

## Immortality

“If I’d known I would live this long I would have taken better care of myself.”

James Hubert "Eubie" Blake  
(February 7, 1887 - February 12, 1983)

Immortality has been something man has searched for. We all know something about the story of Ponce De Leon and the search for the Fountain of Youth. In modern times the desire to drive back the attack of aging is largely the domain of the plastic surgeons. However, there is reason to suspect that aging can be defeated and in some cases may have already been defeated.

Determining what causes us to age is now an area of research by geneticists world wide. As part of their research it is becoming increasingly evident that genetic structures called telomeres figure rather prominently in aging. Telomeres are essentially end-caps on our genes. In many respects they act like leaders on film or magnetic tape. For film, a leader is that part of the film that is attached at the beginning and is used to thread the film through a projector and wrap around the reels without being the portion of the film that contains pictures. The same is true of the leader on magnetic tape that serves a utilitarian purpose without causing some of the sound or video to be used up in the process.

Telomeres serve a very similar purpose in allowing strands of DNA to be properly replicated without concern about any loss of information near the ends of the strands. The telomeres themselves do not seem to contain any active genetic information but do seem to be there for the purpose of sustaining damage at the ends of genes without damaging the function of the gene. Along with this very utilitarian function they also apparently act like a counter for how many times a gene is allowed to replicate which is something that has to take place every time a cell divides. Apparently, each time a cell divides and the DNA is replicated the telomeres on the ends of the genes become shorter. Eventually, when the telomeres become too short, the genes can no longer replicate accurately because replication now results in damage to active portions of the end of the genes rather than just damage to the protective telomere end caps. This stops the gene from replicating, stops the cell from dividing, and leads to cellular death. As more and more cells become unable to divide organs deteriorate, we age, and eventually die.

So can the shortening of telomeres be stopped thereby stopping the aging process? Yes. Not only can this be done, it happens all the time, but not generally in a way we care to have it happen. The telomeres of cancer cells do not shorten as the cells divide and these cells have attained immortality. For some reason cancer cells turn on the ability to create an enzyme called telomerase that prevents shortening of the telomeres during replication. Unfortunately, this immortality of cancer cells is rather bad news. This means that these cells, which divide much too often and crowd out normal cells, don't die unless they are killed by external agents (chemotherapy, radiation, etc.) or until the host body fails.

The question in the minds of many is whether it is possible to combine the one positive feature of cancer cells with normal cells to achieve a non-cancer cell that becomes immortal. In fact,

hybridized cells of this type have already been created in the laboratory and have demonstrated what could be either extreme longevity or immortality.

So, it is possible that physical immortality might be within reach through the use of genetic engineering, but has it already been achieved?

In Brittany (a part of France) between 1970 and 1979 there is the story of two brothers, Joel and Patrick. As related by Timmistral ([http://paranormal.about.com/library/blstory\\_june01\\_05.htm](http://paranormal.about.com/library/blstory_june01_05.htm)).

“Both Joel and his brother Patrick were violent, reckless, dangerous young men. They had been in jail many times for disregarding the law. If, say, they wanted a car, they stole it. If they wanted to climb up to the top of a 500 foot cathedral spire and tie on their shirts to show they'd been there, they did it despite the Quimper municipal authorities. If they wanted to go to Ireland for a few days, they commandeered a boat and sailed over - not a small task considering the coasts of both Ireland and Brittany. Both were excellent sailors, athletes, etc.; in fact, what made them so scary is that there seemed to be nothing they were incapable of doing. I remember others immediately dropping out of athletic contests when Patrick and Joel were involved (and not in jail). And speaking of jail, Joel broke out of the gendarmerie jail in Quimper four times because he "knew the way out."

This seems to be simply the story of two rather obnoxious brothers except for one simple thing. Both were well known among the older population of Brittany, the brothers seem well acquainted with Nazi-types who were left over from the occupation of Brittany during World War II (remember this was the '70s). And while the brothers were not known to have attended school, Joel could quote entire pages of Nietzsche and Kant by heart. They just seemed to know things they shouldn't know given their age and supposed lack of education. In fact, a few very old peasant types told Timmistral that Joel had, "been around forever." "I knew him when I was a child," one said, "he had a different name and lived on a farm a little ways out of town, but it was him." Timmistral and the two brothers one time broke into the Quimper city hall. Joel found a folder. It appeared to be an old police folder, which had perfect likenesses of him and his brother in middle 19th Century garb surrounded by strangers.

Were Joel and Patrick immortals? There certainly seems to be evidence pointing in that direction. This and the recent discoveries in genetics could make one wonder what names the brothers might be going by these days.

But wouldn't we know if there are immortals walking among us? Probably not. Why? It's because few, if any of us, would want to spend the rest of an immortal life

on the run. In fact, immortals, if they exist, may very well do everything possible to hide what they are and live together in enclaves of their own kind. They wouldn't want to spend forever being poked and prodded to find out what makes them different. Also, from a sociological point of view, how much does someone who lived the 19th century have in common with people don't even remember World War II? We all tend to seek out people who are "like us." To an immortal, regular people may just seem inferior and child-like.

Yet, while immortals might feel superior, could they actually be lacking in the very things that have driven humanity? After all, if you are immortal, can't almost everything "wait for tomorrow?" Could an immortal person be the ultimate procrastinator? Isaac Asimov, in his Caves of Steel series, played with the idea that the very thing that has made humanity great is our short life span that drives us to try to achieve great goals in a very short amount of time.

If there are not many immortals in the world, such that they do not live in enclaves, and if they are not bent on the destruction of each other (Highlander), then immortality might be a very lonely existence. In the Stephen King novel, "The Green Mile," we get to know prison guard Paul Edgecomb. Paul, through his interaction with wrongly accused prisoner John Coffey, becomes extremely long lived if not immortal. In the end we realize that Paul has buried anyone he has ever loved. But what is worse is that he realizes that this will be the outcome of every human relation he will have from now on. How hard would it be to know that you will outlive and bury everyone you know and everyone you will ever know? Would it become hard for an immortal to connect emotionally with mortal people? Would they be hesitant to make friends, develop relationships, fall in love, and have children if they knew in advance that they would live to see them all die and yet more thereafter. Would an immortal person be able to stand the continual pain of loss or would they instead choose the pain of loneliness as preferable?

So, is immortality all we think it might be cracked up to be? Maybe we should ask Joel and Patrick, or whatever names they might be using these days.