

XP is an autosomal recessive disorder with 100% penetrance and can result from mutations in any one of eight genes. The products of seven of these genes (XP-A through G) are involved in the repair of ultraviolet-induced photoproducts in DNA by the process of nucleotide excision repair (NER) [5]. XPA protein verifies that proteins are in the correct position and then the nucleases XPG and XPF cut the DNA on either side of the damage, so that the damaged section can be removed and replaced with intact DNA. The XPC and XPE proteins are needed to recognise the photoproducts in DNA. XPB and XPD are part of a protein complex TFIIH, which opens up the structure of the DNA around the site of the .photoproduct