

# Stress and ageing

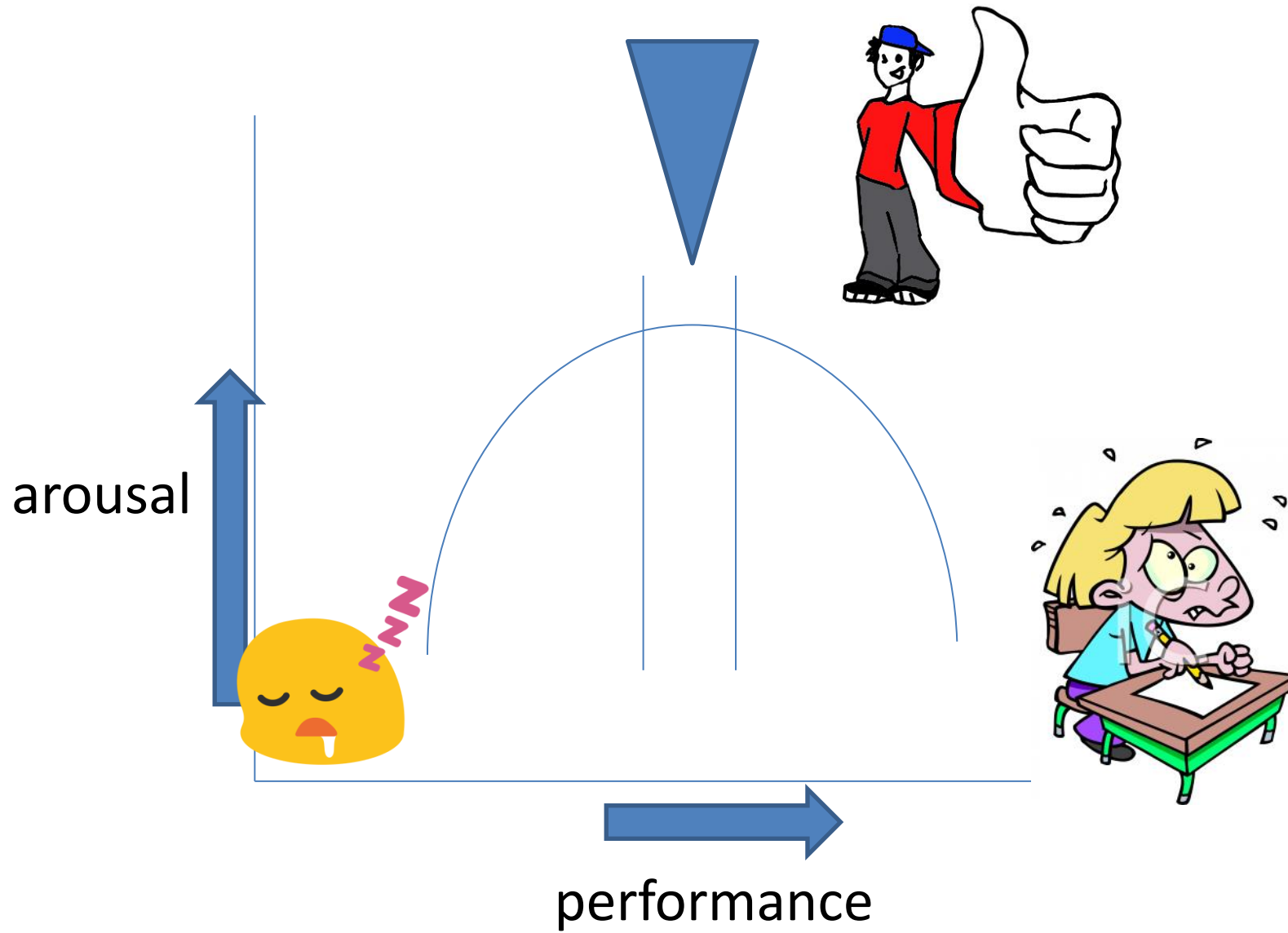
Chris Bundy

Reader

Behavioural Medicine

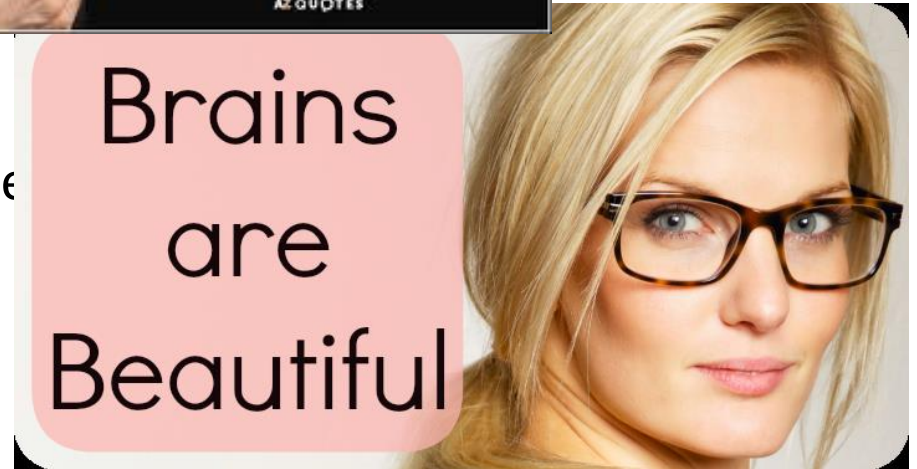
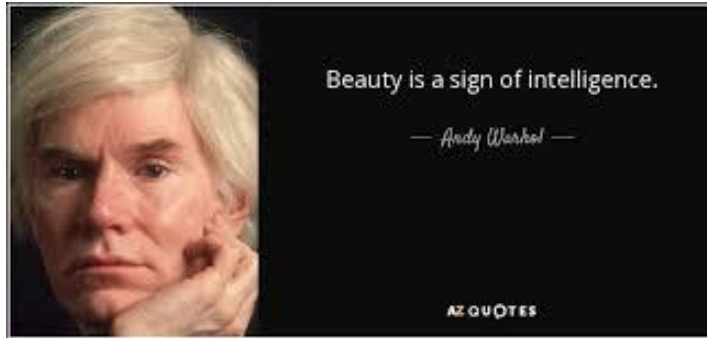
# Appearance

- Skin is the largest sensory organ – more nerve rich than any other
- Particularly susceptible to the effects of arousal, which generates a physiological response which includes sweating & blushing



# What do we assume from appearance?

- Intelligence
- Wealth (& Class)
- Health
- Moral worth (goodness v badness)
  - Prison sentences
  - High level jobs & pay
  - Achievement
- Identity
  - 'our sort'
  - In group / out-group conflict



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**A LITTLE BEAUTY IS  
PREFERABLE TO  
MUCH WEALTH**

SAADI

PICTUREQUOTES.COM

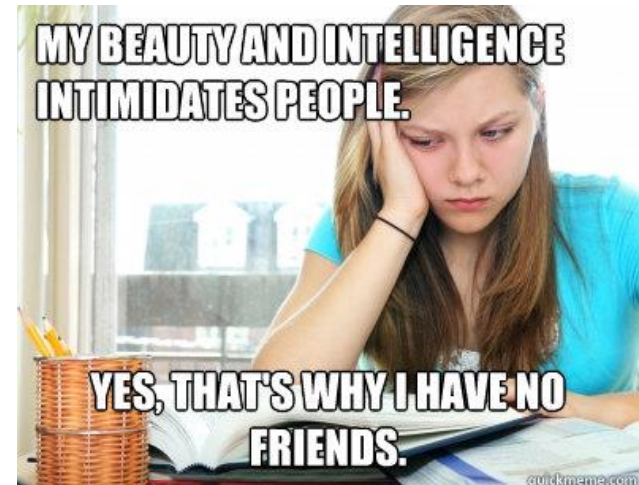


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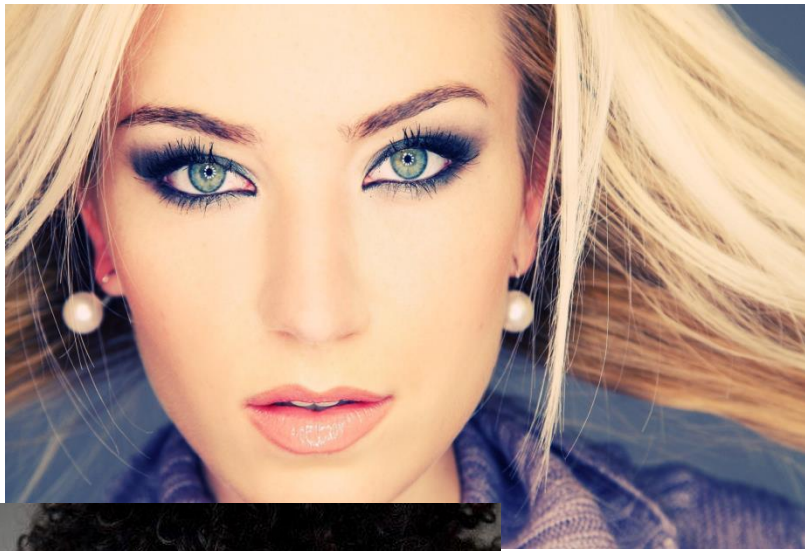
# Appearance matters

- A survey of 77 630 adults in Britain showed 16% women and 27% men like what they see in the mirror and 46% women and 62% feel ashamed of how they look
- Concerns about premature ageing drive desire to stop or reverse the process
  - Want to look 'less tired' as opposed to much younger
- Botox & fillers market rose from £2.3 billion in 2010 to £3.6 billion in 2015
  - Teens are seeking invasive procedures

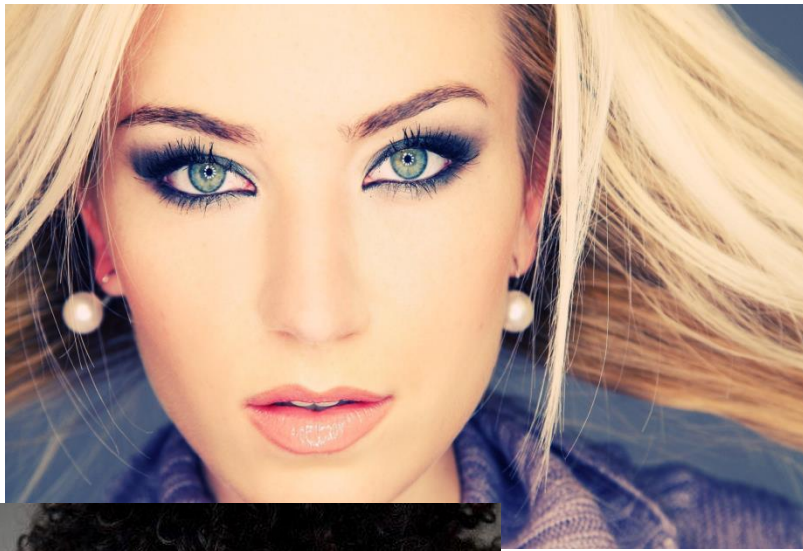


# What is beauty?



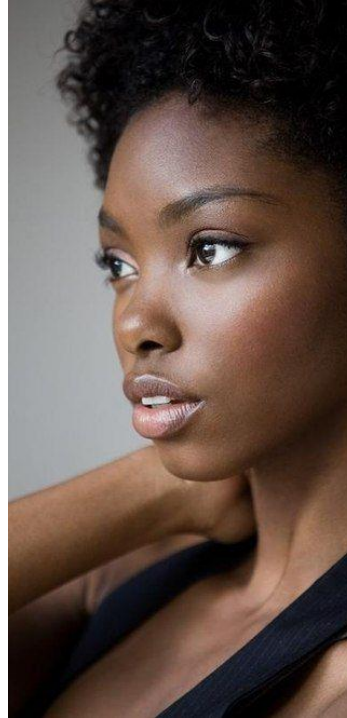
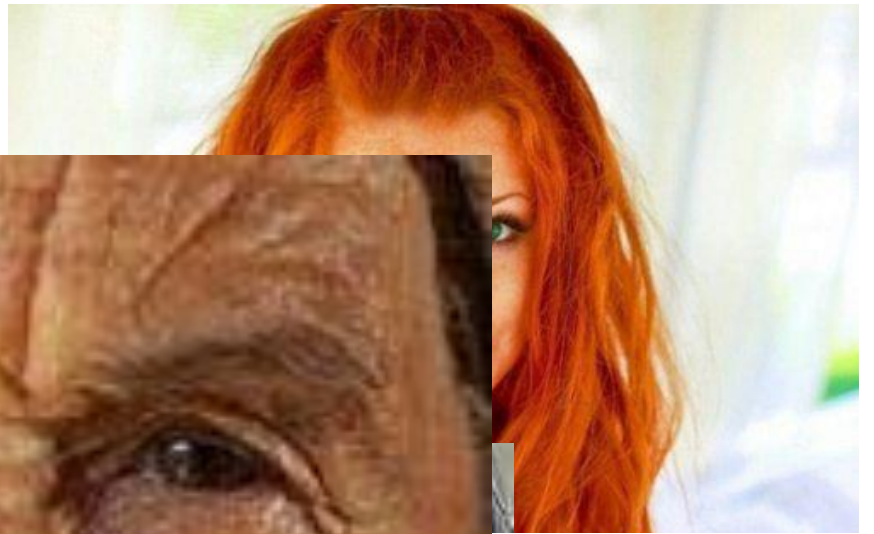
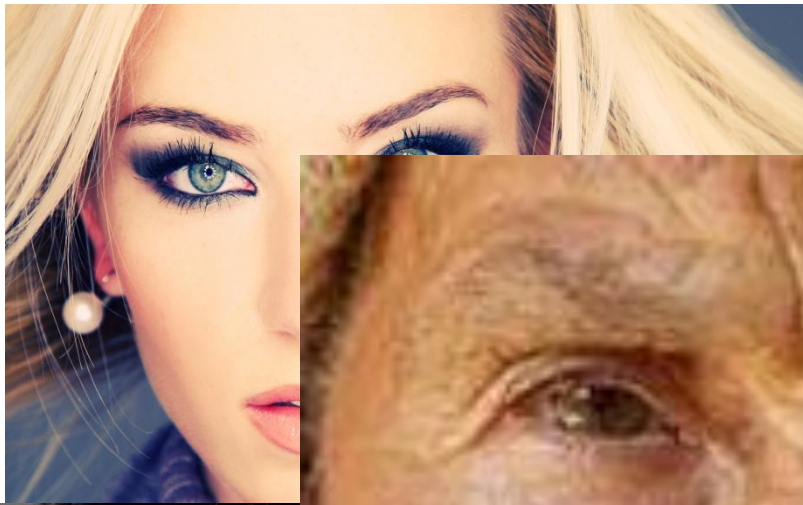




















# What is beauty?

- Balanced features
- In women child – like
- In men – conveying masculinity
- even skin tone that is free from blemishes, independent of skin colour
- No wrinkles
- All about perception

# What is beauty?

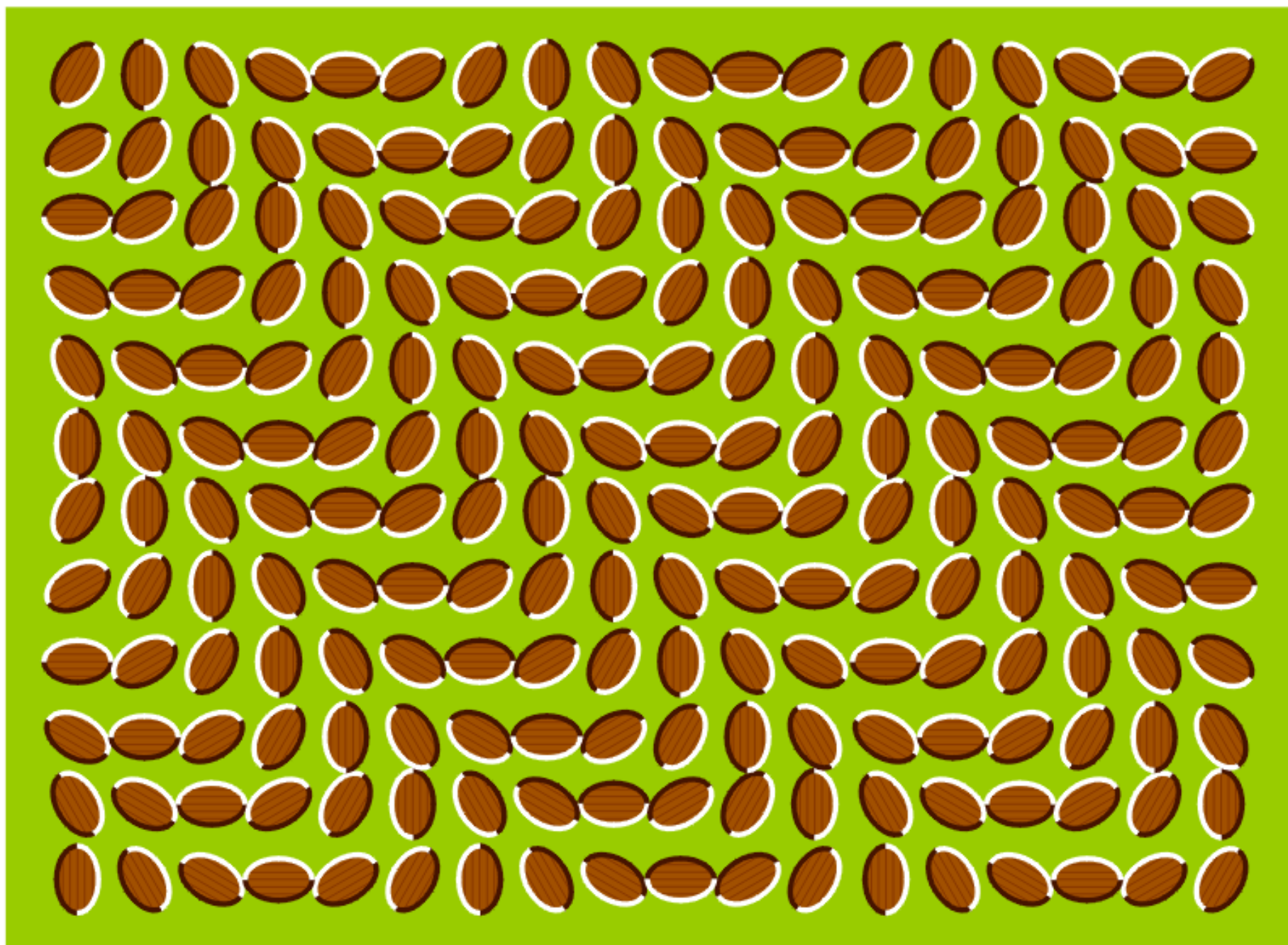


***Man Playing Horn... Or Woman  
Silhouette?***

***(hint: woman's right  
eye is the black speck in front  
of horn handle)***



***Old Woman...Or Young Girl?***



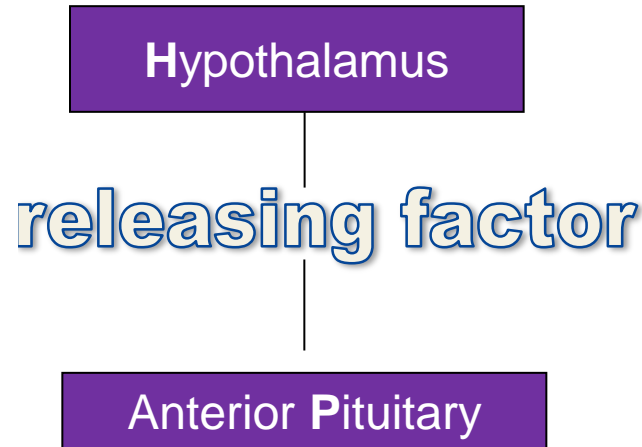
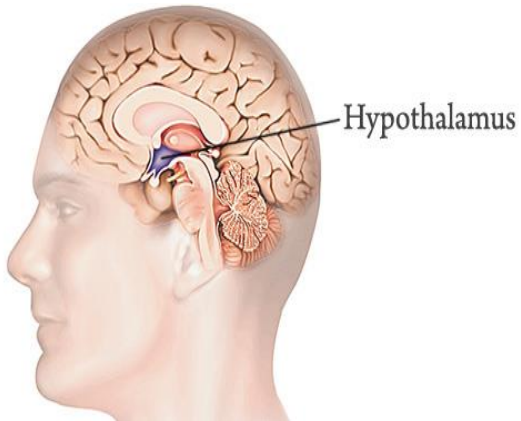
# Stress

- Is stress linked to ageing?
- Stress disrupts sleep – leads to reduced cell repair function
- Long-term exposure to stress linked to reduced telomere length and function
- Stress linked to worse health behaviour .....

# Stress: a complex cascade of physiological activity & interpretations - Acute v Chronic

- Physical
  - Increased SNS activity
  - Arousal
  - CNS activation
  - Fight/Flight response
- And psychological
  - Thoughts
  - Feelings
  - Behaviour

# HPA axis



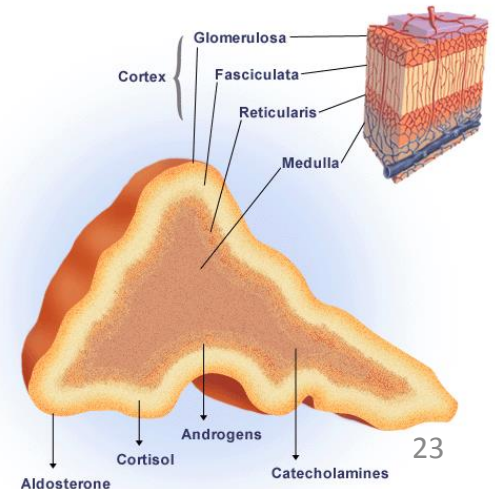
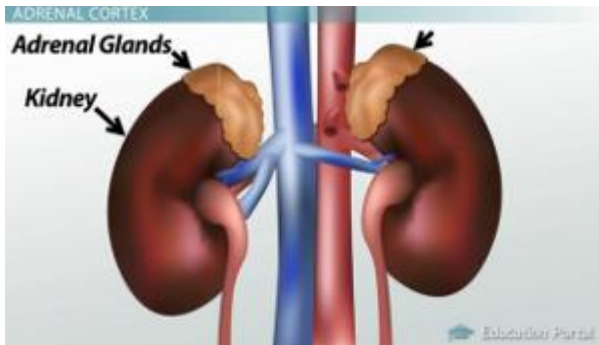
Speeds up cv activity & cv reactivity (responsiveness)

Releases glucagon

ACTH

Adrenal cortex

↑  
blood sugar  
↑  
BMR



# Cannon's fight / flight response



Sympathetic activation

Cognitive performance

Muscular priming

Immune functioning



Immune functioning

Cognitive performance

Exhaustion



# Physical reactions: increased SNS activity

## CVS

BP, HR, CV Reactivity, vessel motility, blood viscosity

## GI/ Endocrine

Energy metabolism

Gut motility

Cortisol production

## Musculo- skeletal

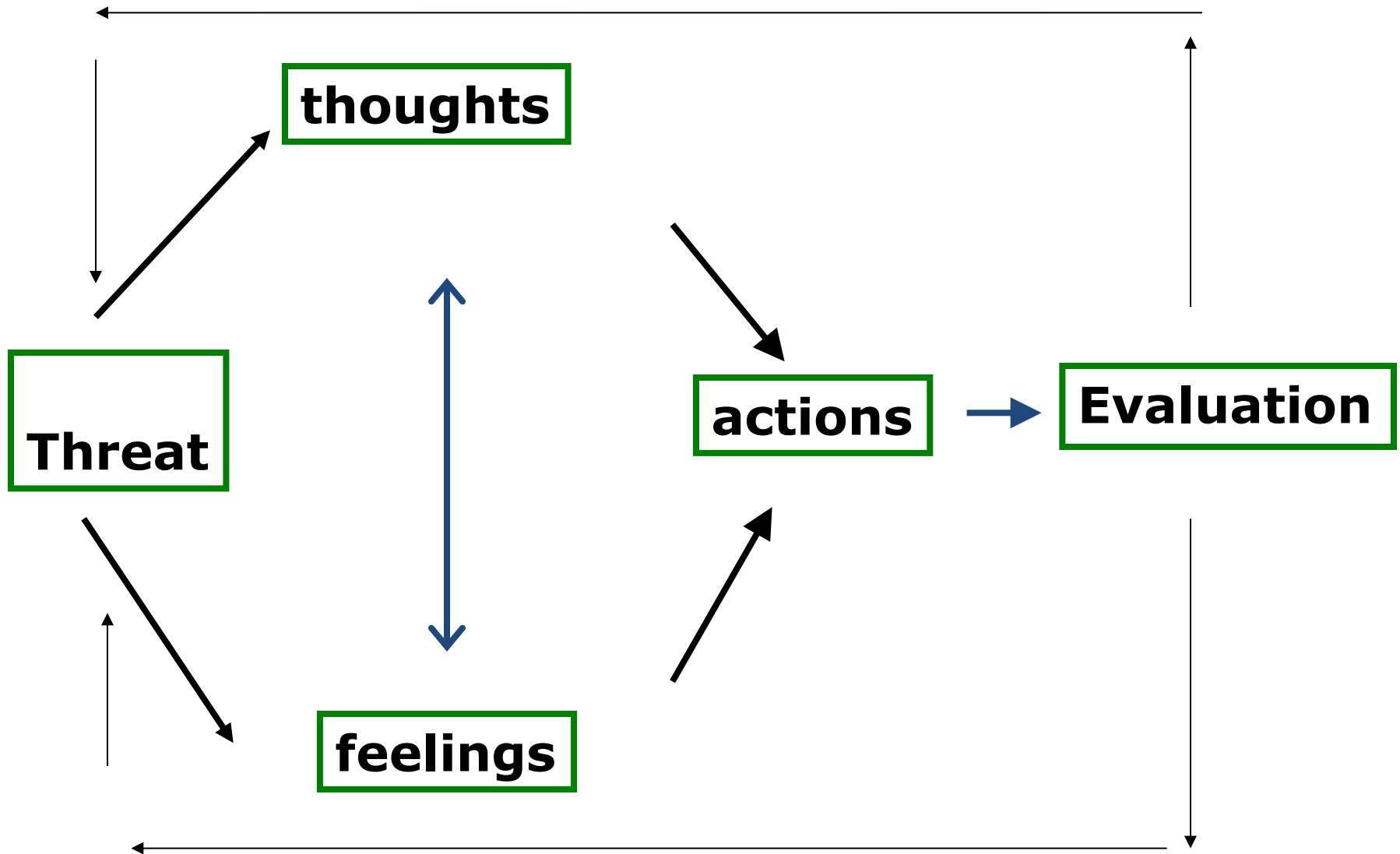
Fight/flight response

## CNS

Cognitive activity (including sleep)

Sensory sharpening

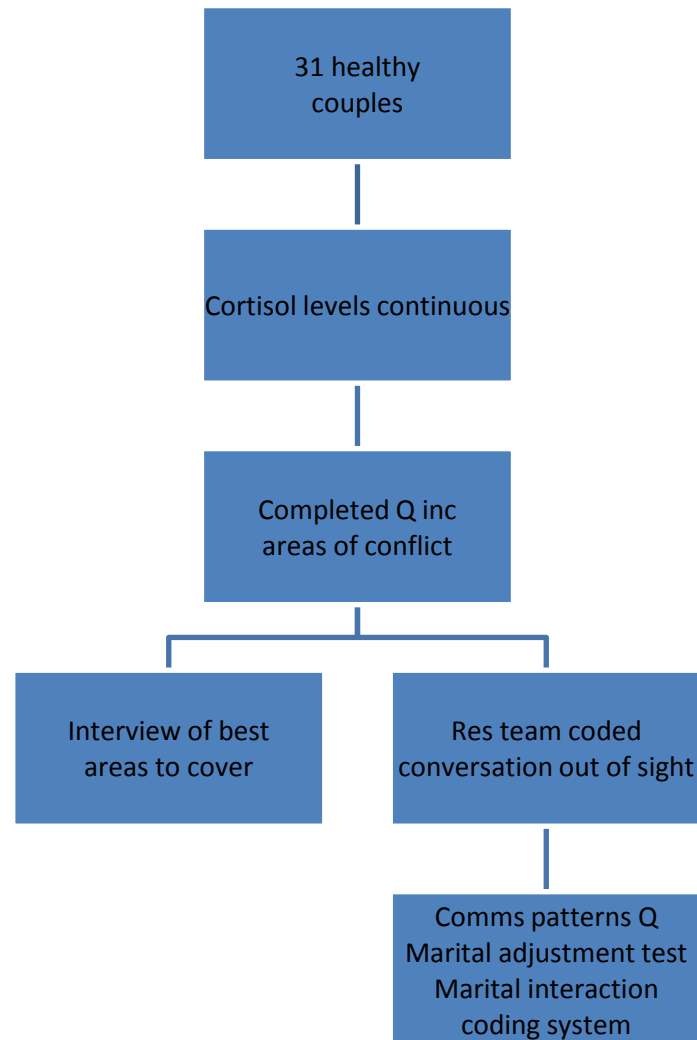
# Self-Regulatory / Common Sense Model (Leventhal et al)



# What actions are important to ageing?

- Health protective
  - Self-checking
  - **Sleep**
  - Diet (& weight)
  - **Exercise**
  - Happiness
- Health threatening
  - **Smoking**
  - UV exposure
  - **Alcohol** (other)
  - **Stress**

# Interpersonal conflict study (Heffner et al 2006)



## Heffner et al 2006 continued...

- Wife demand (WD) husband withdraw (HW) during conflict related to cortisol response for women only
- More couple reported WD/HW in general related to increased cortisol response for both in general
- **Perceived communications patterns contribute to stress response in marital conflict**

Thank you

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