

Nutrition needed, even with 'longevity gene'

The link between food and health has been appreciated since at least the time of Hippocrates. As science progressed, it became apparent that specific nutrients were essential for normal health, disease prevention, and a long life.

During the past decade, many genetic links with longevity became more apparent. Now, researchers in Hawaii have made a breakthrough by identifying a specific human gene related to living longer.

In the Sept. 16 edition of the Proceedings of the National Academy of Sciences, Dr. Bradley Wilcox of the Queen's Medical Center, the Pacific Health Research Institute and the John A. Burns School of Medicine, along with several collaborating researchers, reported that a gene called the FOXO3A gene is strongly linked with longevity in humans.

Question: How significant is this "longevity gene" to personal life span?

Answer: Humans are 99.9 percent identical genetically and the

0.1 percent difference is responsible for all of our variations in physical appearance and physiological function. As part of this 0.1 percent, the FOXO3A gene appears to have a big influence on aging.

The odds of living into the late 90s and even past 100 greatly increased when men of Japanese ancestry in Hawaii had a specific variation of this FOXO3A gene. Typically, it is thought that 25 to 50 percent of a person's potential for longevity is directly related to their genetic makeup and the researchers feel that this particular gene deserves much further study.

Q: If genes play such a big role, do diet and exercise habits have much impact on longevity?

A: Yes, a number of nutritional issues still play an important role in health with or without the longevity gene.

1. Not getting adequate essential nutrients can increase anyone's risk factors for disease.

2. Both "good" and "bad" genes can be positively affected by nutrients. If you don't have the

longevity gene, nutrition is more important than ever.

3. Some specific genes play a role in one's predisposition to chronic diseases. These disease genes can be greatly toned down by good nutrition and exercise.

4. In addition, once health begins to decline, good dietary habits can play an important role in decreasing the severity or the progression of the condition.

Q: Should we be tested for the longevity gene?

A: It is premature for that. However the emerging science of nutrigenomics (nutrition and genetics) is progressing rapidly. As this science grows, we will know a great deal more about how specific dietary choices affect the health of people with particular genetic patterns. Even after this science matures, it will likely remain prudent to stay physically active and eat moderate amounts of a well-balanced diet with a wide variety of wholesome foods. Back to nutrition 101!

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