

Is dancing success ‘in your genes’?

What sporting event are you going to watch next week? The opening of March Madness or the premier of [Dancing with the Stars](#)?

That analogy might seem stretched to some, but dancing, at the intense competitive level, has all the markings of a sport: intense fitness, timing, grace, and teamwork. In many ways, dancers are much like athletes. So it's no wonder that just as scientists and sports writers apply genetics to understand better what makes a great athlete, the same factors can be applied to help us discern our inner dancer.

Geneticists have actually addressed the issue. The latest [study](#) originated at Hebrew University in Jerusalem, where Professor Richard Ebstein and his team have examined 85 dancers. As with studies in the areas of music, [sports](#), and other talents, the media have been attracted to discussions about the potential role of specific genes. In the case of the Israeli dancers in Israeli study, researchers focused on two specific genes, one of which has been covered frequently in the popular media for its reported association with athletes; the other involves serotonin, one of the brain's neurotransmitters.

Athletics plus

Dancers are athletes, but there is a major biological difference between dancing and sports. Superior performance in a sport depends on anatomic, physiological, and other biological factors, and on the amount and quality of the athlete's training. Biological factors tend to dominate in certain sports -running is the classic example. Training tends to dominate in other sports, good examples being gymnastics and skiing. But while dancing requires both the biological equipment and intensive, years-long training, it is an art in which different individuals will express themselves differently.

Dance may have evolved for a variety of reasons. One possible one is that it helps animals to find a mate by sending a message that one is genetically fit.

“At least since Darwin, scientists have suspected that dance so often plays a role in courtship because dance quality tracks with mate quality,” [according to](#) Rutgers University anthropologist Lee Cronk, who has an interesting method for testing his idea. “By using motion-capture technology, we can confidently peg dancing ability to desirability.”

One University of Washington [study](#) that that received a lot of publicity, for instance, has observed links between dancing ability considered to be good (based on ratings from volunteer observers) and physical traits associated with physical attractiveness, body symmetry for instance. Various studies over the years have revealed links between body symmetry health endpoints, such as strength, longevity, and fertility in various species of animals, humans included.

Dance advice on the internet

Just do a quick Google search and you'll find a plethora of articles offering advice for men on how to improve one's dance moves to attract a partner. This includes and intro to a story [published](#) on the GLP

blog just a year ago, based on an evolutionary study at Northumbria University and the University of Gottingen. Here is the gist of it

“Dancing ability, particularly that of men, may serve as a signal of mate quality.” But isolating specific dance moves is difficult – facial attractiveness, body shape and even perceived socioeconomic status play a role in how people judge the dancing ability of their peers.

The connection between dancing and appearing attractive works in both directions. Rather than serving as a direct indicator that a potential mate constitutes favorable genetic stock, dance moves merely present clues. Certainly there are many people of both genders who are fit and fertile, but not particularly interested in dancing, and conceivably, there could be a flip side to the dancing-healthy mate concept. Most of us are not in a position to choose mates from the case of Dancing with the Stars. If we exclude as mate prospects such ‘athlete dancers’ and focus on thenight-club dancer aficionado, we may notice some negative mating qualities. Frequent clubbers may certainly be on the dance floor more frequently than others who dance only at weddings, but clubs are associated with smoking and alcohol use. Which means from an evolutionary biology standpoint, this potential mate should be carefully scrutinized.

One important principle of evolutionary biology is that we have inherited traits and features are often inherited from our distant ancestors, but that doesn’t mean that we need them today. Like your appendix, those athletic-like smooth dance moves may not have the value that they had in the past. So, don’t despair, if you have two left feet there is no cause for alarm. You may not make it to the finals of Dancing with the Stars, but in an age when people meet online, should it really matter?

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