

## ***9<sup>th</sup> Yazd International Congress and Student Award on Reproductive Medicine with 4<sup>th</sup> Congress of Reproductive Genetics***

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### **Key Lectures**

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#### **K-50**

#### **Sperm DNA fragmentation, contributing factors, and clinical setting**

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Sperm DNA fragmentation index (DFI) along with semen parameters evaluation, is considered an important diagnostic method in assessing male fertility potential. Researches Evidence support the association between DFI with male infertility, natural conception, and assisted reproductive technique outcomes. Various factors contributed to DNA fragmentation generation in men, such as testicular dysfunction, diseases correlated with testicular such as varicocele, exposure to high-risk chemicals components,

hyperthermia, and poor lifestyle and nutrition. There are various laboratory methods for assessing DFI clinically. Patients with varicocele, unexplained infertility, recurrent pregnancy loss, recurrent failure of assisted reproductive techniques, and those at risk of lifestyle/environmental exposures are recognized candidates for DFI evaluation.

Although no comprehensive treatment has yet been developed to overcome sperm DNA fragmentation, physicians offer different treatments to reduce the DNA fragmentation and improve sperm DNA and chromatin integrity. It seems in the clinical setting, oral antioxidants therapy, varicocele repair, use of recurrent ejaculations alone or combined with micromanipulation-based sperm selection techniques, and the use of testicular sperm for intracytoplasmic sperm injection are suitable options for improving the quality of DNA.