

## Anti-Aging effects and acupressure

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[Acupunct Electrother Res.](#) 1998;23(3-4):185-206.

**Estimation of the amount of telomere molecules in different human age groups and the telomere increasing effect of acupuncture and shiatsu on St.36, using synthesized basic units of the human telomere molecules as reference control substances for the bi-digital O-ring test resonance phenomenon.**

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It is well established that the telomeres at the ends of chromosomes are composed of long arrays of (TTAGGG) $_n$  x (CCCTAA) $_n$  that form a nucleoprotein complex required for the replication and protection of chromosome ends. Throughout the cell cycle, telomeres also contain a protein component related to the proto-oncogene Myb that is known as TRF1 (telomere TTAGGG repeat binding factor 1) that binds to the duplex array of TTAGGG repeats in the telomere. Previous studies have shown that TRF1 appears to play a role in controlling the length of telomeres by acting as an inhibitor of telomerase. The amount of each of the TRF1(C-19) & TRF1(N-19) was identical to the amount of telomere of the same organ of the same apparently normal individual. Using synthesized basic unit of TTAGGG, as well as CCCTAA, as separate reference control substances for the Bi-Digital O-Ring Test of Resonance Phenomenon between 2 identical substances, we were able to non-invasively measure the approximate amount of TTAGGG and CCCTAA units, in both normal and cancerous human cells. We examined about 30 apparently normal subjects (both Asian and Caucasian in both sex). The subjects' ages ranged from infancy to 76 years. Each subject was first examined using TTAGGG as a control substance and then examined using CCCTAA as a control substance. The amount of telomere in various cancer tissues are almost always higher than that of normal tissue of the same organ. The measured amounts of both TTAGGG and CCCTAA were found to be in an average of 1500-1600 ng for human fetus or infancy and decreased with the advance of age in both sex with the exception of the heart, brain, eyes (retina), testes, and ovaries, which usually remain at the level of the infant, or reduced very little. Individuals in the same age group had a similar range of amounts of both TTAGGG and CCCTAA in the same organ of the same individual, (except for those with unusually low telomeres often had chronic degenerative diseases, and those who had exceptionally high telomere levels often had excellent physical conditions or mental acumen).

The amounts of measured TTAGGG and CCCTAA molecules before and after acupuncture on St. 36 in adenocarcinomas and small cell carcinoma coexisting in the lung of a 54-yr.-old Asian male were: telomere in adenocarcinoma decreased from 950 ng to 750 ng and telomere in small cell carcinoma decreased from 770 ng to 600 ng. When the cancer treatment is effective, the amount of telomere is reduced towards the value of the normal internal organ. **We found that acupuncture on St.36 on apparently normal subjects increased the telomere levels up to a maximum of more than 2 times their telomere levels prior to the treatment, depending on the method of treatment, but frequently increases were between 60% to 100%. Strong Shiatsu performed on St. 36 produced a somewhat lesser effect than acupuncture.** We also determined the amounts of TTAGGG and CCCTAA molecules non-invasively in 3 mummified Egyptian sisters from the 8th Century BC on exhibit at the Museo Egizio in Turin, Italy in order to estimate their approximate ages (at the time of death). The amounts of body telomere were 500 ng, 550 ng, and 750 ng. For the prehistoric Iceman (about 3350 B.C. to 3310 B.C) discovered in 1991 in the Italian Otzal Alps at about 3,200 meters altitude, estimated body telomere was about 400 ng and telomere in brain and heart was 1600 ng, similar to that of a contemporary human being. Although these studies are preliminary, the findings may have **potential applications not only in anti-aging**, cancer treatments, and pathophysiology of brain and heart, but also for the estimation of the difference in the ages of cadavers studied in archeology and forensic medicine.