



Vulnerability and Resilience:
Mood & Anxiety Disorders

Moderator

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What Are Mood & Anxiety Disorders? Aka "Affective Disorders"

Brain disorders associated with disruption in the regulation of feelings, emotions and mood. They result in a sustained, typically maladaptive psychological state that is very painful to the individual.

Affective Disorders Include:

Depressive Disorders- e.g. Major Depression (MDD)

Bipolar Disorders (BPD)

Generalized Anxiety Disorder (GAD)

Social Anxiety Disorder

Panic Disorders

Phobias

Post- Traumatic Stress Disorder

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Review

Addressing the burden of mental, neurological, and substance use disorders: key messages from *Disease Control Priorities*, 3rd edition

Common mental disorders are increasing worldwide. Between 1990 and 2013, the number of people suffering from depression and/or anxiety increased by nearly 50%, from 416 million to 615 million. Close to 10% of the world's population is affected, and mental disorders account for 30% of the global non-fatal disease burden. Humanitarian emergencies and ongoing conflict add further to the need for scale-up of treatment options. WHO estimates that, during emergencies, as many as 1 in 5 people are affected by depression and anxiety.

Depression and anxiety disorders cost the global economy US\$1 trillion each year

Washington DC– Depression and anxiety disorders are reported to cost the global economy US\$1 trillion each year.

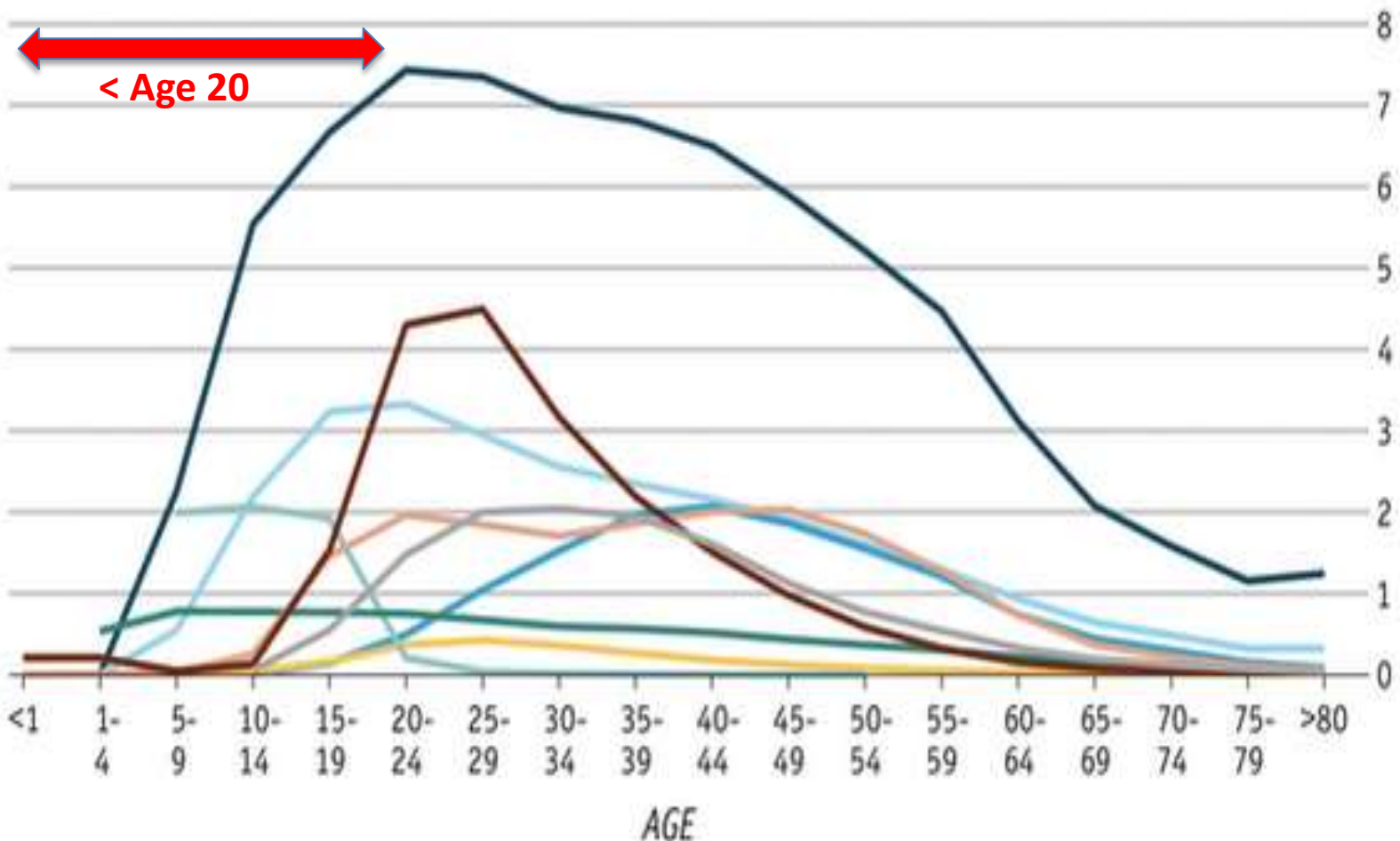
Comorbidity of Depression and Anxiety Disorders



Global burden of mental and substance disorders

Disability-adjusted life years by age group, 2010, m

— Depression — Anxiety — Schizophrenia — Bipolar — Eating
— Childhood behaviour — Pervasive development* — Alcohol — Drugs



Source: H. A. Whiteford et al. "Global burden of disease attributable to mental and substance use disorder", the *Lancet*, August 2013

*Including autism and Asperger's syndrome

The Concepts of Vulnerability & Resilience

A- Stress & Vulnerability:

Affective disorders are often triggered by exposure to major stress. Stress is intrinsically an environmental factor, including physical and psychological environment. The ability to cope with stress differs significantly between individuals, depending on genetic and other experiential factors.

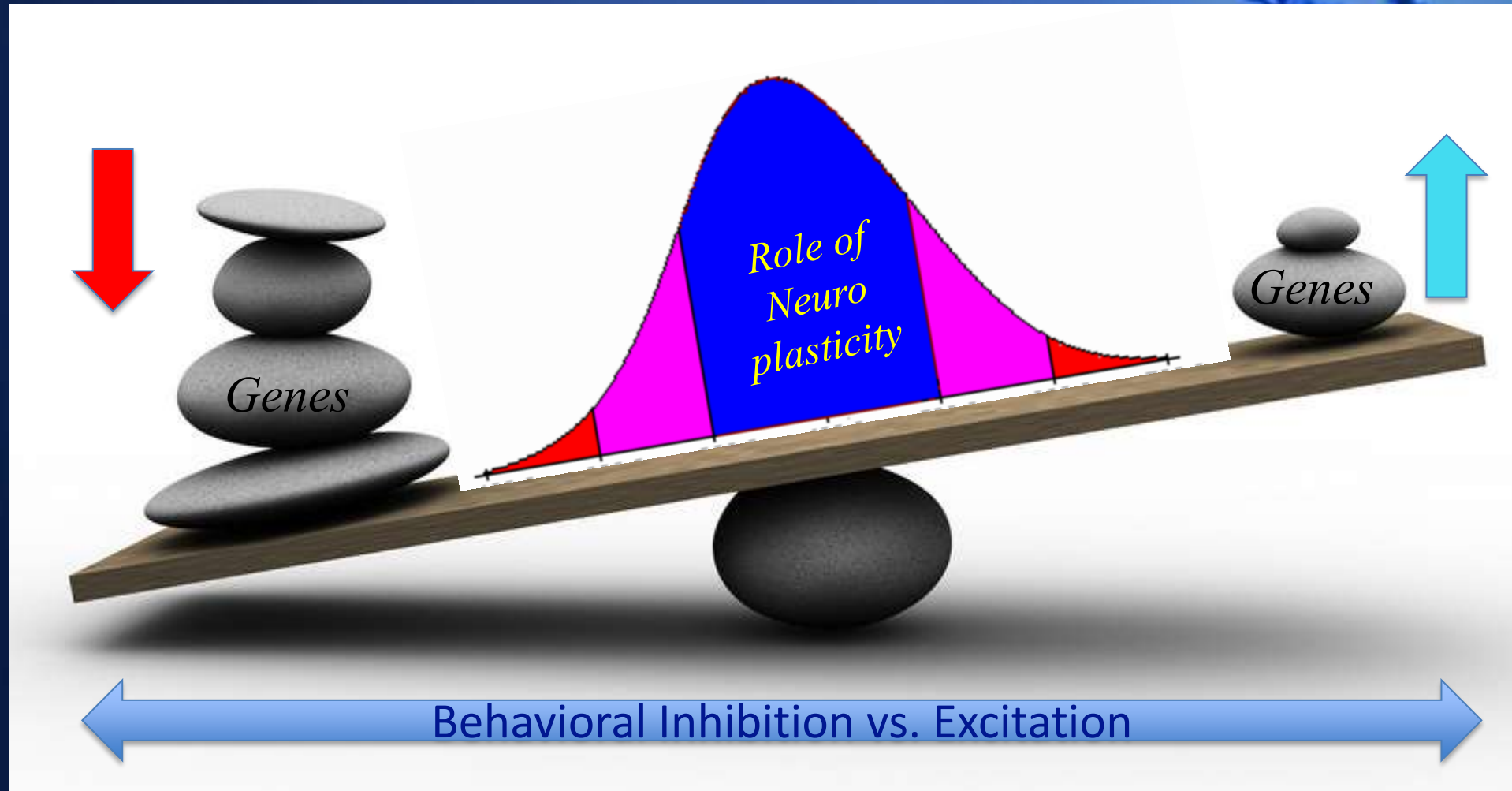
Not Genes vs. Environment.

But Genes and Circuits for Responding to the Environment.

B- Resilience & Active Resilience

*Resilience can be the absence of vulnerability- But evidence, especially from animal models, suggests that factors associated with resilience are distinct. They appear to be forces that may actively counter or buffer against vulnerability. They can be environment, such as as highly enriched or supportive environment. **Resilience can be acquired and counteract vulnerability***

Stronger Genetics at the Extremes



Genetic Extremes Fight Neuroplasticity

Time Windows & Critical Periods

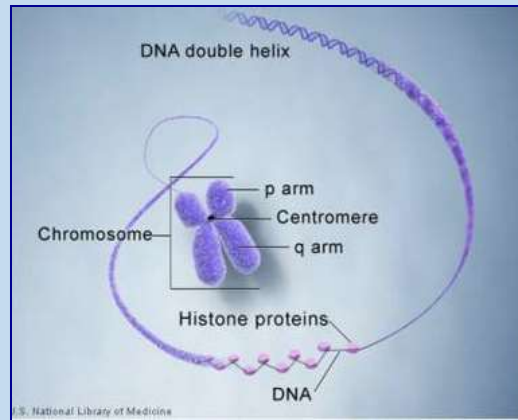
Across Development

- *Neuroplasticity is not infinite, and the brain's capacity for it changes with age.*
- *The Concept of "Critical Windows" with*

Keep in Mind:

*Not All Neuroplasticity is
Good*

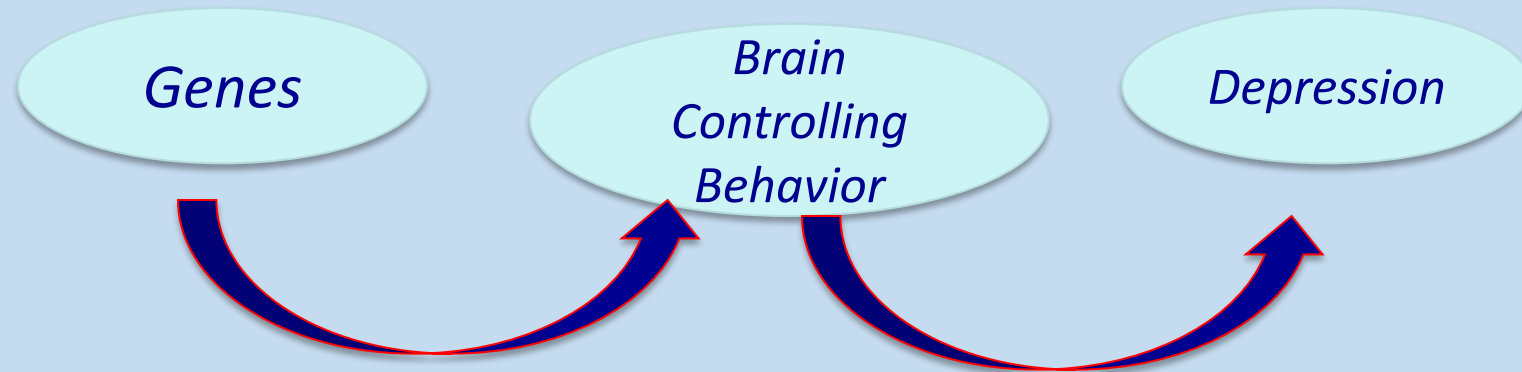
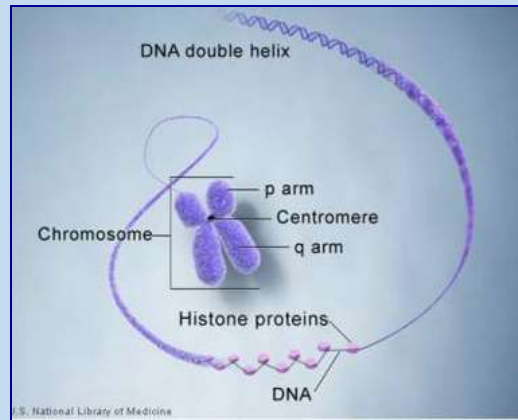




Genes

Depression

*Why Is it So Hard To Connect
the Two?*



*Essential to our Understanding:
Integration Across Levels of Analysis*

Vulnerability and Resilience:
Mood & Anxiety Disorders

Panelists

John H. Krystal: From Pathophysiology to Treatment

Beatriz Luna: The Adolescent Brain Development:
Risk and Resilience

Kafui Dzirasa: The Neurocircuitry of Vulnerability and Resilience

Thomas Lehner: The Genetics of Bipolar Disorder

***Vulnerability and Resilience:
Mood & Anxiety Disorders***

Keep in mind as you listen to each talk:

*How does this knowledge inform the
overall question of today's theme?*

WHAT CAN WE DO NOW???

