How stressed do you get?
A negative personality constellation is associated with higher feelings of stress but lower blood pressure, heart rate, and hormone responses to stressful experiences
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Introduction
- Acute mental stress, such as job interviews
  - Activation of cardiovascular system: ↑ heart rate (HR) & ↑ blood pressure (BP)
  - Stress hormone release: ↑ cortisol
- Large cardiovascular reactions to stress have been linked to high blood pressure and cardiovascular disease development
- Low cardiovascular and cortisol reactivity also linked to a range of adverse health & behavioural outcomes, e.g. depression & addiction

Fig 1. Humans vary on their levels of the Big 5 Personality characteristics

Personality traits proposed to affect how we perceive stress and have physical components. But . . .
Previous evidence = Inconclusive

Aims
- Examine in a large sample the association between the Big 5 personality traits and self-report, cardiovascular and cortisol responses to stress.

Method
- 352 Dutch participants
- Big 5 Personality Inventory 44 items
- 3 Stress Tasks + Stress Task Ratings Stressfulness, Control

Table 1. Personality and biological responses

Table 2. Personality and stress task ratings

Results
- Stress tasks significantly increased cortisol, HR, and BP

Fig 2. Individuals high on neuroticism, and low on agreeableness and openness demonstrated blunted cortisol responses

Fig 3. Individuals high on neuroticism, and low on agreeableness and openness also had blunted heart rate responses

Fig 4. Individuals high on neuroticism demonstrated lower blood pressure reactivity

Discussion
- Negative constellation of personality traits associated with smaller cortisol, HR, and BP reactions to stress

The adverse health and behavioural outcomes identified with smaller physical responses are also associated with this negative personality profile

This may reflect dysregulation in the brain areas involved with emotion and motivation

Feeling during stress
- Higher neuroticism: ↑ Stress + ↓ Control
- Higher openness: ↓ Stress + ↑ Control

Physical responses
- BUT smaller physical responses
- WHY? Repeated stress exposure
- BUT greater physical responses
- WHY? Suppress emotions, Variety

Future research: Assess Type D personality and behaviours of individuals with blunted stress responses.

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References
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