

## Chapter 11 Excerpt

Six years after the Tanner study and two years before the one in Mexico City, Harvard anthropologist Albert Damon probably became the first American to venture an explanation of black athletic success that has stood the test of time. Although it is unlikely that his conclusions were based on a deep knowledge of cell biology, Damon predicted that “physiological factors” were more likely than anthropometric ones to explain “the much greater success of Negroes in track events requiring short bursts of power.”

A decade after Professor Damon’s prediction and eight years after the Mexico City report, an article in the *Journal of the National Medical Association*, the official organ of the African American medical group, provided the first concrete clue to the puzzle of African American athletic superiority. The Mexico City study had expressed surprise that Negroid athletes with sickle-cell trait had been able to compete effectively at the very highest levels, despite deficiencies in their oxygen transportation systems. This article would reveal, astonishingly, that it was not only individuals with sickle-cell trait who had lower than average hemoglobin levels, but that African Americans generally had significantly lower hemoglobin levels than their white counterparts. It would also raise, for the first time, the critical issue of how African Americans coped so well with this apparent biological handicap.

Although the article attracted very little attention at the time, the question posed was central to any attempt to understand the mystery of African American athletic dominance. For not only do average black Americans have significantly lower hemoglobin levels than their white counterparts, but as the authors pointed out, “studies of athletes who tend to higher hemoglobins and hematocrits still show evidence of differences between blacks and whites.”

Conducted in ten states and in New York City, the study involved nearly 30,000 individuals, divided into twenty-four age groups, from the first year through the ninth decade. To eliminate the possibility that the racial differences in hemoglobin levels were caused by socioeconomic factors, the study included matched comparisons of blacks and whites with reported high levels of iron intake and higher incomes, and athletes of both races. Nonetheless, the results clearly indicated that, without exception, there were significant racial differences in hemoglobin levels, at every age group, and for both sexes. This “systematic difference,” the authors wrote, “is fully evident even during the period of rapid adolescent gain in hemoglobin levels in the male, and during the period of declining hemoglobin levels in the 7th and 8th decades.”

Speculating on whether the observed difference in hemoglobin levels between the races was of environmental or genetic origin, the authors explained that if it were the latter, then this “would also raise the possibility of mechanisms for oxygen transport beyond those provided by the respiratory pigments.” Or, more plainly, if the lower hemoglobin levels of healthy African Americans were caused by genetic factors, then it was clear that African Americans had developed an extra-normal system for transporting oxygen, since the “normal” system provided by the red blood cells was clearly inadequate. In fact, as we now know, what African Americans did develop was not an extra-normal system for transporting oxygen but a “compensating” mechanism—that we shall examine in far greater detail in Chapter 13—for coping with this apparent handicap.

Since hemoglobin, the main constituent of red cells in the blood, not only makes blood red but also gives it the ability to collect oxygen from the lungs and deliver it to the tissues, significantly lower levels should have had, as the Mexico City researchers had explained, a significant negative effect on the muscular strength and stamina of African Americans. The fact that the muscular system of black

Americans and other West African-descended groups has not been impaired, indeed has even been enhanced, by an apparent biological handicap, is the clearest and most obvious indication that significant adjustments in energy metabolism have occurred in that population group.

Two years later, another team of researchers, also writing in the *Journal of the National Medical Association*, came closer to the truth. Surely, they wrote, “some compensatory mechanism must exist to counteract this relative deficiency of hemoglobin, since a significant difference has even been demonstrated in healthy athletes.” It is difficult to overemphasize the importance of this finding, and yet, mystifyingly, it has attracted very little attention and commentary in the heated debate over the basis of black athletic dominance.