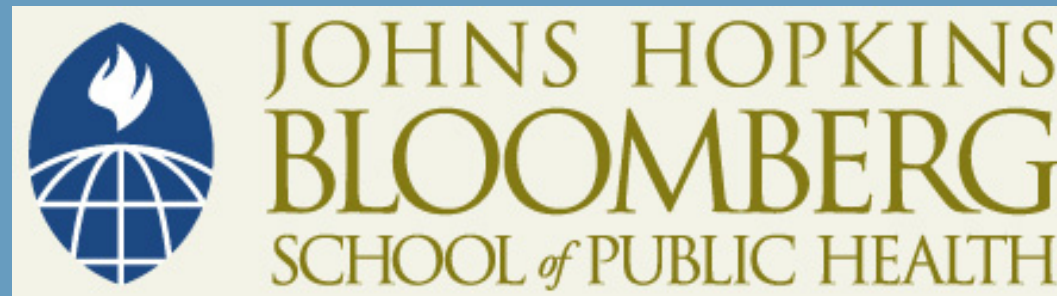


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JOHNS HOPKINS
BLOOMBERG
SCHOOL *of* PUBLIC HEALTH

Section B

Themes Over the Life Course, Part 2

Timing

- When things happen in the life course is often as important as whether they happen at all
 - Going back to school doesn't help people to catch up in earnings
 - Timing of childbirth is consequential in women's lives
- Timing may not refer to age, but to the relationship of the event to other events
 - Having a child prior to finishing education or prior to marriage
 - Divorce with and without children

Time Patterns

- Accumulation of risk (cumulative disadvantage)
- Critical and sensitive periods

Cross-Level Processes

- Stress process
- Immunity
- Neurodevelopment

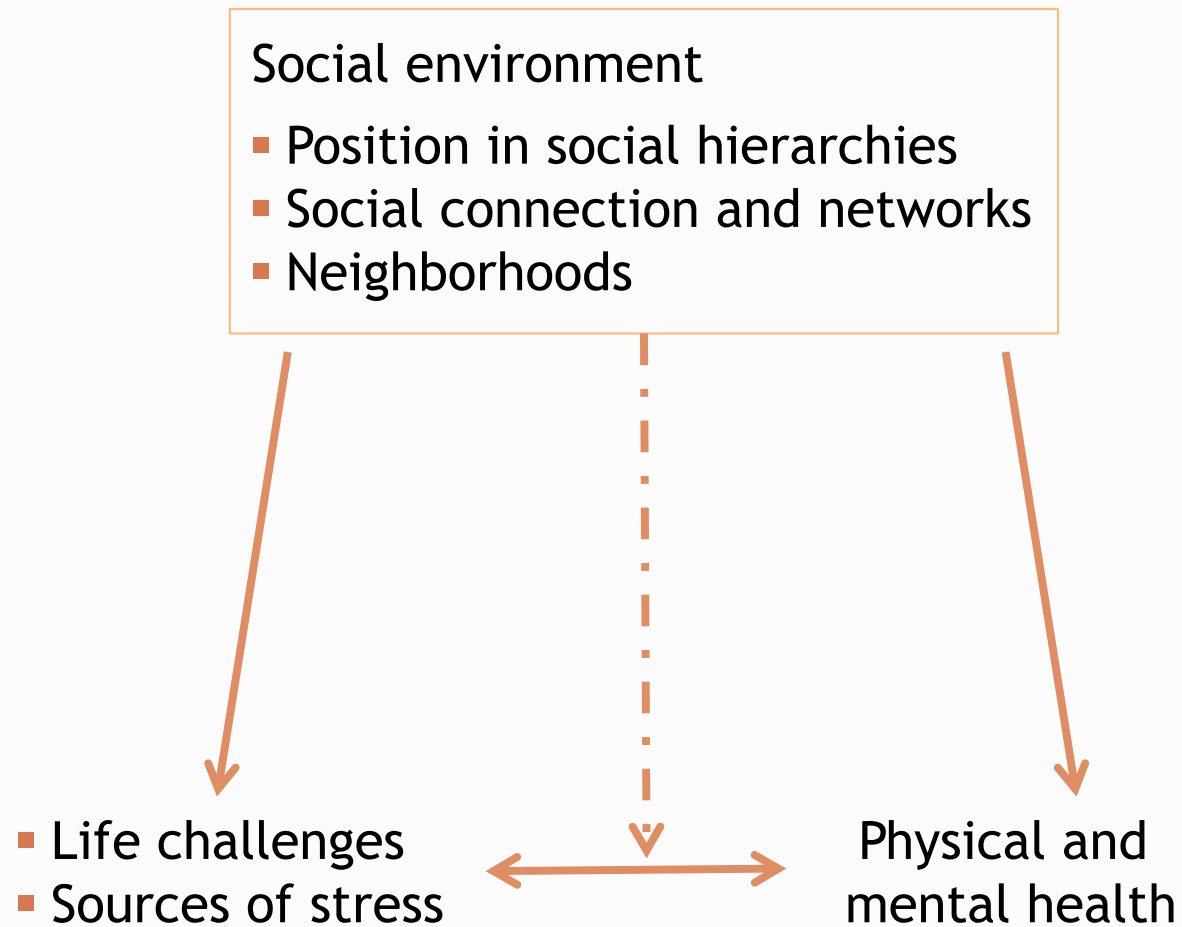
People's Life Experiences Get "Under the Skin"

- How do people's life experiences get "under the skin"?
 - Major potential pathway is through the stress process
 - "Stress" is a rather vague term, used differently by various disciplines
 - Basically, an environmental challenge that threatens the operating integrity of an organism and thus requires the organism to adapt in some way (e.g., threat)
 - Process of adaptation includes return to original state

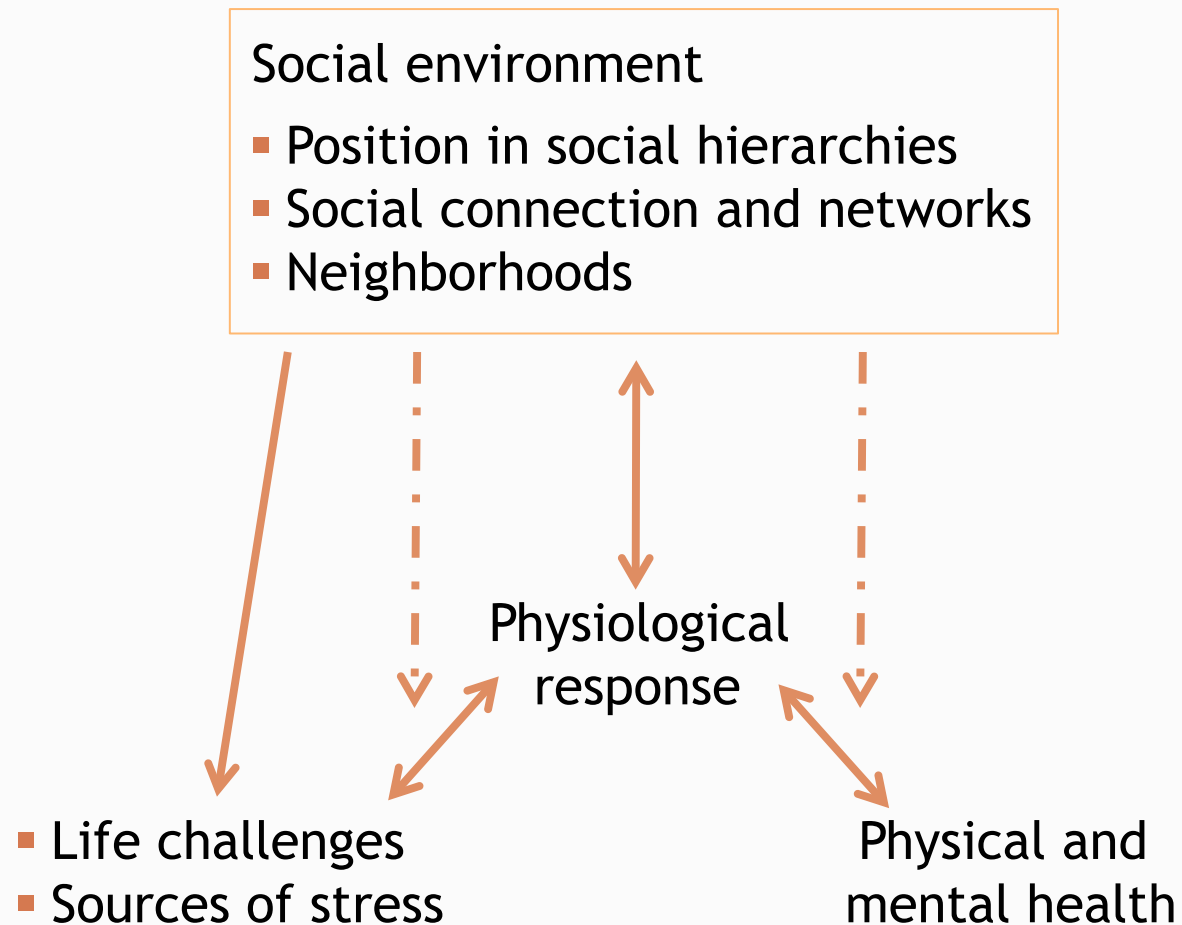
Stress and the Life Course

- Can conceptualize stressors and perceptions of stress in terms of the life course
 - E.g., poverty, divorce, care giving, trauma
 - Note temporality (chronic/acute)
 - Note that context matters: same event may or may not be a stressor depending on what else is going on in the person's life

Social Environment and Health



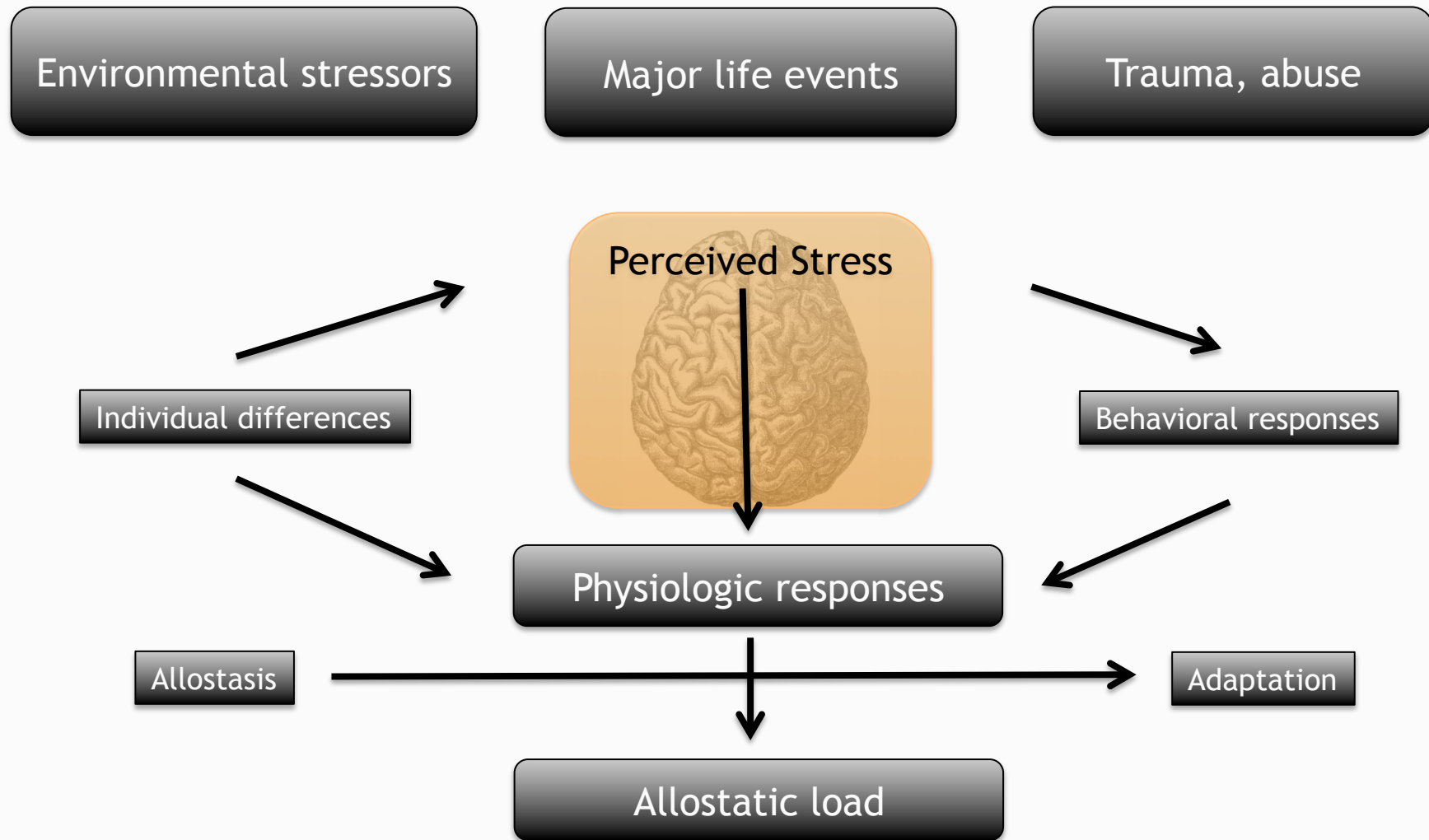
Social Environment and Health



Allostatic Load

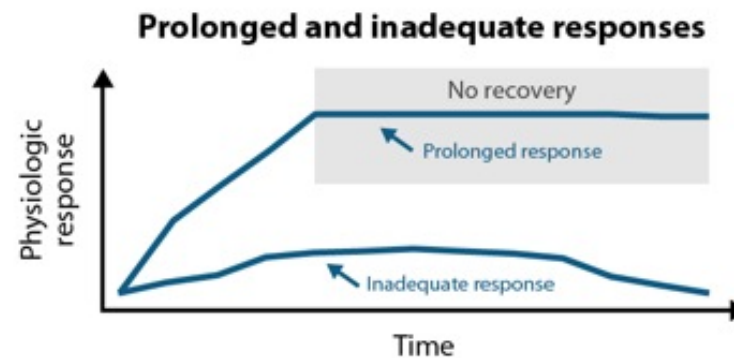
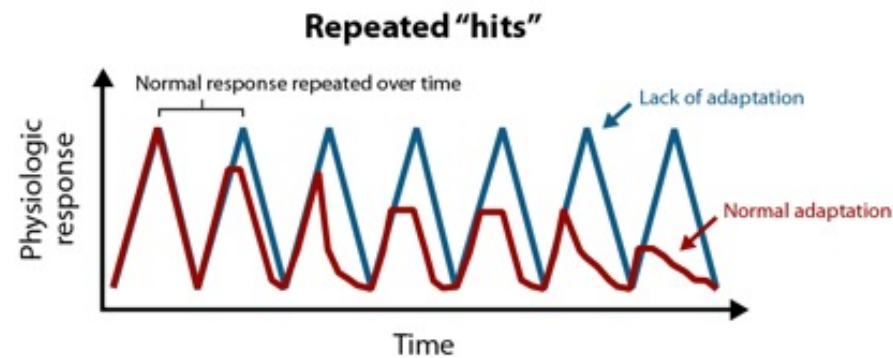
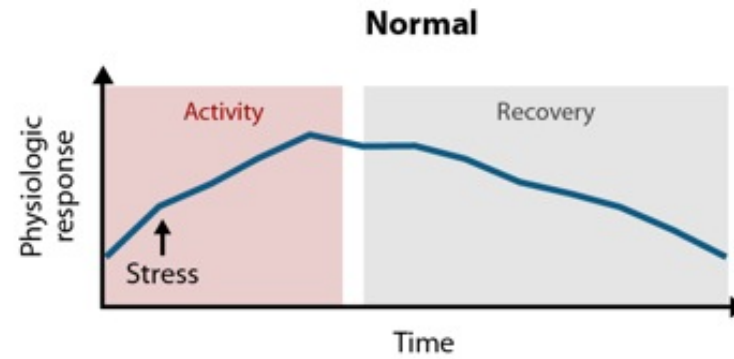
- Framework from McEwen and Stellar (1993), McEwen (1998)
- Systems involved in the stress response include ...
 - Sympathetic nervous system (SNS)
 - Hypothalamic-pituitary-adrenal axis (HPA)
 - Immune system
 - Cardiovascular and metabolic systems
- Homeostasis, allostasis, allostatic load, physiological dysregulation
- Repeated or chronic activation of the stress response can have negative effects on health over time

Stress Response and Development of Allostatic Load



Adapted from: McEwen, B. S. (1998). Protective and damaging effects of stress mediators. *New England Journal of Medicine*, 338, 171-179.

Stress Response and Development of Allostatic Load



Adapted by CTLT from McEwen, B.S. (1998). Protective and damaging effects of stress mediators. *New England Journal of Medicine*, 338, 171-179.

Results on Allostatic Load

- Measures of allostatic load have been positively associated with mortality and cognitive and physical decline (e.g., Seeman et al., 1997)
- AL measures have also been shown to explain a significant proportion of the excess mortality risk for those of low SES (measured by HS education) (Seeman et al., 2004)
 - Independent of self-reported disease
 - Better than individual biomarkers
- Recently, researchers have also examined the role of immune function in AL
- Research continues on the measurement of AL ...