

Let's Talk about Our Hair

Revelations from *Hair: A Human History*, by Yale dermatologist, pathologist, and hair follicle expert Kurt Stenn '65M (MD).

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Talking about our hair: it's rarely considered a weighty conversation.

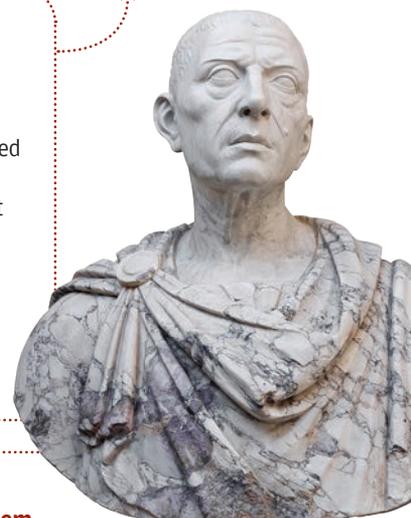
Yet hair is a fascinating subject. **Kurt Stenn** '65M (MD) has devoted his career to studying its biology—as director of skin biology for Johnson & Johnson, professor of pathology and dermatology at Yale School of Medicine, and chief scientific officer for a biotech company devoted to hair follicle regeneration.

In the past 10 years, he's broadened his study of hair to take on its cultural role. Incorporating the observations of anthropologists, stylists, and wigmakers in addition to scientists, *Hair: A Human History* gives hair an overdue treatment. Here are some highlights.



The loss of body hair among hominids was a necessary precondition to human evolution.

Darwin argued that human ancestors began to lose their fur because male hominids preferred hair-scarce females. Expert opinion is now coalescing around the view that fur loss occurred due to other types of evolutionary advantages. Three simultaneous events—the loss of body hair, the development of sweat glands, and the growth of the hominid brain to a recognizably human form—appear to have been interdependent. Exposed skin and sweat glands facilitated body temperature control, aiding foraging in the heat. Brain tissue, which is highly sensitive to elevated temperatures, thrived in new ways as hominids began to lose their fur.



Men have worried about male pattern baldness for thousands of years. Julius Caesar was among them.

According to Roman historian Suetonius, writing in the year 121 A.D., Caesar's "baldness was a disfigurement that troubled him greatly, since he found that it was often the subject of the gibes of his detractors. Because of it, he used to comb forward his scanty locks from the crown of his head." Egyptian papyrus scripts going back 4,000 years show evidence of a similar anxiety among powerful men.



The red-and-white-striped barber's pole is a visual remnant of the bloodletting practiced by medieval barber-surgeons.

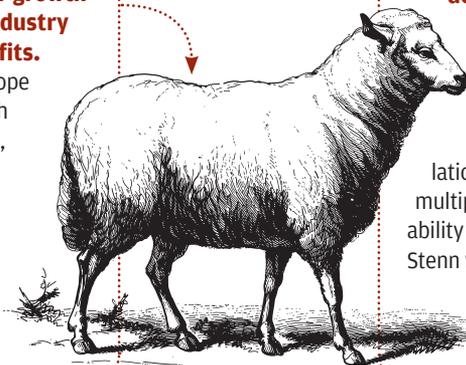
In medieval Europe, the medicine man and the barber were one and the same, and called barber-surgeons. During the practice of bloodletting, a barber-surgeon lanced a vessel in the arm, collected blood in a basin, and wrapped the arm with white bandages. "During this procedure," Stenn writes, "the patient gritted his teeth and gripped a pole. When not in use, the pole rested, with a clean white bandage twisted about it, in front of the shop as a sign of services rendered."

From the 16th century until the end of Imperial China, it was a mainstream belief among Chinese philosophers that a person's degree of civilization was inversely related to his amount of body hair.

It stood to reason: primitive animals had dense fur, while Chinese men and women alike had relatively scant body hair. "When the bearded and generally hairy Europeans arrived on their shores in the 16th and 17th centuries, the Chinese were confused and reluctant to accept them as equals," Stenn writes.

Most early scientific research into hair growth was initiated by leaders in the wool industry seeking increased production and profits.

Sheep farmers and wool merchants in Europe and Australia established multiple research foundations in the 19th and 20th centuries, providing funding for anatomists, pathologists, biologists, and physical chemists to conduct hair research that would suggest how sheep could produce more and better wool. The research that came out of the efforts established the foundation of most of what we know about hair today.



In the last decade, scientists have begun studying the hair follicle as a model of tissue regeneration—a process that could be harnessed to repair or re-form damaged organs.

The hair follicle stimulates the growth, shedding, and regeneration of hair shafts in a predictable cycle. With the exception of the uterus, which sheds and rebuilds its lining every month, "no other mature adult human organs cycle, form, cast off, and re-form," Stenn writes.

The barbershop quartet originated in the black American barber shop, where men sang spirituals, ballads, and other popular songs as they waited.

The barbershop was, and is, a neighborhood gathering place in many African-American communities. In the late 19th century, black barbershops were not only places for grooming, but also for political meetings and discussions, casual socializing, sharing gossip, and even impromptu music making. A practice of spontaneous singing grew into "a codified tradition," Stenn writes. Dressed in striped jackets and pants, and singing in four-part harmony, the a cappella groups "called themselves 'barbershop quartets,' and popularized such songs as 'Shine On, Harvest Moon,' 'Sweet Adeline,' and 'We Are Poor Little Lambs That Have Gone Astray.'"



In multiple studies, patterns of hair growth on the head correlate to patterns in brain development.

Studies of people of European descent have found a strong correlation between cowlicks (or hair whorls) that run clockwise, and right-handedness. Among those with counterclockwise cowlicks, there is no correlation with handedness. In addition, "children with multiple or intersecting whorls show a higher probability of having underlying brain malformations," Stenn writes. Scientists don't have a solid explanation for the correlation, but many embryologists suspect it's due to the common antecedent of skin and brain cells.

Biologists have classified human hair into eight groups. All eight types can be found among all the world's populations.

Early 20th-century Western anthropologists believed that hair types correlated with geographic origin and fell into three groups: straight, black hair in Asians; tightly curled hair in Africans; and smooth, wavy hair in Europeans. In fact, a broad range of hair characteristics can be found among populations around the globe. Modern biologists have identified eight hair types based on curve diameter, a curl index, and the number of waves. They argue that hair type, rather than ethnic origin, is the best guide to treatment, whether in a medical facility or a salon.