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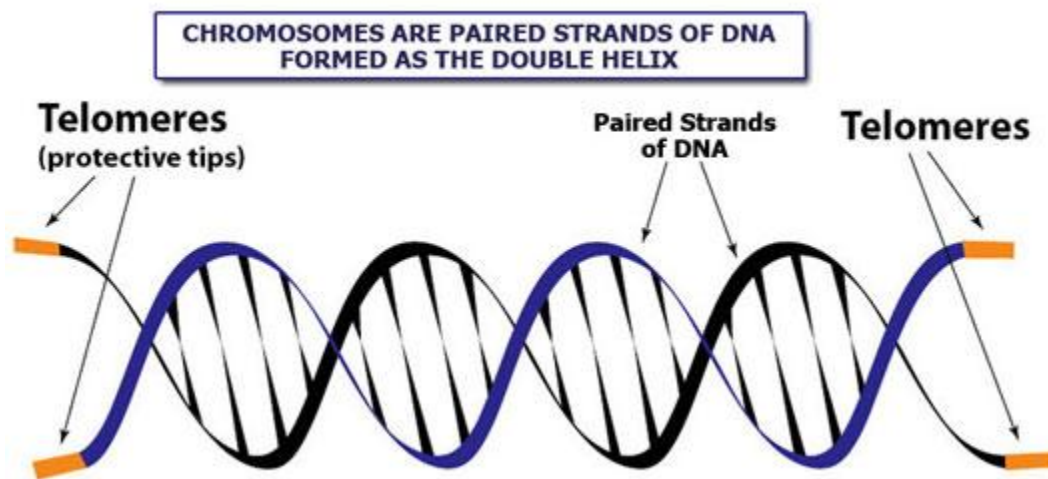
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Telomere Science

There are trillions of cells in our body and at any given time a great number are dividing furiously to keep us alive and well. The process is directed by genes sitting on the 23 pairs of chromosomes found in the nucleus of each and every cell. The chromosomes are long sequences of DNA that contain all our genetic material. Each pair of chromosomes consists of one from your mother and one from your father and they are twisted around each other to form a structure called the double helix.



Of particular interest to the scientists at T.A. Sciences are the ends of each chromosome known as telomeres. Telomeres have no genetic function; they are simply stretches of DNA (repeats of base pairs) that protect the rest of the chromosome. These little bits of DNA are critical to healthy cell function and have been likened to the plastic tips on shoelaces because they prevent the chromosome from “fraying.”

However, telomeres become progressively shorter each time the cell divides. When they get too short, cells reach replicative senescence and can no longer divide. The result can be the various conditions associated with old age.