

DTC Genetic Test Results May Prompt Diet, Exercise Changes, PGen Survey Suggests

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NEW YORK (GenomeWeb) – Direct-to-consumer (DTC) genetic test results may encourage individuals to edge closer to a healthy diet and exercise regime, a new study suggests.

Members of the Impact of Personal Genomics (PGen) Study Group collected survey results from more than 1,000 individuals who got DTC genetic testing from 23andMe or Pathway Genomics, comparing the participants' self-reported exercise frequency and their fruit and vegetable servings per day before receiving results to their answers at two weeks after receiving results and again at six months after test results were returned.

The team did not see clear ties between specific genetic test results and diet or exercise changes. But the survey data suggested individuals with poorer self-reported health at the start of the study tended to become more active and increase the number of fruits and vegetables they consumed up each day. In contrast, those who were more confident in their health before receiving the test results reported a dip in light exercise frequency after the test.

Although the DTC tests available to consumers remain in flux, corresponding author and Brigham and Women's Hospital geneticist Robert Green and his co-authors on a [paper](#) appearing online today in *BMC Medical Genomics* noted that the general survey results "have the advantage of capturing a consumer experience about which the [US Food and Drug Administration] has requested additional research, and which may be reintroduced in the future, pending FDA approval."

23andMe [continues to make headway](#) in convincing the FDA to allow health-related genetic tests to be marketed directly to its customers in the US, the team noted — a shift from the 2013 restrictions that relegated the firm to reporting ancestry and other non-health related information to its customers stateside. Such approvals have renewed researchers' interest in the behavioral and health consequences of personal genetic testing, including the diet and exercise changes prompted by such

tests, if any.

Results from prior studies suggest individuals may not alter their lifestyle dramatically following DTC personal genetic testing. But the PGen investigators reasoned that more complete consideration of baseline health status — among other things — might produce a clearer picture of test effects.

Their study involved pre- and post-test surveys, where participants had a chance to weigh in on their daily fruit and vegetable servings and the number of days per week they spent doing light, moderate, vigorous, and/or strength exercises for 10 minutes or more.

Starting from nearly 1,500 individuals who completed online survey before personal genetic tested, the team received follow-up responses from more than 71 percent of participants at the two week and six month post-test result points. Of those, 1,002 individuals fully completed the surveys.

Across the latter group, the authors saw "modest, but statistically significant increases in vegetable intake and strength exercise frequency." Roughly one third said their dietary changes were prompted by the personal genetic test, the team reported, and more than 25 percent credited the test for prompting them to exercise more often.

The survey suggested that shift towards healthier eating and exercise was enhanced in individuals with poorer self-reported health on the baseline survey, who reported adding both fruit and vegetables to their diet, along with a broader range of exercise types than their counterparts reporting better baseline health.

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