

## Take Home Lessons from Today 11-4-23

### What we can control directly – Consciousness

Actions, Who you surround yourself with, your perspective on certain events (good/bad), Attitude, Words, What you think about in your free time, Your relationships, Your goals and ambitions, Intentions, Opinions, Interests, Time management, Exercise

### What we cannot control directly – Certain neurotransmitter release

We can control these to some extent *indirectly* by what we listed immediately above.

**Homeostasis** refers to the body's or the mind's ability to maintain stability and equilibrium in the face of changing internal and external conditions.

In **neuroscience**, homeostasis primarily pertains to the regulation of physiological processes in the body. For example, when external conditions change, such as exposure to extreme temperatures, the brain and body must adapt to maintain internal stability. The hypothalamus, a key brain structure, plays a central role in this process. When it senses deviations from the body's set points (e.g., temperature, blood pressure, glucose levels), it triggers responses to bring these variables back within a narrow, optimal range. These responses might include shivering to generate heat in the cold or sweating to cool down in the heat.

Another example is the **Stress Response**: When the body perceives a threat or stress, it triggers the "fight or flight" response, releasing stress hormones like adrenaline (a.k.a epinephrine) and cortisol to help the body cope with the situation. Once the threat is gone, the body returns to a state of rest.

**Emotional Homeostasis**: In psychology, homeostasis can be applied to the emotional and psychological well-being of individuals. Just as the body strives to maintain physiological equilibrium, the mind seeks to maintain emotional equilibrium. When faced with changing circumstances or stressors, individuals have a natural tendency to adapt and restore

emotional balance. One can be depressed even if they are rich and they can be happy even when they are poor, injured or fighting a disease.