

## SCIENCE

### Our DNA : Precious gift of the nature

Dr. Jayesh J. Sheth

We all keep saying at times that, “whatever Thy GOD might have written in our fate will get executed”, “Who is to be blamed for the destiny” - The stars constellation at birth are bad and hence a lot of difficulties is to be faced...ill health continues etc. Yet we do not recall that poor destiny or our fate, our horoscope, are given by the nature in the form of GENES. DNA is a complex molecular made up of four letters of alphabet named as A - Adenine, G - Guanine, T - Tymidine and C - Cytosine; also called as nucleotides. Any three of these four nucleotides combine together and form a protein, as per the need of the body. It follows a specific arrangement such as Hemoglobin of blood which is composed of heme and globin (made due to presence of specific genetic code). If its letters combine as ATT, TCC, etc, it will work properly, but if the combination gets altered; in the form of G instead of A, then its normal function will be disturbed and lead to the creation of less hemoglobin in the blood which is called as Thalassemia. Similarly our eyes, nose, ears, talent, nature, the diseases that may occur in the life time; all these information is filled in the DNA just like a computer program. Occurrence of slightest change in the gene alters its original

work or may create a different type of chemical (protein) that may be injurious to the body. This is called mutation in the scientific language.

Generally we understand that genes are usually inherited - it is true. However, environment, food, living style etc. also affect the gene; which is known as “epigenomics”. We therefore suffer from various diseases like cancer, deformed and cranky children etc. In addition, our food habits, environment, thinking, reading etc. also affect genes. For instance, in some families more than one child is born with Neural Tube Defect (NTD’s); Folic acid, vitamin B12 is prescribed to mother before pregnancy, the bad effect of the genes can be considerably reduced. Similarly, cancer - mainly cancer of the mouth - which is more prevalent in our country is contributed by tobacco, bidi, cigarettes. All these habits damage our genes; altering it to a new protein that damages body cells and allows its replication without limit; known as Oncogene expression in scientific language. Many such diseases, many such deformities are inherited from generation to generation. We damage our genes through our bad habits. We may improve the gene function by good food, good reading, environment etc.

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Therefore the science today proves that a child's embryonic culture, his mother's physical, mental health, her thinking affects on arrangement of its genes which become visible when child is grown up. This is called "fetal hood environment - adulthood growth". If mother is very much stressed during pregnancy, it will affect the unborn child on his functionality, on his talent; because his scenatic programming starts from the mother's womb.

It is therefore our responsibility to care for our genes over and above our inheritance. The more we damage it, more the harm to our upcoming generations. Therefore, if we want our future generations to be more mentally and physically sound, we have to take good care of our DNA. This can be availed only by good food, clean environment, good reading, and prayer; this means, our future is in our hand; we need to understand it and to care for it.

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