

Dear Dr. David,

Thank you for writing us at Christian Questions Radio. You asked if Adam's pigment and melanin would have had to have been red in color in order to get all the colors of humanity that we see today.

There is only one skin color: a brown pigment called melanin. All of humanity has basically the same skin color, just differing amounts of melanin. People with very little melanin have "white" skin. Those with a lot of melanin have very dark brown or "black" skin. Brown skin comes from all variations between white and very dark brown. Oriental people appear to have yellow skin because their skin is slightly thicker which gives it a yellowish shade. Geneticists have found that four to six genes, each with multiple variations, control the amount and type of melanin produced. Because of this, many variations of skin shades exist. In fact, it is quite easy for one couple to produce a wide range of skin shades in just one generation.

To illustrate the basic genetic principles involved in determining skin shade, we can use a simplified explanation, with just two genes controlling the production of melanin. Capital A and B versions of the skin color genes code for a lot of melanin, while the small a and b versions code for a small amount of melanin.

If the father's sperm carried the AB version and the mother's ovum carried the AB, the child would be AABB, with a lot of melanin, and thus have very dark skin. Should both parents carry the ab version, the child would be aabb, with very little melanin, and thus very light skin. If the father carries AB (very dark skin) and the mother carries ab (very light skin), the child will be AaBb, with a middle brown shade of skin. In fact, the majority of the world's population has a middle brown skin shade.

A simple exercise with a Punnett Square (see attached file, "Why Do Different People Have Different Skin Color?") shows that if each parent has a middle brown shade of skin (AaBb), the combinations that they could produce result in a wide variety of skin shades in just one generation. Based on the skin colors seen today, we can infer that Adam and Eve most likely would have had a middle brown skin color. Their children, and children's children, could have ranged from very light to very dark.

We know that Adam and Eve were the first two people. Their descendants filled the earth. However, the world's population was reduced to eight during the Flood of Noah. From these eight individuals have come all the tribes and nations. It is likely that the skin shade of Noah and his family was middle brown. This would enable his sons and their wives to produce a variety of skin shades in just one generation.

In Genesis 11 we read of the rebellion at the Tower of Babel. God judged this rebellion by giving each family group a different language. This made it impossible for the groups to understand each other, and so they split apart, each extended family going its own way, and finding a different place to live.

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The result was that the people were scattered over the earth. Because of the new language and geographic barriers, the groups no longer freely mixed with other groups, and the result was a splitting of the gene pool. Different cultures formed, with certain features becoming predominant within each group. The characteristics of each became more and more prominent as new generations of children were born, creating the so-called “races” of people that we see in the world today.

Was Adam’s skin color red? We believe it was probably a medium brown from the evidence presented above. Scientific evidence fits with the biblical view that all people are rather closely related and that there is actually only one race biologically. We hope we have answered your question. Please write us again.

Sincerely,
Christian Questions Radio