

# How Epigenetic Changes to Histones Work!

## HISTONE COMPLEX

**GENE ON**

**ACTIVE GENE**

**- ACETYLATION -**

Add Acetyl Groups ( $\text{CH}_3\text{CO}$ )



**DNA UNWINDS**

**Gene is "ON"**

**GENE OFF**

**SILENT GENE**

**- METHYLATION -**

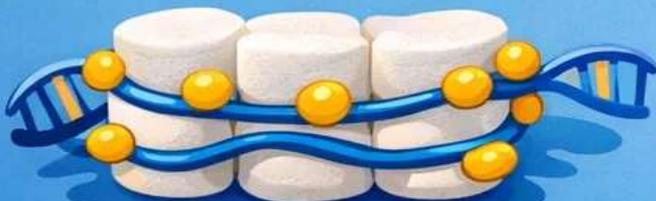
Add Methyl Groups ( $\text{CH}_3$ )



**DNA TIGHTLY PACKED**

**Gene is "OFF"**

**GENE EXPRESSION**



Proteins Produced



Proteins Produced

**GENE SILENCING**



No Proteins Made