

# Lecture 21 Stress and Health

Why don't zebras get ulcers?

Life of zebras very stressful — water, tigers, death...

## #1 Basics of Stress

\* Stress — response of body to demand of change  
→ Getting up → Going out in the cold

\* Types — Acute Physical Stressors

→ Get punched

— Chronical Physical Stressors

→ Hunger

— Psychological & Social Stressors

→ Stress about possibilities in future

→ Midterms → Applications

zebra don't have this

\* Responses Sympathetic: digestion ↓ heart rate ↑ blood to muscles ↑  
growth ↓ reproductive ↓ immune system ↓  
↑ so that you can escape

Parasympathetic: opposite

\* Three stages of Stress

1. Alarm — body reacts

2. Resistance — temporarily rebalanced

3. Exhaustion — resource depletion

Consistent stress: low digestion  
all the time, resource  
depletion ... ☹️

\* On brain: dendroids pull away ... worse memory (hippocampus)  
↑  
Vicious cycle more negative association ... more stress (amygdala)

→ Psychogenic Dwarfism — so stressed that ppl don't grow.

→ Stress → more likely to get sick.

## \* Type A vs type B personalities

- Type A: need efficiency, trouble relaxing, need pressure
- Type B: not need activity, low stress environment

## \* Measuring Stress

- Cortisol
- Ulcers
- Psychophysiology (GSR, blood pressure, etc.)
- Questionnaires

## #2 Coping with Stress

### \* Reducers of Stress

- Predictability

→ Shocking rat

- |  |                       |   |
|--|-----------------------|---|
| - No shock   | - low stress          | □ |
| - Shock with warning                               | - some stress but low | □ |
| <i>interestingly</i> - Shock without warning       | - high stress         | □ |
| ↘ - Can pull lever to stop the shock after warning | - mid stress          | □ |

- Perceived Control

→ Old ppl care place asile de vieillards

- |  |                       |
|--|-----------------------|
| - allowed to set up bedroom, let them choose movie | - Happier             |
| - set up room already, schedule movie for them     | - Lower death rate!!  |
|  | - Less happier        |
|  | - higher death rate!! |

- Attribution Styles

- |                          |                  |
|--------------------------|------------------|
| - External "Bad weather" | - Less stressful |
| - Internal "I'm stupid"  | - More stressful |

- Social Support
  - Tangible - money, shelter, food
  - Intangible - comfort, support, advice
- Meditation → David Creswell here at CMU expert on that!
- Exercise
- Cognitive reappraisal - rethink in grand scheme of thing
- Social comparison - at least better than some ← Ummm
- Humour

### #3 Placebo Effects

We have lots of control over our body.

→ Effect of medicine in head!

Believe that something heals heals.

→ The more expensive the placebo, the more effective it is

→ Side effect listing also has placebo effective!