



Figure 29.7 Complementarity in base pairing in the DNA double helix as shown by this computer-generated structure. The sugar-phosphate backbone runs along the outside of the helix, while the amine bases hydrogen-bond to one another on the inside.

Notice in Figure 29.7 that the two strands of the double helix coil such that two kinds of “grooves” result, a **major groove** that’s 12 Å wide and a **minor groove** that’s 6 Å wide. The major groove is slightly deeper than the minor groove, and both are lined by potential hydrogen-bond donors and acceptors. Thus, a variety of molecules are able to *intercalate*, or fit into one of the grooves between the strands. A large number of cancer-causing and cancer-preventing agents are thought to function by interacting with DNA in this way.

PROBLEM

29.13 What sequence of bases on one strand of DNA is complementary to the following sequence on another strand?

G-G-C-T-A-A-T-C-C-G-T

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