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## Complementary Bases of DNA Structures

Difference between nucleotide and nucleoside :-

**Nucleotide :-** The building blocks of nucleic acids DNA and RNA is nucleotide. This nucleotide is composed of nitrogenous base, a five-carbon sugar (ribose or deoxyribose), and at least one phosphate group.

Nucleoside + phosphate group  $\rightarrow$  Nucleotide.

\* The components used in de novo nucleotide synthesis are derived from biosynthesis of precursors of carbohydrates and amino acid metabolism and form ammonia and carbondioxide; Nucleoside triphosphates (ATP, GTP, CTP and UTP), plays a central role in cell metabolism.

\* Malfunctioning of nucleotides are one of the main causes of all cancers known for today.

**Nucleoside :-** The subunits of nucleic acids such as DNA and RNA. A nucleoside, composed of a nucleobase, is either a pyrimidine (cytosine, thymine (or) uracil) or a purine (adenine (or) guanine), a five carbon sugar which is either ribose (or) deoxyribose.

In medicinal fields nucleosides are used as antiviral (or) anticancer agents.