

Newtopia in the Wild: 12-Month Results

Book of Business Program Performance

Compared to Randomized Control Trial Outcomes

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Sustainable Habit Change

Preventing chronic disease and decreasing employer healthcare costs with outcomes that grow over time

About Newtopia

Newtopia is the gold standard for disease prevention through our sustainable habit change platform. We focus on employees at risk of developing type 2 diabetes, heart disease, stroke, and NASH (fatty liver disease). Each personalized experience aims to reduce the metabolic risk factors of chronic disease, including waist circumference (BMI), blood pressure, blood glucose, triglycerides, and cholesterol [Metabolic Syndrome (MetS) components], and deliver meaningful medical cost savings resulting in a 2X ROI in the first year.¹ Evidence has demonstrated that body weight reduction through intensive personalized lifestyle interventions reduces risk factors for chronic disease.²

Eligible at-risk employees are offered an exclusive invitation to participate. Once enrolled, they complete a personal profile which helps us understand their personality type, level of motivation, eating habits, activity level and social determinants of health. Participants are then personality matched with a Newtopia “Inspirator” (personal health coach) who works with each participant to build confidence and develop new habits across nutrition, exercise, and behavioral well-being.

Participants are provided supporting tools for success in the program. These tools include a genetic test, smart scale, activity tracker, access to the mobile app, and measuring tape (for waist circumference). The genetic test allows Newtopia to further personalize lifestyle recommendations by understanding how genes impact their ability to lose weight. Our mobile platform gives participants access to their Inspirator, video lessons, goals, and their progress from anywhere. It also helps to increase accountability and engagement between coaching sessions.

This report contains:

1. An update on the state of chronic cardiometabolic disease in the US, and their associated healthcare and societal costs
2. The clinical and medical cost findings of the Randomized Control Trial published in the peer-reviewed Journal of Occupational and Environmental Medicine
3. Current 12-month results from clients that have undergone the Newtopia habit change program compared with our 12-month randomized control trial outcomes

¹ Steinberg, Scott, Honcz, Spettell, & Pradhan, December 2015

² National Heart, Lung, and Blood Institute, 1998

Cardiometabolic Disease

Prevalence and Burden

Cardiometabolic disease continues to be a growing public health challenge of epidemic proportions and a major economic burden for Americans. The latest report by the American Heart Association³ estimates that approximately 48% (121.5 million) of adults have cardiovascular disease (CVD), while the Centers for Disease Control and Prevention⁴ found that diabetes affected 12.2% of adults, with 33.9% (84.1 million) having prediabetes. Heart disease was the leading cause of death in the US in 2017, while stroke and diabetes ranked 5th and 7th, respectively.⁵

Current and Projected Healthcare Costs

The mounting economic and societal costs of obesity and its associated comorbidities, in terms of both healthcare expenditures and quality of life, accentuate the importance of implementing effective prevention strategies. On average, CVD and stroke cost Americans \$351.2 billion in 2014-2015, in terms of both direct health costs and indirect costs from loss of productivity. Total cost was projected to increase to a staggering \$1.1 trillion by 2035.³ The total direct and indirect estimated cost of diagnosed diabetes was \$327 billion in 2017, with \$237 billion attributed to direct medical costs, and \$90 billion in reduced productivity.⁶ The total cost is projected to double to \$622 billion by 2030.⁷ Individuals payed approximately \$16,750 in medical costs per year, which was 2.3 times more than individuals without diabetes.⁶

Metabolic Syndrome is a Risk Factor

Cardiometabolic disease arises from a complex interaction of nonmodifiable factors (i.e. genetic predisposition, age, and sex) and modifiable risk factors (behavioral and lifestyle). Metabolic syndrome (MetS) has been identified as a cluster of five interrelated clinical and metabolic risk factors for CVD and T2DM and is a predictor for the development of these diseases. Individuals with MetS have twice the risk of developing CVD over the next 5 to 10 years compared to individuals without the syndrome, have a 5-fold increase in T2DM risk, and an increased risk of all-cause mortality.⁸

The five clinical risk factors defining MetS are:

1. Elevated waist circumference
2. Elevated triglycerides
3. Reduced HDL cholesterol
4. Elevated blood pressure
5. Elevated fasting glucose

While the exact genetic, behavioral, and environmental causes is still unclear, metabolic syndrome is tied to the increasing levels of obesity (abdominal) and sedentary lifestyles.⁸ Around 1/3 of Americans have metabolic syndrome, and obesity is seen as the driving force behind its rising prevalence.⁹

³ Benjamin, et al., 2019

⁴ Centers for Disease Control and Prevention, 2017

⁵ Murphy, Xu, Kochanek, & Arias, 2018

⁶ American Diabetes Association, 2018

⁷ Rowley, Bezold, Arkan, Byrne, & Krohe, 2017

⁸ Alberti, et al., 2009; Isomaa, et al., 2001; Lakka, et al., 2002

⁹ Grundy, et al., 2005

Body Weight Reduction as a Clinically Significant Target

The American Heart Association/National Heart, Lung, and Blood Institute state that weight reduction should be a priority for individuals with MetS and obesity, in order to reduce the severity of the metabolic risk factors.¹⁰ Lifestyle therapies for weight loss should incorporate a reduced-calorie healthy meal plan, physical activity, and behavioral interventions.¹¹ Current clinical guidelines for management of overweight and obesity states that a weight loss of $\geq 5\%$ of initial body weight, based on evidence from several clinical trials, produces clinically meaningful improvements in health targets, such as reductions in blood glucose, hemoglobin A1c, blood pressure, triglycerides, and the risk of developing type 2 diabetes.¹² The resulting benefits in obesity-related medical conditions and cardiovascular risk factors are more pronounced with greater weight loss. Overall, achieving modest weight loss results in improved health outcomes, reduced healthcare costs, and enhanced workplace performance and attendance.¹³



As such, Newtopia utilizes ongoing weight loss tracking as a proxy for measuring the successful reduction of MetS risk.

¹⁰ Jensen, et al., 2014

¹¹ Garvey, et al., 2016; Saklayen, 2018

¹² Williamson, Bray, & Ryan, 2015; Jensen, et al., 2014

¹³ Wing R.R. & Group, 2011; Williamson, Bray, & Ryan, 2015

Proven Results. Proven ROI.

Newtopia Randomized Control Trial (RCT)

Newtopia embarked on a randomized control trial in collaboration with Aetna, to test Newtopia's hyper-personalized habit change program on employees who were at risk for MetS. The results of the trial have been published in the peer-reviewed Journal of Occupational and Environmental Medicine (JOEM).¹⁴

Aim

To determine the impact of a targeted personalized program on reducing employees' future risk of MetS and to quantify reductions in medical costs.

Methods

Study Population

Aetna employees (≥ 18 yrs) who had undergone biometric screening and were found to have at least two out-of-range MetS components, one of which had to be waist circumference, were invited to join the program. Employees enrolled in external weight loss/wellness programs were excluded from the study.

Study Design

Eligible participants were randomly assigned to one of these treatment arms (n=945 each group):

1. Program Group 1: employees received baseline MetS results and were invited to the program
2. Program Group 2: employees received baseline MetS results and received a specific 12-month prediction of their future MetS risk
3. Control group: employees received baseline MetS results but were not invited to participate in the program

Habit Change and Disease Prevention Program

In the highly personalized and high-touch program, each employee was provided with personal coaches and client care managers to achieve high levels of engagement and sustained behavioral changes, as well as an individualized online portal and mobile application to track nutritional and activity data. Each personalized nutrition and activity plan were tailored to each employee's psychosocial profile characteristics and genetic makeup (obesity, appetite, and compulsive behavior genes).

Outcome Measures

1. Enrollment: differences in online registration between Program Group 1 and Program Group 2 to determine the impact of providing personalized risk predictions to Program Group 2
2. Engagement: participant tracking of their nutrition or physical activity (manually, electronically, or via activity tracker) for at least 12 days per month, and/or participating in at least one coaching or care manager session (telephonic, e-mail, or video)
3. Clinical outcomes: weight and MetS components (waist circumference, triglycerides, HDL, blood pressure, and fasting blood sugar)
4. Medical Costs: total medical costs were calculated on a per-employee per-month basis

¹⁴ Steinberg G. M., Scott, Honcz, Spettell, & Pradhan, December 2015

Key Results at 12 Months

- 50% of those enrolled (n=445) remained engaged for 12 months
- Participants lost on average 4.3% of their initial body weight, which was equivalent to 10 lb. The body weight reduction corresponded to a reduction in metabolic risk factors
- 76% of participants lost weight after 12 months in the program at an average of 6.2%* which was the equivalent to 14 lb
- Medical costs were reduced by \$122 per participant per month or \$1,464 per year versus the control. These savings were equivalent to a 2X return on investment in the first year of the program
- Study conclusion: “At scale, programs like Newtopia would be expected to lead to significant downstream reductions in major clinical events and costs.”

The Randomized Control Trial published in the Journal of Occupational and Environmental Medicine showed decreased risk factors and positive ROI

	Savings	Outcomes	Engagement	Adoption
12-month Published Results	<p>\$1,464</p> <p>12-month reduction in medical costs</p>	<p>4.3%</p> <p>Average weight loss (10 lb)</p>	<p>50%</p> <p>Remained engaged after 12 months</p>	<p>24%</p> <p>Who were invited, started the program</p>



“Programs like Newtopia should be expected to lead to downstream reduction in major clinical events such as type 2 diabetes, heart disease, and stroke; along with their attendant costs.”

Gregory Steinberg, MB, BCh, Adam Scott, MBA, Joseph Honcz, MBA, Claire Spettel, PhD, and Susil Pradhan, MS

Published Trial Results:

[Reducing Metabolic Syndrome Risk Using a Targeted Personalized Wellness Program](#)

*unpublished RCT data

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Newtopia in the Wild

Effectiveness of Newtopia

Results from participants from Newtopia's Book of Business are in line with the results seen in our RCT.

Aim

To evaluate weight change related to MetS risk reduction after 12 months of program participation.

Outcome

Weight was tracked using a cellular enabled scale which automatically uploaded weight readings to our secure database.



Book of Business Average Weight Reduction Achieved After 1 Year in Newtopia

All Participants



Subgroup of Participants who Lost Weight (74%)



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Key Findings

- On average, Newtopia participants lost **10 lb (4.2%)** after 12 months in the program
- **74%** of participants lost weight after 12 months
- **Of those who lost weight**, participants on average lost **16 lb (6.8%)** after 12 months in the program

Comparison to Randomized Control Trial

	RCT Results	Book of Business Results
Month 12 engagement rate	50%	56%
Average % weight loss for total population	4.3%	4.2%
Average % weight loss for those who lost weight	6.2%*	6.8%
% of participants losing weight	76%	74%
Medical cost reduction	\$1,464	\$1,464 (expected)

Conclusion

Using body weight as a proxy to measure metabolic risk reduction and associated medical cost savings, we continue to replicate the results from our RCT. The Newtopia book of business represents individuals across a broad range of ages, socioeconomic levels, workplace environments and roles, and other demographics, in comparison to the RCT which included a more homogenous Aetna employee population.

This report validates that our sustained habit change platform continues to deliver the same, if not better, results seen in the RCT.

*unpublished RCT data

Contact Newtopia

Have any questions about this report or about Newtopia?

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