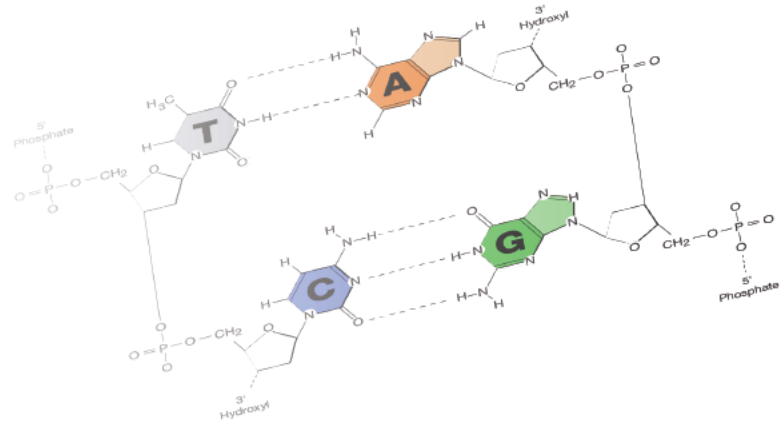


Nucleotide

 [genome.gov/genetics-glossary/Nucleotide](https://www.genome.gov/genetics-glossary/Nucleotide)



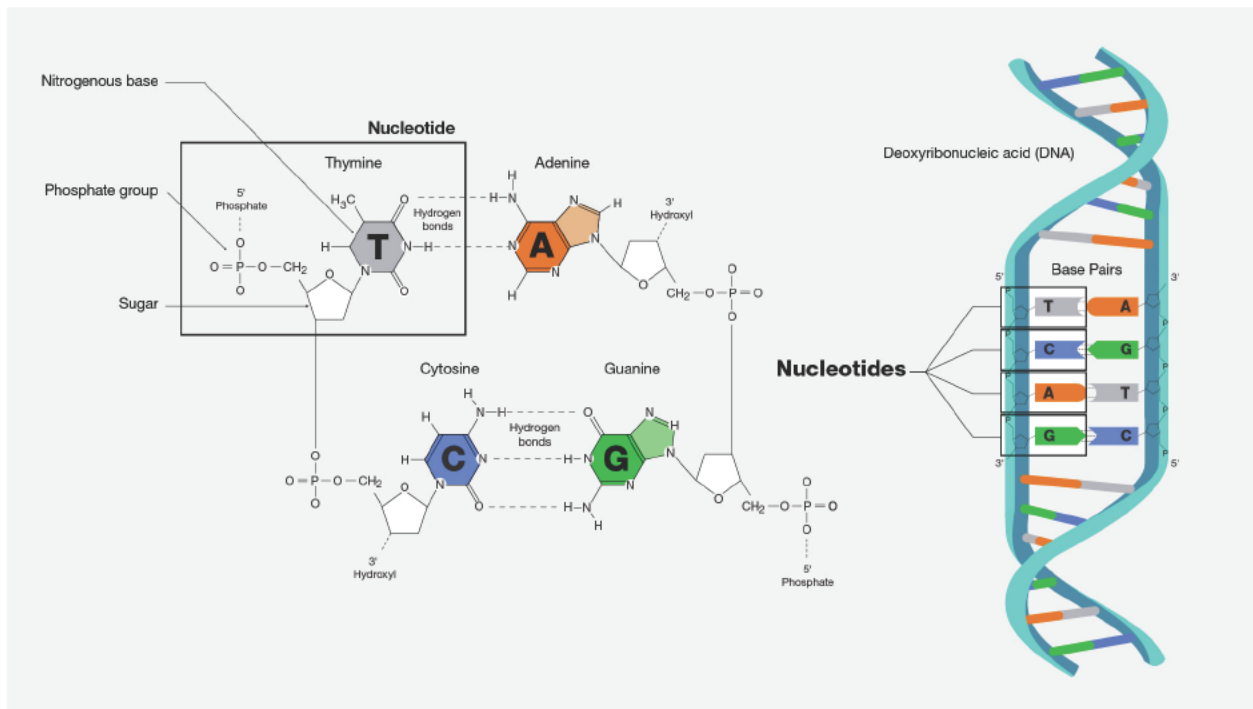
Nucleotide

updated: March 4, 2023

Definition

A nucleotide is the basic building block of nucleic acids (RNA and DNA). A nucleotide consists of a sugar molecule (either ribose in RNA or deoxyribose in DNA) attached to a phosphate group and a nitrogen-containing base. The bases used in DNA are adenine (A), cytosine (C), guanine (G) and thymine (T). In RNA, the base uracil (U) takes the place of thymine. DNA and RNA molecules are polymers made up of long chains of nucleotides.





Narration

▶ 0:00 / 0:11 ——— 🔊 ⋮

Nucleotide. It is the chains of these nucleotides that encode the information content in RNA and DNA.



Lawrence Brody, Ph.D.

Director

Division of Genomics and Society