Summary of: “How exercising now could benefit your future grandchildren”

According to the *Washington Post* article, “How exercising now could benefit your future grandchildren,” by Gretchen Reynolds, an individual may benefit the general health of future generations by exercising prior to mating. Based off of the article, males who perform healthy activities prior to mating can pass better metabolisms to their offspring with no dependency on whether or not the female is active or sedentary. The news article discusses a summarization of a study conducted on mice that showed this as a potential truth.

If this is true, then it shows that the potential of genetics may be altered slightly to favor better traits in an organism by simply exercising the male prior to copulation. This may lead to better health of individuals attempting to have children and even those seeking to altering the results of their children by attempting to live healthier lives. This usage of epigenetics would have the potential to alter much of how people reproduce or the conceptualization of reproduction.

The question remains as to whether or not it is true. Apropos to an article known as “*Grandmaternal exercise improves metabolic health of second-generation offspring*,” the researchers noted that mice do appear to have health benefits from those who sired them from a copulation experience after exercise. The mice were tested based off of a sedentary or active lifestyle. Mice whose lineage were sedentary appeared to exhibit normal behaviors, normal body fat, and consumed a normal amount of food. Mice who exhibited more active lifestyles showed slimmer bodies, larger amounts of food consumption, and active behaviors, even if they had not been born directly to those parents whom where active. To test whether or not mice had to be strictly active, active-borne offspring were mated with sedentary offspring. The resulting offspring still exhibited some form of leaner appearance, however, showed some of the lackadaisical behaviors of their lazy ancestors.

According to the researchers, the active males sported offspring with better structure to the musculoskeletal system while active females tended to produce healthier pancreatic and gluconic regulation in the body. In comparison for use in humans, these could help provide better health for future offspring. Trouble as indicated in the report would be that attempting to sway people to do this whether it be exercising or choosing the right partner based on overall health would conflict with beliefs whether religious, based on principle, or based on likes and dislikes. Another problematic detail is the whether or not someone would be a great candidate for such a purpose based off of other non-established information about the said individual. While the overall appearance and perhaps even the overall health of an individual may appear very good, what happens later on down the line can be just as important. For example, while someone might be able to produce excellent insulin now, the body’s pancreas may deteriorate after, for instance, thirty years and in turn the once deemed excellent candidate could now have diabetes mellitus. Genetics can be a literal “wheel of fortune” in regards to the health and overall aspects of an individual, it is for this reason that this would need to be considered when attempting to make a group of healthier individuals.

Overall, this research may prove valuable in not only understanding epigenetics, but also seeing to the bettering of the human race. However, large conflict looms over potentially making this happen due the beliefs of others from a non-scientifically biological point of view. However these methods may help lead to future understanding of the mammalian body and assist in finding new methods or cures to help with the general health of humans.

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CITATIONS

Goodyear, L. Grandmaternal exercise improves metabolic health of second-generation offspring. *Molecular Metabolism*, Vol. 60, pp. 1-10 https://www.sciencedirect.com/science/article/pii/S221287782200059X (2022).

Reynolds, G. How exercising now could benefit your future grandchildren. *The Washington Post*, https://www.washingtonpost.com/wellness/2022/09/28/exercise-genetics-grandchildren/ (2022).