



DNA Damage and Mutations

hhmi | **BioInteractive**

Animation
Transcript

DNA is under constant attack from reactive chemicals and natural background radiation. Free radicals are the byproducts of normal metabolism in human cells. Seen here as bright particles, they sometimes react with DNA and cause chemical changes. Radiation can also affect DNA. Foreexample, ultraviolet light from the sun can cause harmful chemical changes in the DNA of skin. These changes can lead to kinks in the DNA that prevent genes from being correctly read or deletions that alter the type of protein produced. Thanks to constant biochemical repair work, most mutations are corrected before they have any effect. But in rare cases, mutations can accumulate and this can give rise to diseases such as cancer.