United States

Original MIDUS 1 Sample (N = 7,108)

Overall Longitudinal Response Rate (RR) = 75% (adjusted for mortality)

Main RDD (N = 4,244) RR = 71%

Sibling (N = 950) RR = 83%

Twins (N =1, 914) RR = 82%
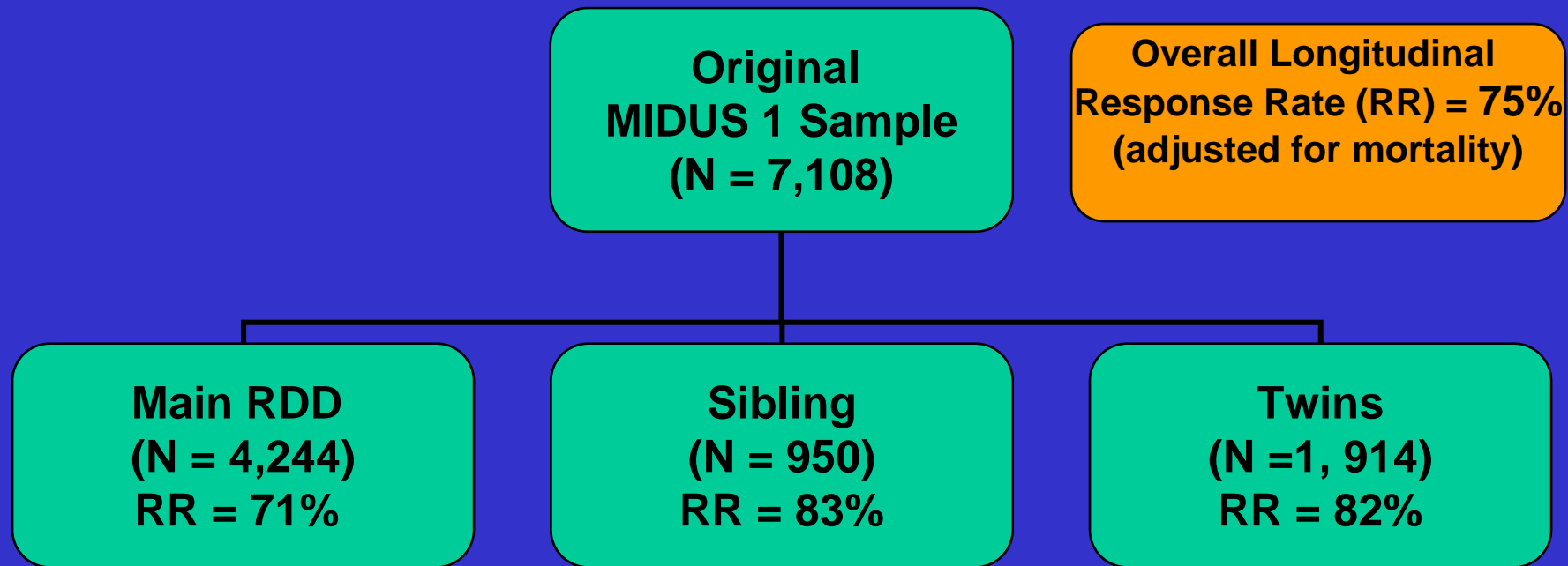
New to MIDUS II → **Milwaukee (African Americans) (N = 592)**

[Project 1]

Project 2 – Daily Diaries
(via phone interviews)

- Data: 8 days of interviews/person
- Data: 4 days of salivary cortisol/person (4 times/day)

- Strengths:
  - *largest and only national study* of daily experience
  - *largest and most representative study of diurnal cortisol*
  - *longitudinal design (~1,400 respondents)*
  - *includes 250 twin pairs*

Project 3 – Cognitive Function

- Response rate: 86%
- 20-min Phone Interview: BTACT (Brief Test of Adult Cognition by Telephone) → episodic verbal memory, working memory span, verbal fluency, inductive reasoning, processing speed, attention-switching reaction time

- Strengths:
  - *first ever national assessment of above abilities*
  - *across 5 decades (measures sensitive to early age decline)*
  - *data on RDD, twins, siblings, African American*

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Project 4 – Biomarkers

- Protocol includes overnight stay at GCRC clinic

- Strengths:
  - *comprehensive biomarkers (neuroendocrine, inflammatory, cardiovascular, bone)*
  - *laboratory challenge study (including heart-rate variability and salivary cortisol)*
  - *comprehensive data on medications*
  - *all across 5 decades of aging*

Project 5 – Neuroscience

- Protocol includes measurement of EEG and bodily responses to emotion-laden information, EEG and MRI structural and functional brain assessments during affective tasks

- Strengths:
  - *Largest study ever on neural substrates of emotion*
  - *Diversity of sample (age, ethnicity, SES)*

Unique Strengths of MIDUS

- **In-depth multidisciplinary content**
  - *Achieved via 5 separate data collection projects*
- **Wide age range (25-74)**
  - *Facilitates focus on life course transitions*
- **Longitudinal change (9-10 years)**
  - *Enables assessment of cumulative, long-term influences*
- **Includes national twin sample**
  - *Allows for study of genetic influences*
- **Use of data**
  - *Wide presence across scientific fields*

Use of MIDUS Data
[publicly available at ICPSR]

❖ MIDUS I data available since 1998 → 225+ publications: http://midus.wisc.edu/

➢ appearing in 67 different journals

➢ ~ 40% generated by non-MIDUS investigators

➢ 6,298 data files downloaded from ICPSR

❖ MIDUS II → Project 1 survey data delivered to ICPSR in January, 2007

➢ 2,296 data files downloaded to date

MIDUS
Midlife in the United States

HOW
Healthy ARE WE?

A NATIONAL STUDY OF WELL-BEING AT MIDLIFE

Edited by
Orville Gilbert Brim, Carol D. Ryff,
and Ronald C. Kessler

Summary Volume (2004) from MIDUS I

- ❖ 21 chapters
- ❖ Main headings:
  - ▪ Midlife Perspectives on Physical Health
  - ▪ Emotion, Quality of Life and Well-Being
  - ▪ Contexts of Midlife: Work and Family, Neighborhood and Community

Midlife in the United States
A National Study of Health & Well-Being

MIDUS

Sponsored by the National Institute on Aging   June 5, 2007

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Welcome

Carol Ryff , Principal Investigator of MIDUS II welcomes you to our website.

MIDUS II Investigators

A list of the Scientists who are carrying out the data collection for MIDUS II.

History and Scope of MIDUS

The first MIDUS investigation was conducted in 1994/95 with a sample of over 7000 Americans, aged 25 to 74. It was funded by the John D. and Catherine T. MacArthur Foundation. In 2002, the National Institute on Aging provided a grant to the Institute on Aging at the University of Wisconsin, Madison to carry out a longitudinal follow-up. MIDUS II is currently in progress.

Overview of MIDUS I

In 1994/95, the MacArthur Midlife Research Network carried out a national survey of over 7,000 Americans aged 25 to 74. The purpose of the study was to investigate the role of behavioral, psychological, and social factors in understanding age-related differences in physical and mental health. The study was innovative for its broad scientific scope, its