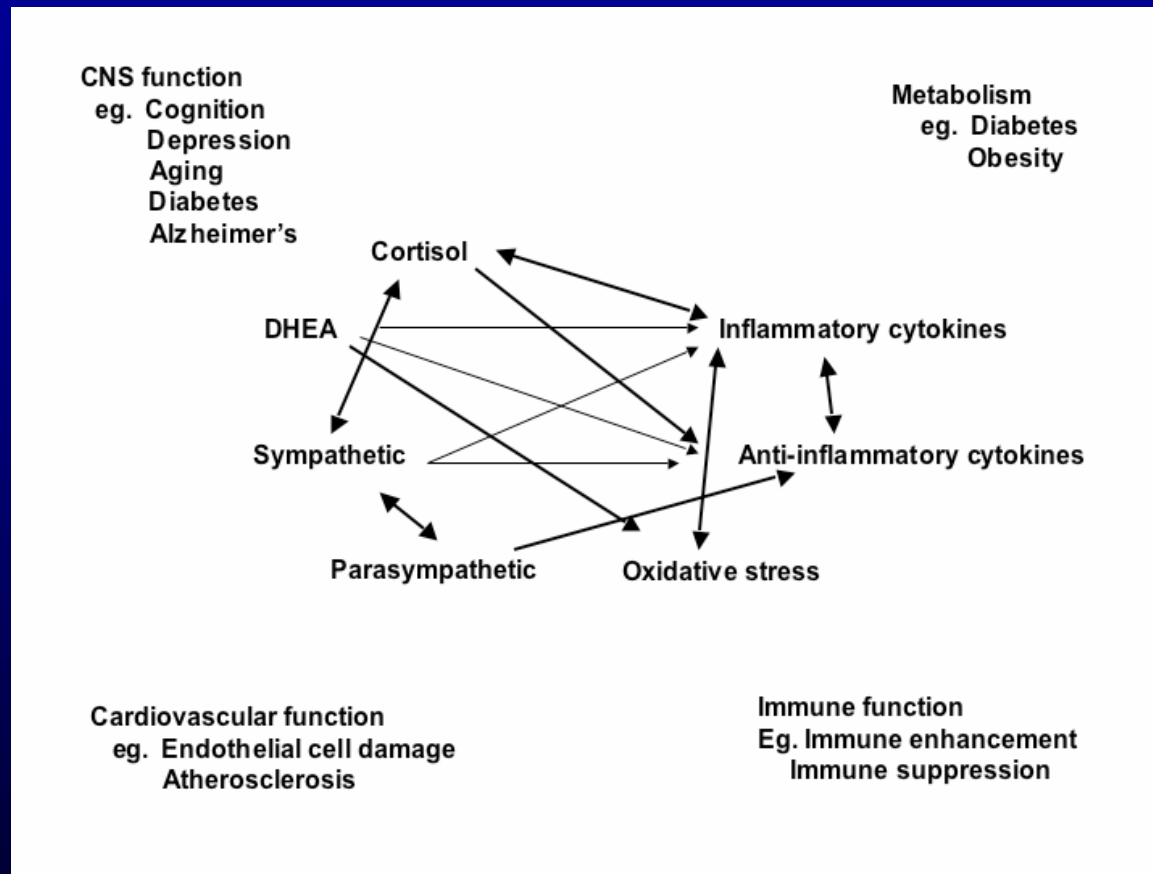
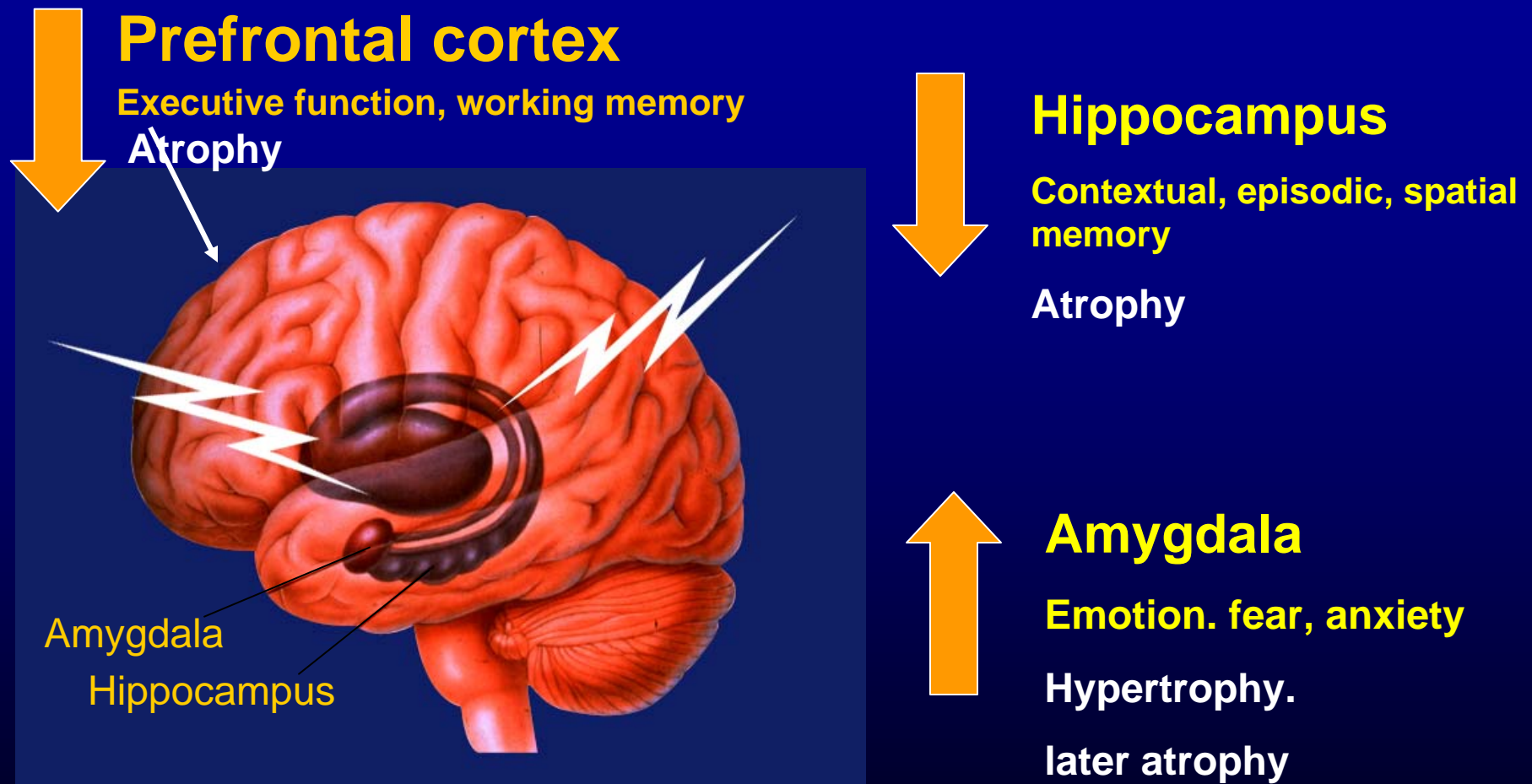


Mediators of stress and adaptation



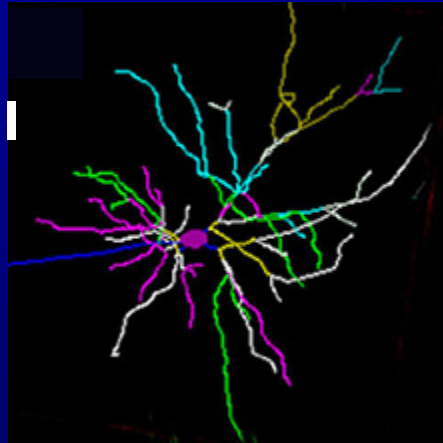
NON-LINEARITY!!

The Human Brain Under Stress: Depression and Aging

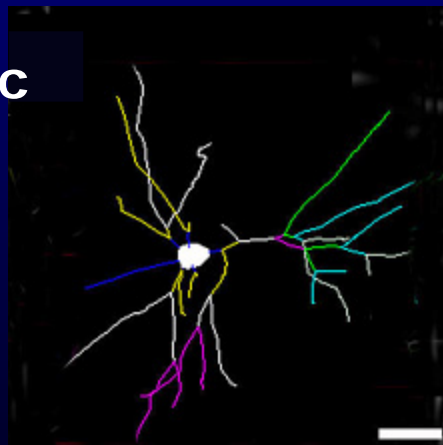


Stress causes neurons to shrink or grow

Control

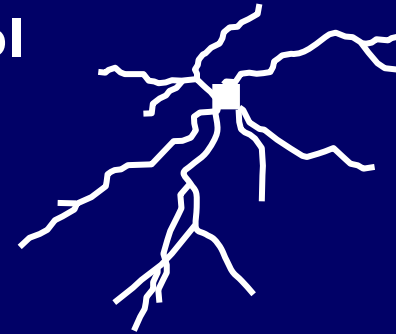


Chronic stress

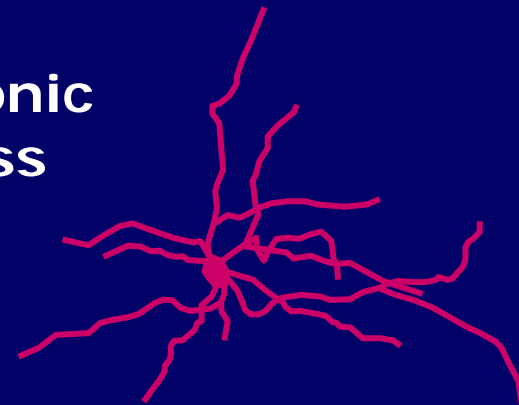


Prefrontal Cortex
And Hippocampus

Control



Chronic stress



Amygdala

How Chronic Stress Can Affect Behavior and Health

Chronic Life Stressors

Pre-Existing Stress Load & State of Brain and Body.

Chaos, Conflict,
Lack of Control

Anxiety,
Mood changes, and
Disturbed Sleep

Health-damaging behaviors

Toxic Stress leading to
Chronic physiologic stress burden
(allostatic overload)

Dysregulated stress response

Adverse health outcomes

Examples

Overeating No exercise
Heavy Drinking, Smoking

Chronically elevated:
Cortisol, Insulin,
Inflammatory
Cytokines

↑ Heart rate, BP,
Hyperlipidemia

Hypertension, diabetes,
obesity, coronary disease,
arthritis, depression, GI disorders
and fatigue.