

I. What is Epigenetics? “Above / on top of genes”

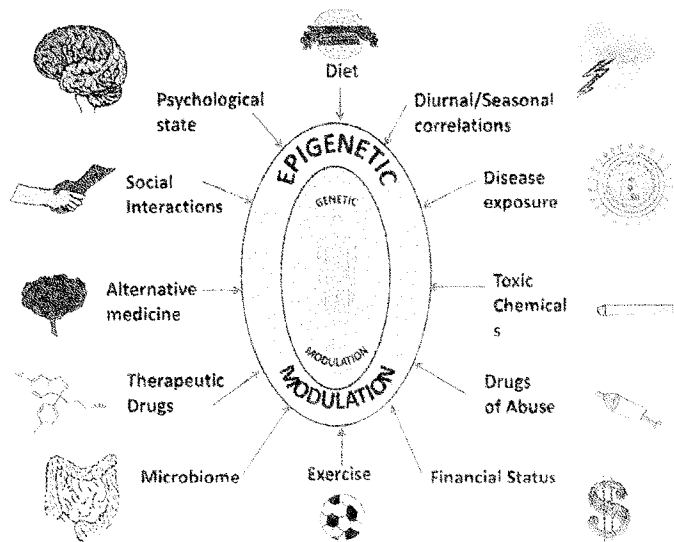
- A. = the study of changes in DNA that are caused by
- B. Affect how (traits) are expressed
- C. These changes alter the DNA sequence but can change the of organisms.
- D. These changes on to the

II. How can DNA be changed by Epigenetics?

- A. Can turn genes on ()
- B. Can turn genes off ()
- C. Can be inherited from and
- D. Can change over time due to life experiences. (Epigenetics:)

III. Environmental factors that can affect DNA.

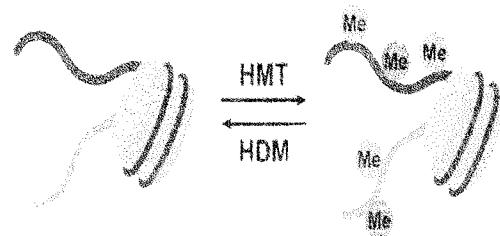
- A.
- B. Chemical Toxins like BPA in canned goods, plastics, and cosmetics
- C. Stress
- D.



IV. Three Mechanisms of Epigenetics

A. Methylation

- a. Addition of groups () to the base when DNA replicates.
- b. Histone proteins tighten when methylated.
- c. Transcription proteins cannot signal to start.
- d. Gene expression is



Dynamic methylation of histones