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# Genotoxic Stress

National Cancer Institute

## Source

National Cancer Institute. *Genotoxic Stress*. NCI Thesaurus. Code C19419.

Exposure to DNA-damaging agents and subsequent energy expenditures by a cell to repair DNA damage. Genotoxic stress elicits biochemical responses that either enhance cell survival or lead to cell death. These biochemical responses include DNA-damage-inducible repair and increasing expression of a variety of proteins by both transcriptional and post-transcriptional mechanisms. Genotoxic stresses frequently activate signal transduction pathways that originate in the cell membrane or cytoplasm, triggering similar phosphorylation cascades to those induced by the activation of cell-surface receptors.