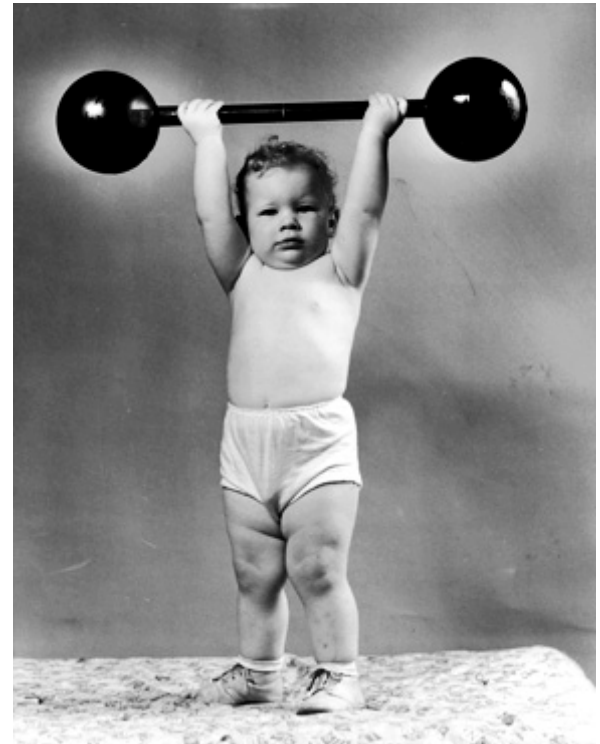


## Searching for the Perfect Athlete

Superbaby was born around the turn of this century, in Berlin, emerging in a fit of twitches and shudders. Epilepsy, the doctors first thought, until one noticed that although Superbaby was roughly the size of any other newborn, his biceps were chiseled. His skin held tight around his calves and quads. The phrase “baby fat” did not apply.

The boy’s tremors calmed, and he settled into relative normalcy. But by age four, he had twice as much muscle as other boys his age, and could hold a six-pound dumbbell, horizontally, at arm’s length, a struggle for some grownups. Something was going on, and laboratory analysis found that the secret to Superbaby’s physique was more earthly than Clark Kent’s: an extremely rare genetic mutation—passed on from his mother, an accomplished sprinter—that inhibited myostatin, a protein that limits muscle growth. The genetic blueprint that keeps most of us puny, or relatively so, was missing.



In any athletic endeavor, as with any intellectual one, there are some innate talents that can’t be acquired. Tiger Woods’s gifts with a driver have been largely credited to his willingness to practice at a young age for hours on end. That certainly helped, but, in the interest of bursting bubbles, Epstein is quick to point out Woods’s ability, at six months old, to stand on his father’s palm while the elder Woods walked around the house. Not quite Superbaby, but close. The most devastating quotation in “The Sports Gene,” for those who harbor hopes of a second act as a professional athlete, might be this one, delivered by a scientist who has been testing inherited athleticism in rugby players: “We’ve tested over ten thousand boys, and I’ve never seen a boy who was slow become fast.”

Well, bummer. There are, by Epstein’s count, around a hundred thousand “naturally fit” Americans between the ages of twenty and sixty-five—those whose genetic makeups predispose them to being in shape. The book is rife with such genetic advantages that find their ways into different populations. Members of a particular ethnic group in Kenya, in addition to living at altitude, have thinner legs, which makes the pendulum effect necessary for distance running that much easier to create. An outsized number of Jamaicans from Trelawny, a region in the island’s northwest, have become world-champion sprinters. Redheads from everywhere tend to have greater tolerance for physical pain.

But the disappointing reality Epstein most often presents is that there are no answers, or at least not definitive ones, to the questions of what genetic traits will guarantee athletic success, or whether training can truly overcome inborn limitations. Take ACTN3, a gene that allows for the production of alpha-actinin-3, a protein found in the fast-twitch muscles of almost every top sprinter who has ever

been tested for the gene. But a properly functioning ACTN3 is not a golden ticket, merely a prerequisite for entry. “The ACTN3 gene may tell a billion or so people in the world that they won’t be in the Olympics 100-meter final,” Epstein writes. “But chances are they all already knew that.”

Still, professional teams, which rise and fall on their ability to judge which athletes are worth spending time and money on, are starting to take genetics seriously. European soccer teams have begun employing scientists to test athletes in their youth-training academies for everything from willingness to practice to their top sprinting speed. (Those who go on to sign professional contracts are, on average, two-tenths of a second faster in a shuttle sprint as preteens than those who don’t.) In 2005, a rugby team in Australia announced that it would start testing players for ACTN3 because of what it might be able to predict about sprinting speed. That same year, after the Chicago Bulls center Eddy Curry was diagnosed with a benign arrhythmia, the team offered him a new contract only on the condition that he submit to DNA testing to look for a specific gene variant that could cause Curry to suffer a sudden, possibly fatal heart attack. (Curry declined, citing privacy concerns.)

<http://www.newyorker.com/online/blogs/sportingscene/2013/07/genetics-searching-for-the-perfect-athlete.html>

1. What is the article’s main or central idea concerning genes and heredity? **L6-8RST1**
2. What are some examples of genetics in inheriting specific athletic traits according to the article? **L6-8RST1**
3. What is the connection between genes and the “superbaby’s” abilities? **L6-8RST1**
4. How does the author define the “sports gene”? **L6-8RST4**
5. How is research on the “sports gene” being used by professional sports franchises as they evaluate players? **L6-8RST1**