

**THE
MONDAY
CAMPAIGNSSM**

Research

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The Research Behind Monday

The key to health behavior change is to create healthy habits that can be sustained over time. A growing body of evidence suggests that healthy thinking and behavior is synchronized to the week, with Monday being the day people are most “open to buy” health. Using this “Monday effect” can be a powerful leverage point in public health promotions to help people stay on track with their health goals.

Monday has a special significance in our culture as the beginning of the week, which influences our mood and health outcomes

The 7-day week and the meaning we associate with the days of the week is a social construct, and not based on biological or planetary cycles. Yet a range of negative health outcomes, such as heart attacks and strokes, happen more frequently on Mondays as people transition back to the structured routine of the week.¹

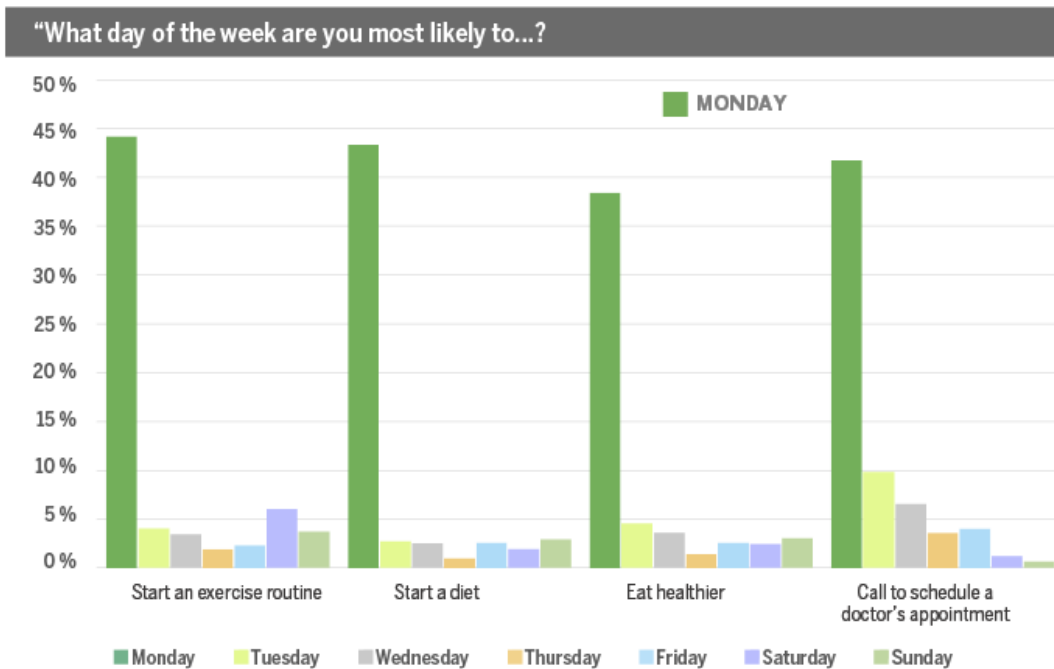
A 2019 nationwide survey conducted by the Data Decisions Group for The Monday Campaigns tracked awareness and behavior related to Mondays and healthy behaviors. While 15% of people report that Monday is “a day to dread”, many people see Monday positively. They view it as an opportunity for a “fresh start” (28%) and a day to “get my act together” (10%).

65% of responders to the survey agreed that feeling positive on Monday motivates them to engage in healthy activities. 72% of the survey panel agreed that Monday is a good day to get back on track after indulging on the weekend.²

There’s a surge in healthy contemplations and actions on Monday.

People are more likely to either start diets, exercise regimens, quit smoking or schedule doctor’s appointments on Monday than on other days of the week.^{3, 4}

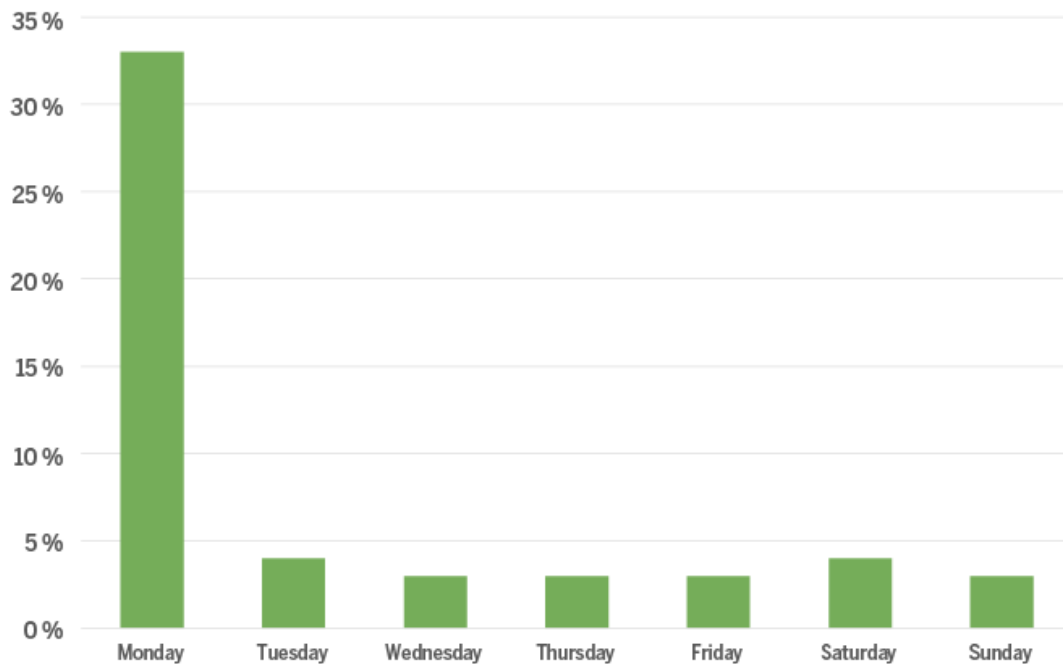
There's an upsurge of healthy intentions on Monday.



People call tobacco quit lines more on Mondays than other days.[5](#). [6](#)

An analysis of health-related Google searches from 2004-2012 showed a consistent pattern of spikes at the beginning of the week. This pattern was also seen in tobacco-related searches in 6 different languages.[7](#). [8](#). [9](#)

Those who said quitting smoking was relevant for them, described Monday as the day they'd choose to quit.



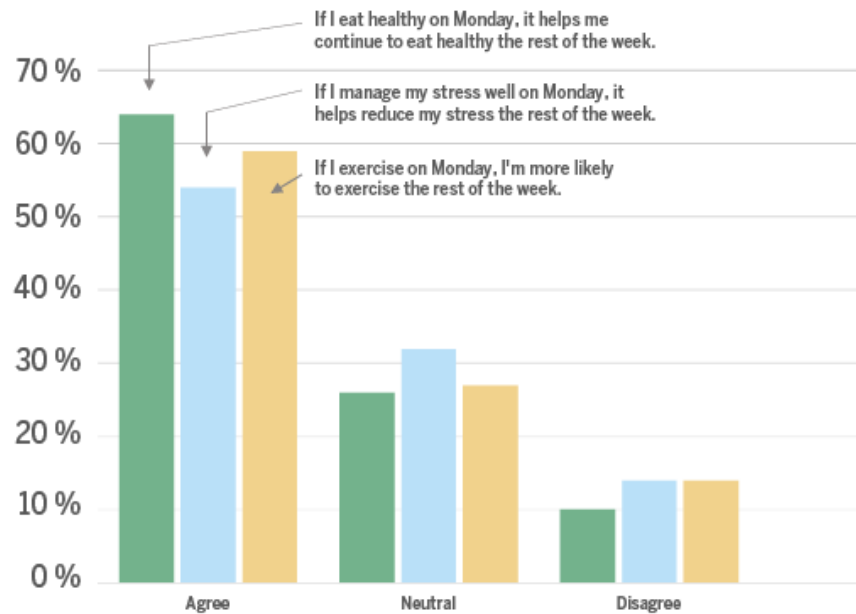
Engaging in healthy behaviors on Monday helps people sustain healthy behavior throughout the week.

Dieters can have greater long term success if they use Monday as a “refresh” day to get back on track. One study showed that it was normal to gain some weight over the weekend, but the individuals that got back on track with their weight loss regimens at the beginning of the week were most likely to either lose or maintain weight over time.¹⁰

People report that starting the week off with exercise, healthy eating, good stress management, and a positive attitude keeps them on track throughout the week.¹¹

Monday helps people sustain healthy behaviors

Does Monday affect your intentions for the rest of the week?



Taking small steps that build over time can help people sustain healthy behavior

Periodic, frequent messages have the potential to improve a range of health behaviors.¹²

Monday cues can help people maintain their resolutions.¹³

Survey respondents said that staying on track, a lack of discipline or support, and not seeing results fast enough were the main challenges in maintaining a New Year's resolution.

The main actions that would help survey responders keep their New Year's resolution(s) are to do something simple to start off each week (59%) and be prepared to re-start every Monday if I slip-up (55%).

Most agree that a Monday refresh could help. 73% of individuals who made a resolution in 2019 believe that recommitting to their New Year's resolution every Monday would help them maintain their resolution or resolutions.



Research

Research About Meatless Monday

Johns Hopkins and other leading institutions have conducted research on the benefits of reducing meat consumption and the impact of Meatless Monday in shifting people towards a more plant-based diet.

There's a growing body of research that shifting towards a more plant-based diet can help reduce the global burden of chronic preventable diseases, preserve precious land and water resources, and slow the acceleration of climate change, which threatens our planet's future. Meatless Monday can help people make this shift because it asks people for a small step on a day when people want to eat healthier, and can be practiced with others which provides a social support for change.

Benefits of Reducing Meat Consumption

The Johns Hopkins Center for a Livable Future has extensive research about the health, environmental and nutritional benefits of reducing meat. Read more about the Center and their resources [here](#).

Health

Shifting to a plant-based diet is a low-cost way to help reduce the risk of developing chronic diseases like type 2 diabetes, obesity and cardiovascular disease.¹ Eating a more plant-rich diet and lowering meat consumption can provide a variety of health benefits, such as lower blood pressure and a healthy weight.^{2, 3} Individuals who eat a plant-based diet usually consume fewer overall calories, fewer calories from fat and more fiber, potassium, and vitamin C.

Environment

Plant-based diets can be good for the planet, too. Raising animals for our current level of consumption has a detrimental impact on our planet, increasing the greenhouse gas emissions that cause global warming and depleting our scarce natural resources, including water, land and energy.⁴ Plant-based nutrition contributes to healthy, sustainable food practices. Shifting to a more plant-based diet could decrease agricultural land use by 80 percent.⁵

Nutrition

Diets that include less meat and more fruits and vegetables offer plenty of nutrition. This FAQ shares how you can make this change in a healthy, satisfying way.

Meatless Monday and Behavior Change

Awareness Helps Drive Change

Since Meatless was started in 2003, it's grown exponentially through media, advocacy groups and word-of-mouth. A recent survey showed that 42 percent of Americans were aware of Meatless Monday and of those aware of Meatless Monday, 35 percent say the campaign has influenced their decision to not eat, cut back on, or consider cutting back on the amount of meat they eat. Visit this [page](#) to learn more about the survey results.⁶

Meatless Monday in Communities

Encouraging people to join together to practice Meatless Monday in organizations or whole communities can foster solidarity and a shared commitment to reducing meat consumption. The Johns Hopkins Center for a Livable Future collaborated with the city of Bedford NY to conduct a pilot of a community-wide Meatless Monday which found increases in awareness and motivation to reduce meat consumption. Read more about the initiative [here](#).

For more tips and resources to promote Meatless Monday, [click here](#).

**DESTRESS
MONDAY**

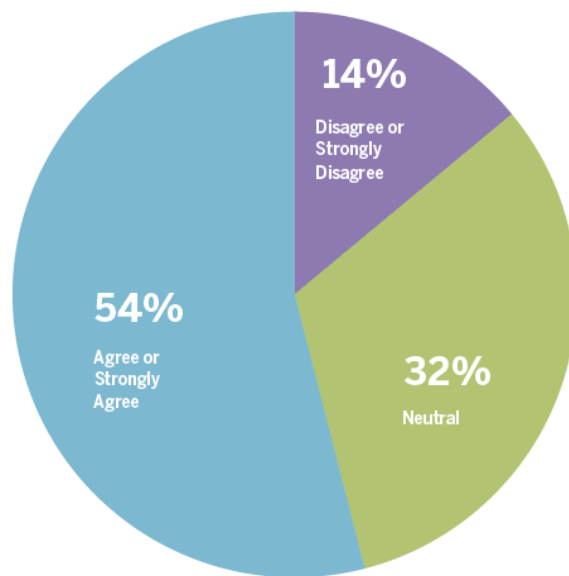
Research

Research About DeStress Monday

High levels of stress can have a negative impact on organs, systems and mental health. Changing behaviors to help better manage stress can reduce the risk of developing these harmful health effects.

Monday marks the beginning of the week and can function as a cue for a fresh start. In fact, research shows that Monday is the day people are most likely to adopt new health behaviors.¹

If I manage my stress well on Monday, it helps reduce my stress the rest of the week.



By integrating the Monday concept into stress management practices, a weekly reminder can be built into health programs, and encourage the use of these practices throughout the rest of the week. People who take the time to practice stress management can also establish healthier routines and have better sleep.²

According to a 2019 survey, while 18% of people reported that Monday is the day they experience the most stress, 54% agreed that if they manage stress well on Monday, it helps them reduce stress the rest of the week. And 65% of people said that feeling positive on Monday motivates them to engage in healthy activities.³

DeStress Monday programs have received positive results in different settings. A DeStress Monday [pilot program conducted with teachers](#) in Baltimore City Schools showed improvements in reducing perceived stress, duration of sleep, reducing sleep disturbance, sleep quality, indicators for depression anxiety. Of the teachers surveyed, the stress-reduction programming found 78 percent of respondents requesting a continuation of the program. Another pilot [program for nurses](#) in a hospital setting found

that participants reported improved energy levels and an increase in their knowledge of nutrition/diet, physical activity, and stress management practices.

DeStress Monday offers guides and resources to help individuals incorporate the practices of mindfulness, breathing exercises, shifting to positivity, and getting the recommended amount of physical activity. To learn more background and general research behind these practices, click on each topic below:

[**Mindfulness**](#)

[**Breathing**](#)

[**Positivity**](#)

[**Physical Activity**](#)

For more tips and resources to promote DeStress Monday, visit our [Resources page](#).

For more information about how a Monday cue can support behavior change, visit [The Monday Campaigns Research](#) page.

**MOVE IT
MONDAY!**SM

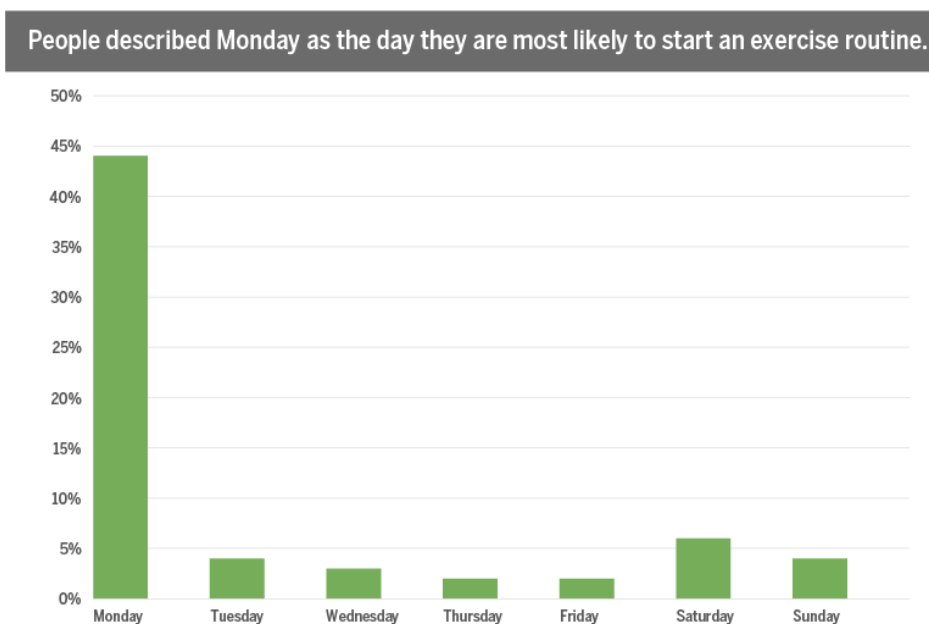
Research

Research About Move It Monday

Getting people moving and participating in physical activity is a simple way to encourage them to take steps toward better health. Regular physical activity can improve overall livelihood and help to prevent disease.¹

Engaging in or recommitting to regular participation in physical activities on Monday can impact healthy behavior throughout the entire week. Nearly 60% of respondents to a nationally representative survey indicated that if they exercised on Monday, they were more likely to exercise the rest of the week.²

The survey found that one-third of respondents identified Monday as the day of the week that they make the most effort to be physically active. And 74% chose walking as the most useful exercise to get their recommended daily physical activity. These results suggest that regularly walking a Monday Mile may be an effective strategy to help individuals start and ultimately meet their weekly exercise goals.



Since 2012, the Lerner Center for Public Health Promotion at Syracuse University has been leading [Monday Mile](#) efforts in central New York.³ Results from a countywide program found that the Monday Mile walk improved community cohesion and helped move towards their goal of making their county a healthier place to live.⁴

Research indicates that people who set small, realistic goals are more likely to be successful at accomplishing their goals than trying to change everything all at once. And those that perform regular physical activity, even those short in duration (perhaps as

short as [4 seconds](#)), can have a cumulative effect in meeting the recommendations to get at least 150 minutes of physical activity every week.⁵

You can learn more about [preparing to be physically active](#), the [health benefits of physical activity](#), the [benefits of walking](#) and the [recommended physical activity guidelines](#).

For more tips and resources to promote Move It Monday, [click here](#).

For more information about using a Monday cue to support healthy behavior, read [The Monday Campaigns Research](#).

QUIT
& *STAY QUIT*
MONDAY

Research

Research About Quit & Stay Quit Monday

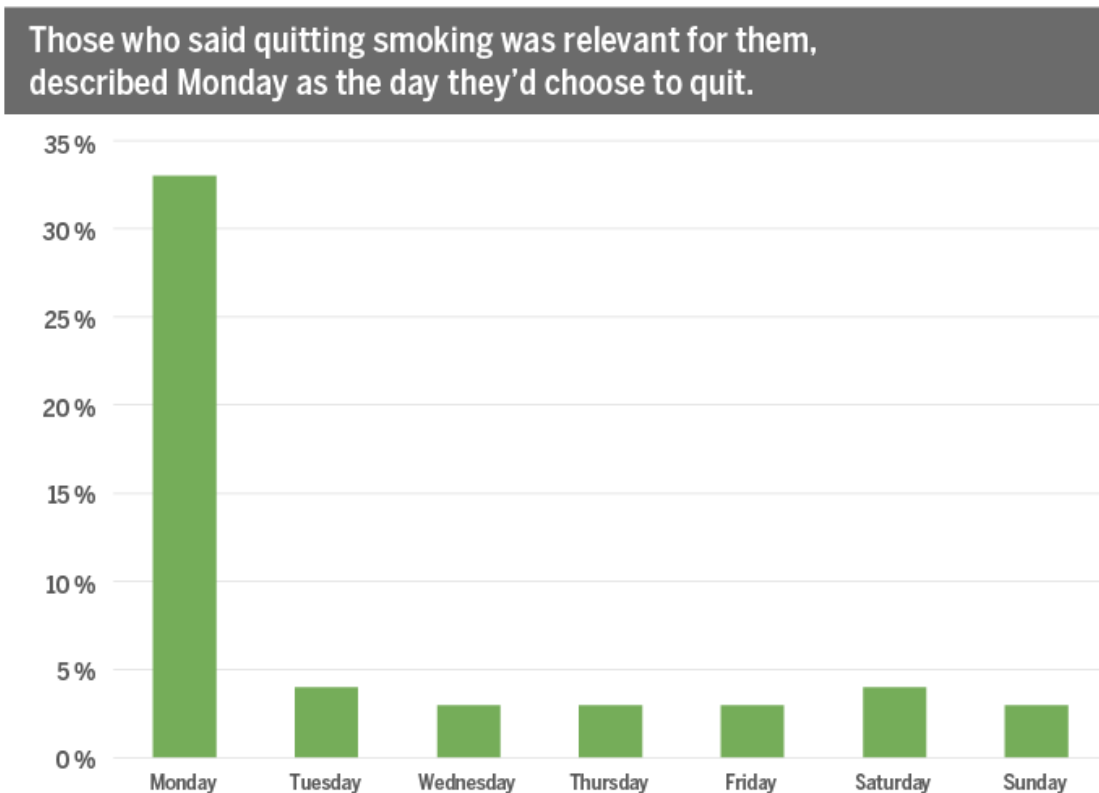
A Monday cue to quit and recommit to tobacco cessation goals can benefit smokers of any age or health status.

Committing to quit is an important step as benefits accrue immediately and in the long run. The sooner an individual quits, the sooner their body can begin to heal.¹

The Monday Campaigns has worked with the Institute for Global Tobacco Control and the Lerner Center for Public Health Promotion at the Johns Hopkins Bloomberg School of Public Health to explore the ways in which Monday can be a leverage point in helping people quit and stay quit. Key conclusions include:

Monday is the day smokers are most likely to choose as a quit date

According to a nationally representative survey of adult Americans, one third of those who said quitting smoking was relevant for them, described Monday as the day they'd choose to quit.²



Over 40% of survey respondents that use tobacco products have tried to quit in the past thirty days. Of those trying to quit, 60% said that they would make an effort to quit on Monday. They selected Monday two times as much as any other day of the week. This

supports research that while the majority of smokers want to quit completely, for many tobacco users, it may take 30 or more quit attempts to be successful.^{3, 4}

People seek cessation services and information more on Monday than other days

A study published in JAMA Internal Medicine showed “quit smoking” query volumes are 25 percent higher on Mondays than other days, amounting to 8 million more quit smoking searches per year on Mondays across 7 different languages.⁵

An analysis of participant engagement data from Truth Initiative’s “Become an Ex” quit program showed that there are more initial contacts with the online program at the beginning of the week as compared to other times.⁶ Additionally, an analysis of 16 state quitlines and the US national quit hotline showed that Mondays are the most popular day for calls, with a consistent weekly pattern of a beginning of the week “surge” in call volumes and a decline towards the end of the week and over the weekend.⁷

Choosing Monday as a quit day increases confidence for quitters

In a pilot conducted with smokers in the State of Maryland counselor-led weekly in-person cessation groups, Johns Hopkins researchers found that those in groups that encouraged using Monday as a quit day were more likely to show increased self-efficacy about quitting at the end of the study than those that did not.⁸

QSQM programs can increase engagement with tobacco cessation resources

The [Pima County Department of Health](#) launched a 12-week QSQM program with assets in Spanish and English. Metrics showed that social media was an effective way to reach high-priority populations and calls to the state quitline increased.

The [Virginia Department of Health](#) partnered with QSQM to conduct a 12-week QSQM program. Results showed changes in tobacco usage, plans to change worksite tobacco use policies and utilization of the state quitline.

Further Study of the Monday Approach

Learn about [preparing to quit tobacco](#), [the health benefits of tobacco cessation](#) and [how to get support for quitting](#).

For more information about using a Monday cue to support healthy behavior, read [The Monday Campaigns Research](#). Visit our [Resources page](#) for more creative material and resources to promote Quit & Stay Quit Monday.

The Kids Cook Monday!

Research

Research About The Kids Cook Monday

Learning about food at a young age helps children consider the portions, and understand the nutrients in what they're eating, which can lead to healthier lifestyles.

Getting families together to cook every Monday is a simple action that can lead to healthier outcomes. Monday can also function as a weekly cue to remind everyone in the family to refresh their commitment to their health. Considering the health and behavior benefits for children and adolescents, the American College of Pediatricians encourages “parents to make every effort to regularly gather around the ‘Family Table’ for meals.”¹ Eating meals together, as noted by the Family Dinner Project is “good for the spirit, the brain and the health of all family members.”² By integrating the Monday concept into coordinating family dinners, a weekly reminder gets built into the schedule. Monday is also an opportunity to refresh a commitment to healthy eating if good food choices weren't maintained over the weekend. Research shows that kids “who share family meals 3 or more times per week are more likely to be in a normal weight range and have healthier dietary and eating patterns.”³

According to a nationally representative survey, 73 percent of respondents with children in their household said they would be interested in a program that encourages families to set aside the first night of every week for cooking and eating together as a family. And 62 percent of all respondents said that they would be interested to try a Meatless Monday by cooking at home.⁴

The Center for Food & Environment at Teachers College Columbia University and the Harlem Health Promotion teamed up with The Kids Cook Monday initiative to launch The Kids Cook Monday Pilot– a weekly community cooking class for a selected group of families in Harlem in New York City. At the program's conclusion, 55 percent of parents planned to cook them again at home. Parents also trusted their kids more in the kitchen after participating, and 73 percent of kids surveyed said they wanted to be involved in their family's future meal preparations.

Evidence from other studies also links family dinners to healthier life choices:

- Parents that involve their kids in meal preparation can increase their consumption of vegetables.⁵
- National surveys of parents and teens, as reported by the [Center on Addiction](#), suggest that kids who eat family dinners have better relationships with their parents and have a decreased risk of smoking, drinking or using other drugs.⁶
- A meta-analysis in the Journal of the American Academy of Pediatrics found that frequency of family meals is significantly related to nutritional health in children and adolescents. Some benefits include a reduction in the odds of children becoming overweight and a reduction in eating unhealthy foods.⁷
- Findings from a study in the journal Preventive Medicine found that family meals can contribute to the social and emotional wellbeing of parents.⁸

The Kids Cook Monday initiative encourages families to set aside the first night of every week for cooking and eating together.

For more tips and resources to promote [The Kids Cook Monday, visit our Resources page](#).

For more information about how a Monday cue can support behavior change, visit The Monday Campaigns Research page.

What's the Healthiest Day?

Circaseptan (Weekly) Rhythms in Healthy Considerations

John W. Ayers, PhD, MA, Benjamin M. Althouse, PhD, ScM, Morgan Johnson, MPH, Mark Dredze, PhD, Joanna E. Cohen, PhD, MHSc

Background: Biological clocks govern numerous aspects of human health, including weekly clocks—called circaseptan rhythms—that typically include early-week spikes for many illnesses.

Purpose: To determine whether contemplations for healthy behaviors also follow circaseptan rhythms.

Methods: We assessed healthy contemplations by monitoring Google search queries (2005–2012) in the U.S. that included the word *healthy* and were Google classified as health-related (e.g., healthy diet). A wavelet analysis was used in 2013 to isolate the circaseptan rhythm, with the resulting series compared by estimating ratios of relative query volume (healthy versus all queries) each day (e.g., (Monday–Wednesday)/Wednesday).

Results: Healthy searches peaked on Monday and Tuesday, thereafter declining until rebounding modestly on Sunday. Monday and Tuesday were statistically indistinguishable ($t=1.22, p=0.22$), but their combined mean had 30% (99% CI=29, 32) more healthy queries than the combined mean for Wednesday–Sunday. Monday and Tuesday query volume was 3% (99% CI=2, 5) greater than Wednesday, 15% (99% CI=13, 17) greater than Thursday, 49% (99% CI=46, 52) greater than Friday, 80% (99% CI=76, 84) greater than Saturday, and 29% (99% CI=27, 31) greater than Sunday. We explored media-based (priming) motivations for these patterns and they were consistently rejected.

Conclusions: Just as many illnesses have a weekly clock, so do healthy considerations. Discovery of these rhythms opens the door for a new agenda in preventive medicine, including implications for hypothesis development, research strategies to further explore these rhythms, and interventions to exploit daily cycles in healthy considerations.

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Introduction

Clock-like rhythms are ubiquitous across health.¹ Seasonal variations, such as with mental illness,² have been most notable. However, weekly circaseptan rhythms characterized by Monday spikes in high blood pressure,³ infectious disease,⁴ myocardial infarction,⁵ sinus tachycardia,⁶ and stroke⁷ also exist.

Given the week is socially constructed, the likely mechanisms driving circaseptan rhythms in illness are psychosocial and therefore relevant to health behaviors. Moreover, understanding circaseptan rhythms of health behaviors can yield critical public health gains. For instance, government-funded health promotion programs spend \$76.2 billion annually,⁸ and their cost-effectiveness can be improved by targeting the population on weekday(s) when more individuals are contemplating their health habits.

Because healthy contemplations are at best recorded semi-annually, investigators have focused on annual (e.g., New Year's day)⁹ or seasonal (e.g., winter weight gain)¹⁰ rather than weekly rhythms. Nonetheless, a web data revolution is changing preventive medicine by generating real-time health trends, such as those from aggregating Internet search queries.^{11–15} In this exploratory report, we describe daily patterns in online search queries to

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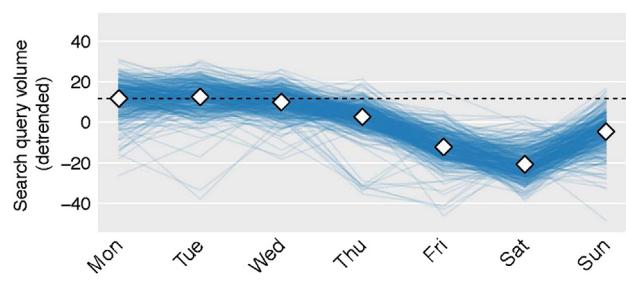


Figure 1. Early-week spikes in “healthy” thinking

Note: Each line is a weekly trend line for all Google queries that included the term *healthy* that were then Google classified as health-related, as estimated from the wavelet transform. The diamonds indicate the mean estimates by day of the week, with the corresponding mean for Monday also reflected in a reference line. N=2,906 number of days in the analysis (2005–2012).

uncover circaseptan rhythms, where examining individual’s searches reveals both the searcher’s contemplations and when they are taking action toward behavior change.

Methods

Daily trends for all queries that included the word *healthy* in combination with other terms (e.g., *healthy recipes*) were downloaded from Google’s public database for 2005–2012, or 2,906 days (google.com/trends). Non-health-related searches (e.g., *healthy salary*) were omitted by only analyzing search trends that Google classified as health-related.¹⁶

Changes in raw search volume can be deceptive because all searches might decline during the weekend. Therefore, Google archives return relative search volume (RSV) trends, reflecting the proportion of healthy queries relative to all queries, then normalized on a 0–100 scale representing the highest observed daily search proportion (e.g., RSV=50 is 50% of the highest search proportion).

First, we used the continuous wavelet transform to identify searches’ weekly periodic component. Specifically, this approach decomposes the time series into time-frequency space (e.g., RSV per day, week, or year), thus determining the dominant decomposition time variability in the data. This approach was preferred to alternatives (e.g., Fourier) because it produces robust estimates over time that correct for the typical biases in time series designs (e.g., trending) and does not make parametric assumptions.¹⁷ Moreover, the wavelet allows examination of both the intensity and timing of periodic circaseptanality over the entire study period, which is not dually possible with a Fourier decomposition. For a comprehensive analytic treatment of the wavelet transform, see Torrence et al.¹⁸; for practical examples, see Grenfell¹⁹ and Johansson.²⁰

Second, we reconstructed the time series with periodic components < 14 days (as identified by the wavelet) after adding back the mean of the time series, as the wavelet is mean-centered. Third, we modeled the difference between Monday and other days as a difference in means, fitting a linear regression with the days of the week as a factor variable (i.e., $\beta_{\text{Tuesday}} + \beta_{\text{Wednesday}} \dots + \beta_{\text{Sunday}}$).

Fourth, the mean search volume difference between days was described as a percentage increase by division of the regression variables (e.g., percentage difference = $\frac{\beta_{\text{Tuesday}}}{\beta_{\text{intercept(Monday)}}} \times 100$). For the latter, CIs were estimated by simulating 5,000 bootstrap

replicates from the multivariate normal sampling distribution, with the mean equal to the maximum-likelihood point estimates and variance equal to the variance–covariance matrix; that is, $\hat{\beta}_{\text{est}} \sim \text{MVN}(\hat{\beta}_{\text{mle}}, V(\hat{\beta}_{\text{mle}}))$, where $\hat{\beta}_{\text{mle}}$ is the vector of the regression coefficients and $V(\hat{\beta}_{\text{mle}})$ the variance–covariance matrix from the regression. This method allows estimation of the uncertainty in non-standard, interpretable measures (see King et al.²¹ for a detailed explanation and statistical justification). Ninety-nine percent CIs are presented based on a Bonferroni correction for six comparisons (7 days, one common reference).²²

We crawled the U.S. Google News (news.google.com) domain for the same periods, capturing English-language coverage of “healthy” topics in newspapers/magazines and broadcast/cable networks, including online and print content. The number of articles containing *healthy* was divided by the number of articles containing *the* each day, reported per 100,000. We then tested the hypothesis that media were responsible for search patterns²³ by replicating the wavelet analysis for media, and estimating Pearson correlation and a repeated measures ANOVA with within-week clustering for media compared to search trends.²⁴ All statistical analyses were conducted in R, version 2.15.3.

Results

Healthy queries in the U.S. peaked early in the week, declining through Saturday until modestly rebounding on Sunday (Figure 1). Moreover, search volumes were more consistent by day across weeks than within weeks across days (intraclass correlation, 0.006 vs 0.740), meaning that Mondays are more like other Mondays than the neighboring Sunday or Tuesday.

Relative query volume was significantly different for each comparison except Monday versus Tuesday ($t=1.22$, $p=0.22$); thus, Monday and Tuesday were pooled for further analysis. Monday and Tuesday queries were 30% (99% CI=29, 32) greater than the combined Wednesday–Sunday mean. Moreover, healthy queries on Monday and Tuesday were 3% (99% CI=2, 5) greater than Wednesday; 15% (99% CI=13, 17) greater than Thursday; 49% (99% CI=46, 52) greater than Friday; 80% (99% CI=76, 84) greater than Saturday; and 29% (99% CI=27, 31) greater than Sunday.

Media rhythms were substantially different from search rhythms. For example, Monday was not focal for healthy media coverage: Wednesday had about 9% (99% CI=0.4, 18) greater media coverage than Monday. In addition, media trends were only loosely associated with search queries ($r=0.34$). Lastly, repeated measures ANOVA revealed no effect of news on search after accounting for within-week clustering ($F=0.926$, $p=0.34$). Therefore, the likely explanation for circaseptan rhythms in healthy thinking was not media priming.

Discussion

Just as many illnesses have a weekly clock, so may healthy contemplations. Investigators now have evidence to

embark on a research agenda to further appreciate and exploit rhythms in health behaviors, including developing new hypotheses, databases, and interventions.

Hypothetically, the observed patterns suggest that health behavior contemplations are not governed by individual psychology, but rather collective behavior patterns. Therefore, the likely mechanistic factors supplanting individual psychology are the socially constructed meanings attributed to the days of the week. First, the beginning of the week may be akin to a mini New Year's day. Second, reengagement with workweek planning may engender health-related planning. Third, healthy rhythms may be a collateral consequence of early-week spikes in poor health. Lastly, poor health choices during the weekend may promote a desire to cleanse come Monday.

Evidence cannot be presented herein to test mechanistic claims, but new databases can shed light on the ubiquity of circaseptan rhythms. Interventionists, for instance, could assess how program enrollment varies daily as a secondary aim, where enrollment may indicate healthy contemplations. Population surveys could include questions about the weekday respondents' desire to initiate a behavior change and why. Use of service data, such as smoking quitlines, may also yield insights.²⁵

Nevertheless, the discovery of circaseptan rhythms has strong potential for improving public health, both near- and long-term. Health promotion campaigns could immediately be made more cost effective by targeting the population early in the week rather than uniformly across the week. For instance, mass media campaigns could purchase more advertisements.

A major limitation is that we cannot precisely link our findings to raw search volumes. However, Eysenbach and Köhler estimated that 5% of all global searches are health-related,²⁶ and in 2012, people searched Google 1.2 trillion times.²⁷ Thus, a single percentage point difference may represent millions of health queries each day, meaning that a small percentage difference between Wednesday and Monday/Tuesday can have substantial practical implications.

These findings are the initial steps toward understanding recurring weekly rhythms in health contemplations. That weekly clocks also impact precise behaviors seems likely,²⁸ and we hope our work encourages others to measure and leverage these rhythms in preventive medicine.

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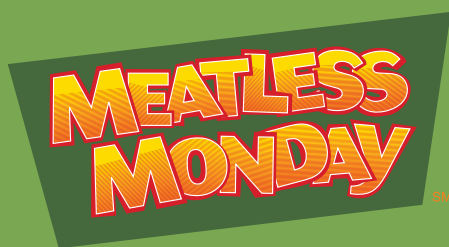
JWA holds an equity stake in Directing Medicine LLC and HealthWatcher Inc. He has been a paid advisor/speaker to numerous universities and allied health groups in the past 2 years. BMA holds an equity stake in Directing Medicine LLC and is a paid advisor to HealthWatcher Inc. MJ is the research director at the Mondays Campaign. MD is a paid advisor to Directing Medicine LLC. JEC is a faculty advisor to the Mondays Campaign as part of a collaborative agreement between the Mondays Campaign and the Johns Hopkins Bloomberg School of Public Health.

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EVALUATION OF THE MEATLESS MONDAY CAMPAIGN AT NEWYORK- PRESBYTERIAN



JOHNS HOPKINS
CENTER *for* A LIVABLE FUTURE

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BACKGROUND

In January 2018, four hospitals in the NewYork-Presbyterian (NYP) network implemented a health communication campaign to reduce meat consumption among hospital employees. NYP hoped that this campaign could improve employee health and reduce the institution's environmental footprint. Diets high in red and processed meat, especially those low in vegetables, fruits, and whole grains, are associated with adverse health outcomes such as some cancers¹, heart disease², obesity^{3,4} and type 2 diabetes⁵. In addition, livestock production accounts for nearly 15 percent of global greenhouse gas emissions⁶, making it a major driver of climate change. Likewise, livestock agriculture uses a disproportionate amount of the world's fresh water, arable land and fossil fuel.⁷ The increasing global demand for meat drives the livestock sector furthering intensive animal confinement and misuse of antibiotics, thus contributing to the growing public health crisis of antibiotic resistance and animal-to-human spread of diseases.⁸

Reducing the amount of meat we consume globally is necessary, but a large-scale shift toward the consumption of plant-based proteins will require multiple approaches. Within the food service industry, one approach is to reduce portions of meat and incorporate more plant-based proteins into menus at schools, hospitals, work sites and restaurants. For organizations who haven't yet made the commitment to reducing meat consumption, one strategic approach is to introduce a meat reduction, plant-based initiative like Meatless Monday.

Meatless Monday is a global movement with a simple message: one day a week, cut out meat. Launched in 2003, Meatless Monday is a non-profit initiative of [The Monday Campaigns](#) (TMC). Their goal is to reduce public meat consumption in the United States by 15% for personal health and the health of the planet. Meatless Monday provides information, news, recipes and free promotional materials to help individuals, schools, restaurants, hospitals, food companies and entire communities start each week with a commitment to eating healthy, environmentally friendly, meat-free meals.

NewYork-Presbyterian (NYP) is an academic medical center with seven campuses in the New York Metropolitan area. It houses more than 6,500

physicians and over 20,000 employees among its campuses. As part of their wellness and sustainability initiatives and with the guidance of TMC, NYP launched Meatless Monday in four of its seven hospital cafeterias in early 2018. NYP's "Meatless Monday" promotion is a partnership between the Department of Food and Nutrition, NYP *BeHealthy*, and NYP *green*. It aims to educate staff, students and community members on how small adjustments in meat consumption can reduce an individual's environmental footprint as well as the risk of adverse health outcomes associated with diets high in animal proteins, such as some cancers, heart disease, obesity and type 2 diabetes. The Monday Campaigns enlisted the consultation of the Lerner Center for Public Health Promotion at Columbia University's Mailman School of Public Health and the Johns Hopkins Center for a Livable Future to design, implement, and evaluate the influence of the Meatless Monday campaign at NYP.

The Meatless Monday at NYP intervention used the socio-ecological framework to influence both personal and environmental factors that determine individual behaviors. The proposed intervention was designed to have an impact on multiple levels (community, organizational, interpersonal and individual levels) providing a comprehensive network of intervention components to reduce employee meat consumption on Mondays. All components of the intervention (figure 2) were implemented within the New York Presbyterian dining cafeterias or through New York Presbyterian's digital resources. While NewYork-Presbyterian has six main facilities, only the four facilities with NYP retail operations were included in this study. These were selected because of their higher level of engagement and patronage by NYP staff.

- ▶ NewYork-Presbyterian/The Allen Hospital (NYP/AH)
- ▶ NewYork-Presbyterian/Columbia University Irving Medical Center (NYP/CU)
- ▶ NewYork-Presbyterian Hospital/Weill Cornell Medical Center (NYP/WC)
- ▶ NewYork-Presbyterian Hospital/Westchester Division (NYP/WD)

The Meatless Monday intervention components according to their socio-ecological levels are highlighted in figure 2.

METHODS

Implementation

NewYork-Presbyterian’s Meatless Monday Intervention was initiated in February 2018 after the administration of the baseline survey two weeks prior. Outreach and promotion regarding the initiative was made on a weekly basis every Monday throughout the campaign. The communication efforts were intended to educate employees on how small adjustments in meat consumption can reduce an individual’s environmental footprint as well as the risk of adverse health outcomes associated with high-meat diets.

The program also encourages participation in Meatless Monday by promoting a vegetarian entrée as the daily featured special. This special meets the **NYPBeHealthy** nutritional guidelines and is offered for a one dollar discount. Meat options are still available in the cafeterias on Mondays. For the purpose of the program, the meatless meal is defined as a meal containing grains, beans, legumes, nuts, seeds, vegetables. A meatless meal does not include red meat (beef,



Figure 1

pork, poultry, fish, or shellfish, but may contain dairy or eggs.

Each week, a fact explaining the benefits of eating meatless is displayed via a creative graphic that was developed and verified by The Monday Campaigns (see *figure 1*), Johns Hopkins Center for a Livable Future, and the NewYork-Presbyterian Food & Nutrition team. These materials are intended

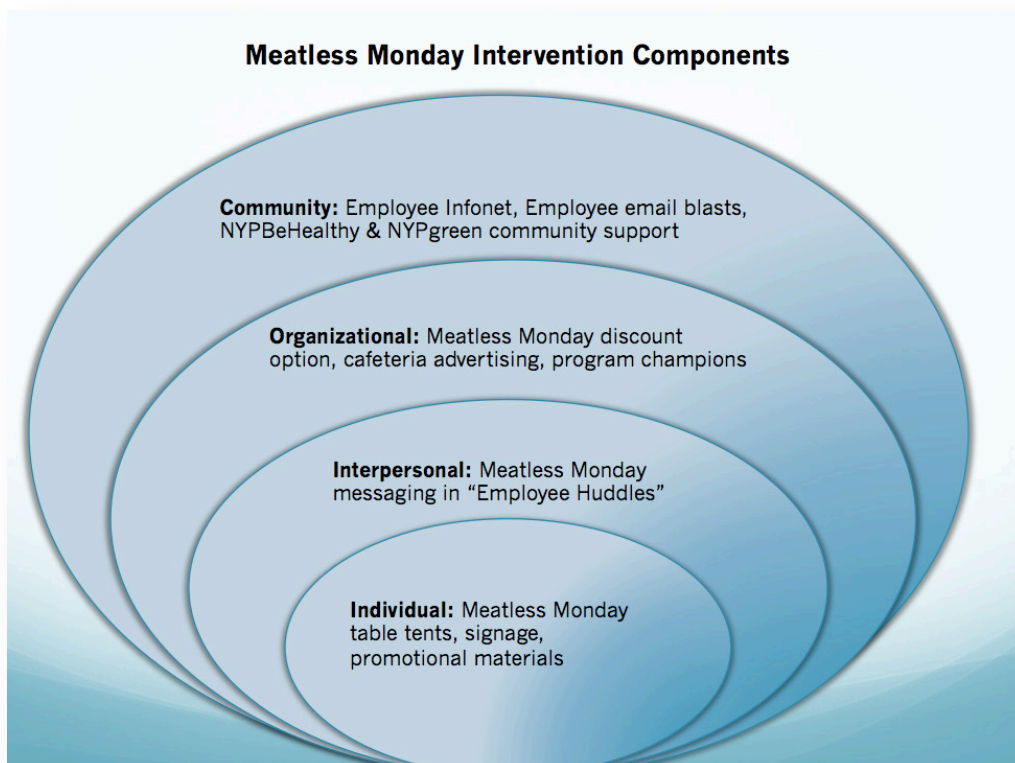


Figure 2

to educate staff and encourage participation in the Meatless Monday initiative. Statistics demonstrating the potential impact of all NYP staff participating in Meatless Monday were generated via NewYork-Presbyterian's partnership with the Monday Campaigns and The Johns Hopkins Center for a Livable Future. Citations for all claims can be accessed via [NewYork-Presbyterian's Food & Nutrition Website](#).

Design

The primary research objective of this project was to evaluate the influence of the Meatless Monday campaign after six months of implementation in four NYP hospital cafeterias, measuring self-reported awareness and reduction of meat consumption among NewYork-Presbyterian (NYP) employees. Although planned for six months initially, the program continued for 18 months due to inconsistent implementation. After adjustments to implementation were made at the sites, a second follow-up was added.

Data were collected in-person using preloaded electronic Qualtrics surveys on iPads from the NYP cafeteria sites (NYP/AH, NYP/CU, NYP/WD and NYP/WC) in an attempt to support the research objective and answer the following research questions:

1. **Over the past month**, did the Meatless Monday campaign at NYP influence your decision to not eat meat, cut back on, or consider cutting back on the amount of meat you eat?
2. **This past Monday**, did the Meatless Monday campaign at NYP influence your decision to not eat meat, cut back on, or consider cutting back on the amount of meat you eat?
3. **Yesterday**, did the Meatless Monday campaign at NYP influence your decision to not eat meat, cut back on, or consider cutting back on the amount of meat you eat?

To address the research questions of interest, the NYP data collection team (NYP Dietetic Interns, Nutrition Fellows and Health and NYP Wellbeing staff trained by Columbia University researchers from the Mailman School of Public Health, Lerner Center for Public Health Promotion) conducted a multi-site, pretest and posttest consumer survey evaluation for all quantitative endpoints (responses to research questions). The intention was to capture data at multiple time points of the initiative (baseline, and six months post-launch) in order to evaluate behavior change and sustainability. Data were recorded on tablets via the electronic Qualtrics software. All data were managed and analyzed by the Johns Hopkins Center for a Livable Future.

RESULTS

The survey was implemented three times: at baseline (February 2018), follow-up 1 (November 2018) and follow-up 2 (July 2019). Although the original research plan only included one follow up at six months, due to irregular implementation at several sites and a poor response rate for follow-up 1, the survey was implemented again to garner a wider response from participants. For the baseline survey, 751 New York Presbyterian staff participated; 174 staff participated in follow-up 1; and 461 staff participated in follow-up 2. Because the first follow-up was small, and

therefore insignificant compared to the baseline and second follow-up, it was not included in all of the comparisons below. The largest category of employees to participate in the survey were classified as ‘other clinical staff’ at 28% followed by support staff at 24%. Doctors had the lowest participation rate.

Of the employees that participated, on average, 67% reported ever purchasing a meatless entrée/ meal offered at the NYP cafeteria.

Occupation	Baseline (N=729)	Follow-up 1 (N =172)	Follow-up 2 (N=461)	Total (N=1362)	Percentage
Administrative staff	122	34	106	262	19%
Doctor	120	14	20	154	11%
Nurse	106	25	112	243	18%
Other Clinical staff	211	62	108	381	28%
Support staff	170	37	115	322	24%

Table 1

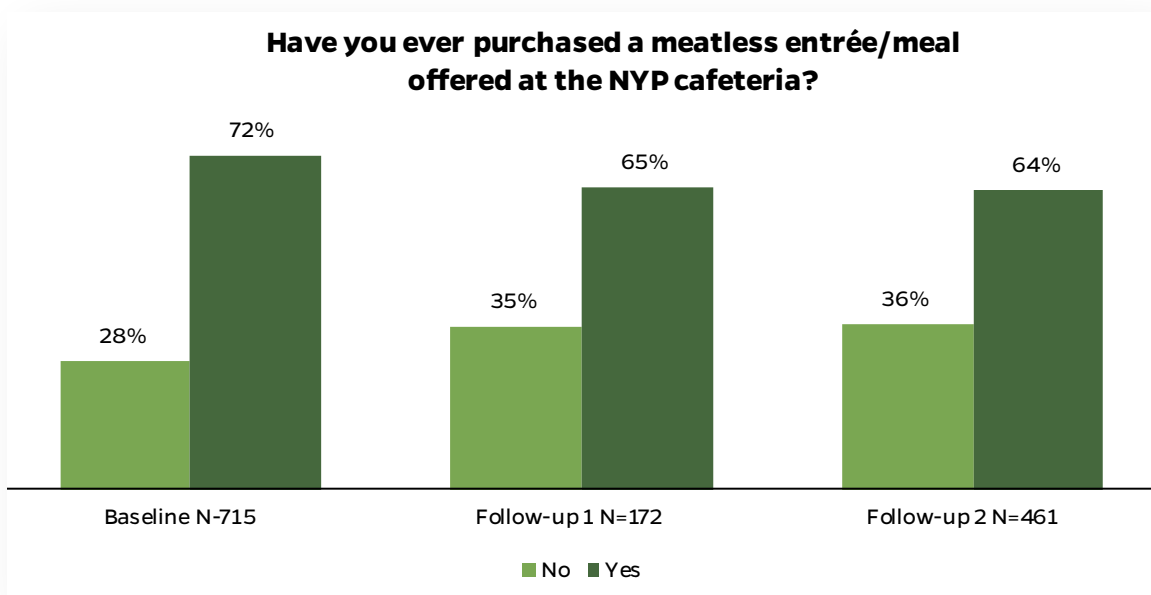


Figure 3

When participants were asked if they've seen, read, or heard messages or materials about meat reduction at NYP, 60% responded positively in follow-up 2, a 7% increase from the first follow up and a 27% increase from baseline.

When broken down by sites, an increase of campaign awareness was observed from follow-up 1 to follow-up 2 across all sites, except at Allen Hospital (AH).

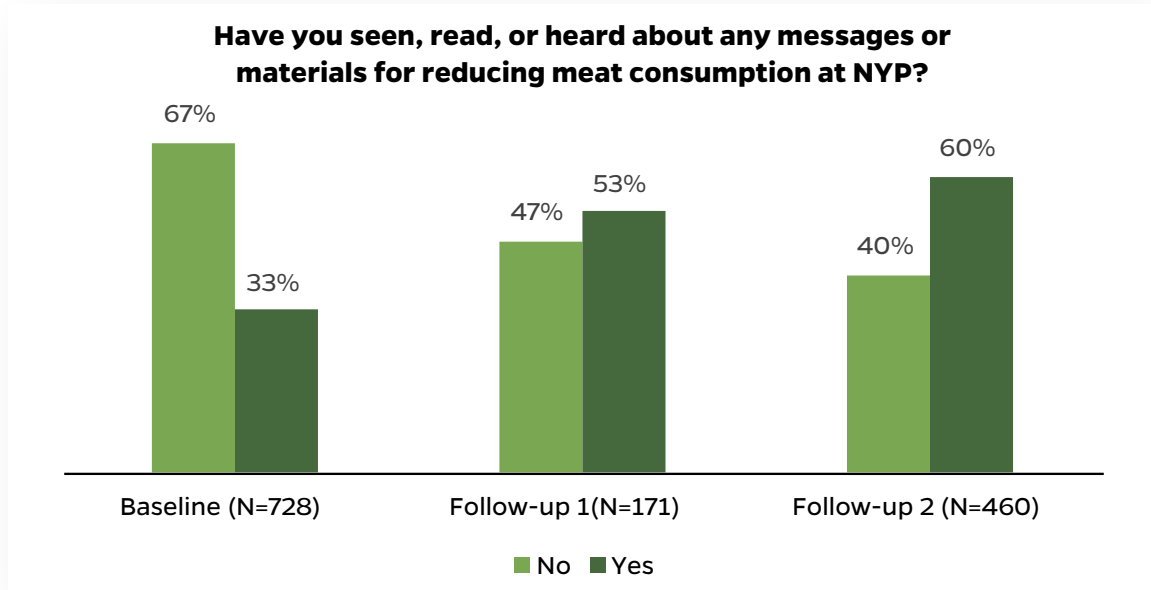


Figure 4

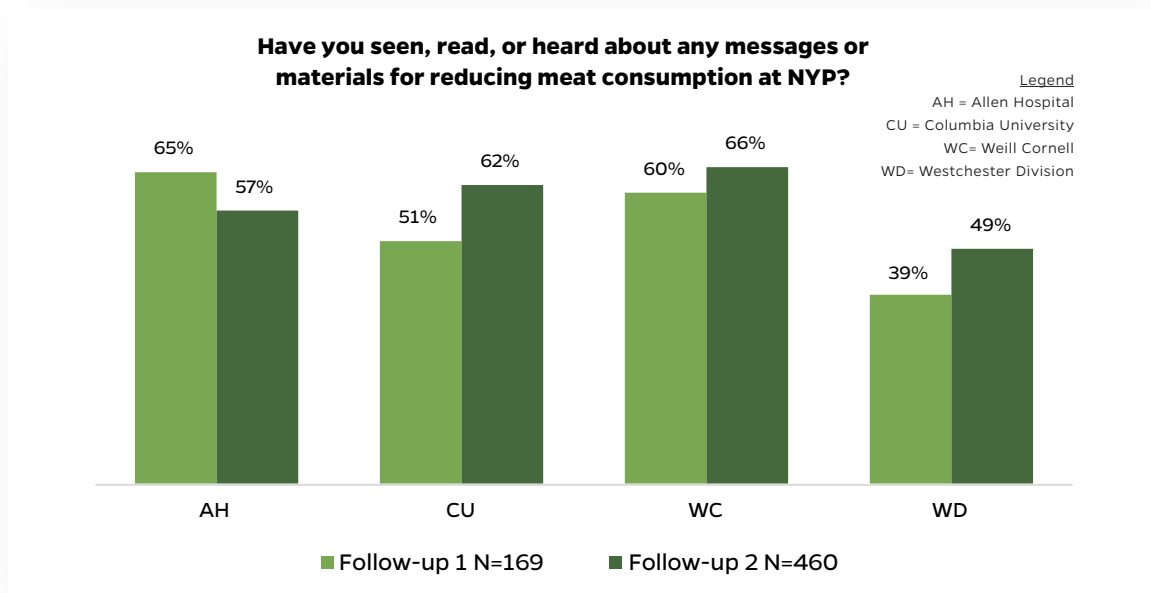


Figure 5

When participants were asked if they were actively trying to cut back on the amount of meat they eat, at follow-up 2, 45% said yes (a 4% increase from baseline), while 44% said they were not considering cutting back (a 5% decrease from baseline). The results from the NYP evaluation were compared to that of the Data Decisions Group (DDG) Biennial Monday Campaign 2017

household survey that is conducted every other year to track awareness and behavior related to TMC initiatives. Compared to the DDG survey, the NYP participants had a greater percentage of meat reducers and individuals who identified as vegetarians or vegans (3% vs. 8%) at baseline and both follow-ups.

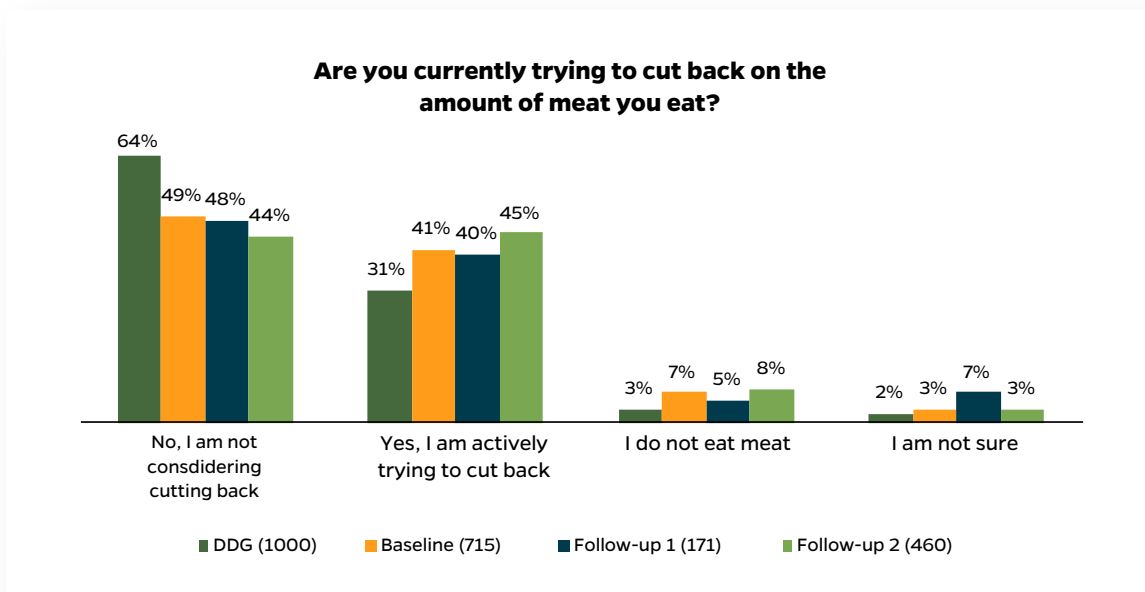


Figure 6

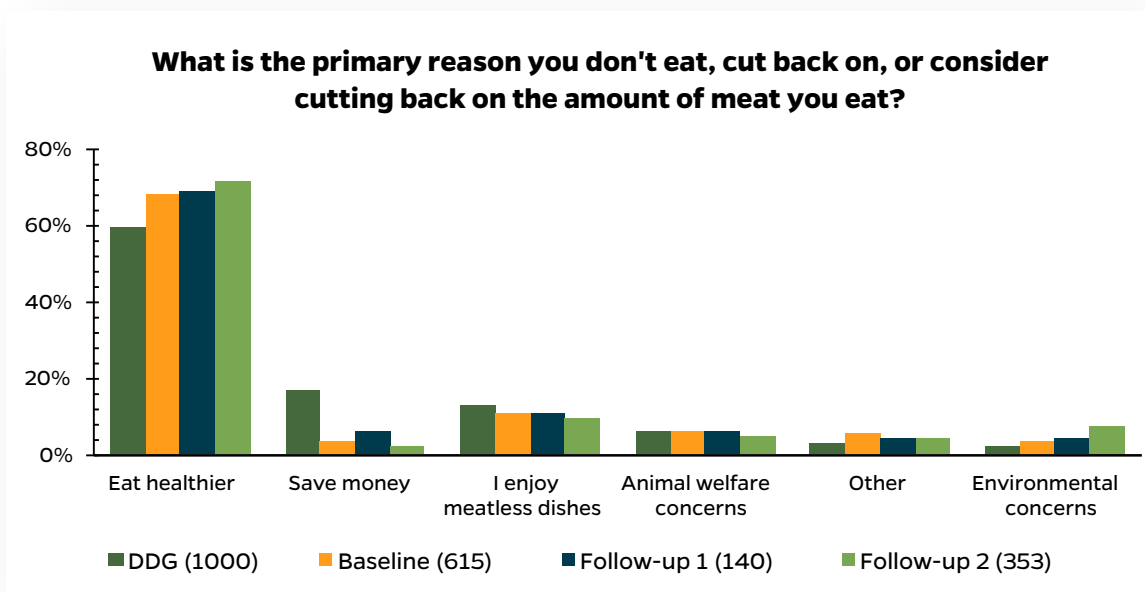


Figure 7

Subsequently, when asked for the primary reasons they don't eat, cut back on or consider cutting back on the amount of meat they eat, 72% reported 'eating healthier' as the motivation, a 4% increase from baseline. Additionally, though still a small proportion, environmental concerns doubled as a reason for not eating or considering cutting back compared to baseline (4%), which could be attributable to education and awareness. The results observed in the NYP survey results are similar to what was reported in the DDG survey.

The results presented below are aimed at answering the research questions to support the research objective.

Over the past month, did the Meatless Monday campaign at NYP influence your decision to not eat meat, cut back on, or consider cutting back on the amount of meat you eat?

Overall, the Meatless Monday campaign influenced NYP employees to not eat meat, cut back on, or consider cutting back on the amount of meat they eat as illustrated in figure 8. In follow up 1, 46% of participants stated the Meatless Monday campaign influenced meat consumption. This finding was further confirmed in the second follow-up where 53% stated the campaign had an influence on their meat consumption.

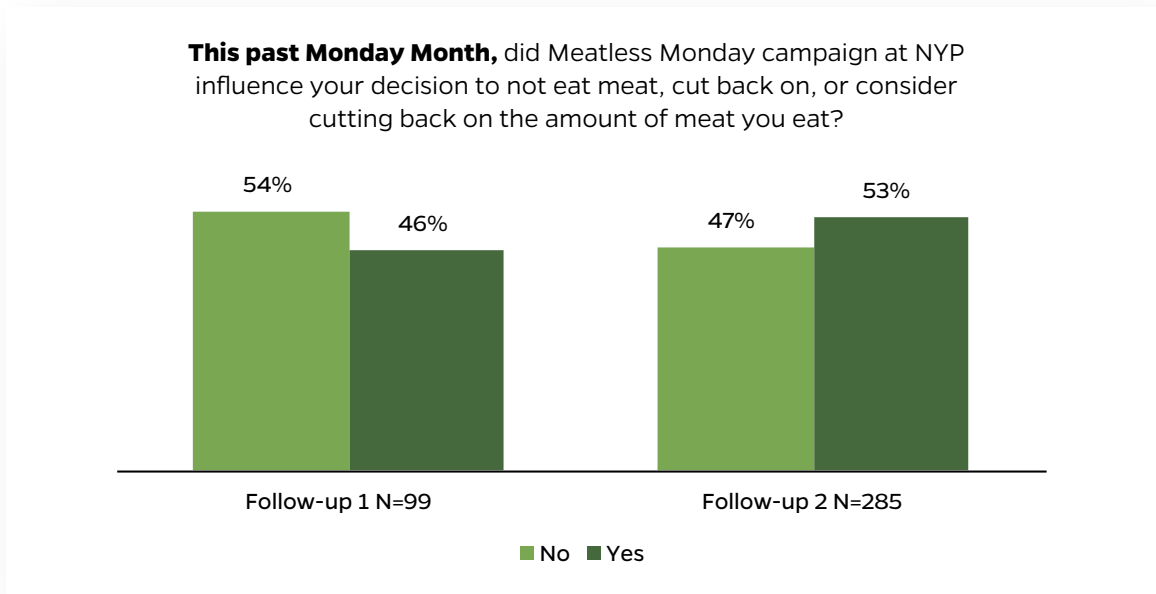


Figure 8

Additionally, over half (53%) of the respondents reported participating in the Meatless Monday campaign by selecting a meatless entry at a NYP hospital cafeteria in follow-up 2. However, those who heard the Meatless Monday message

for greater than 1 month had a slightly higher participation rate in choosing a meatless entrée compared to those that heard the message for less than 1 month (53% vs. 50%).

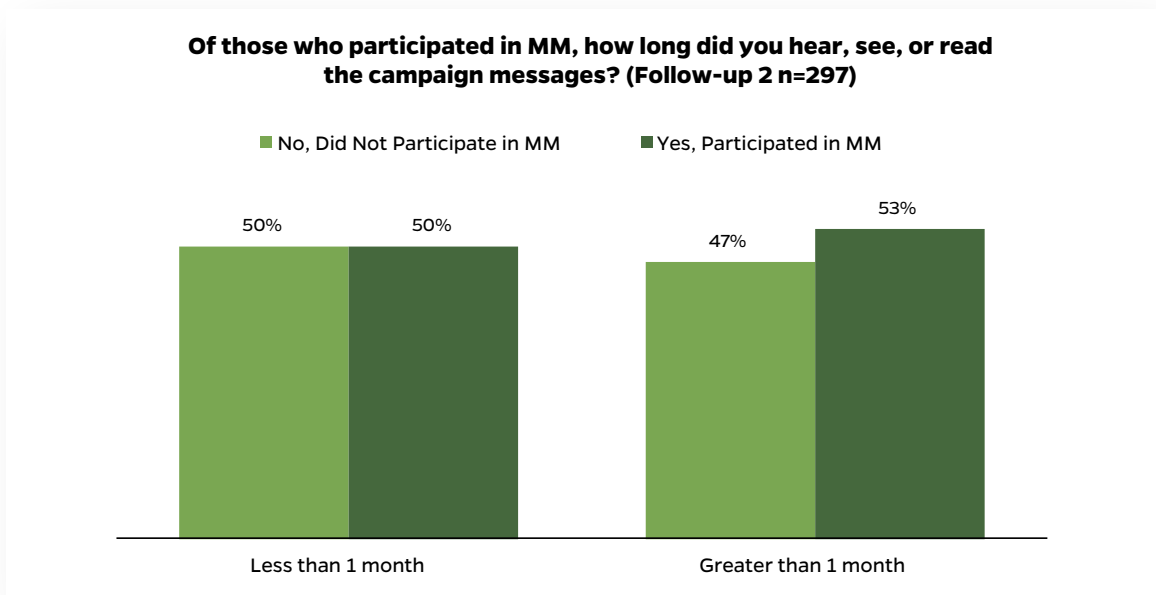


Figure 9

When the numbers are broken down by site, with the exception of Allen Hospital (AH), more than 50% of respondents across the sites par-

ticipated in the Meatless Monday campaign by choosing a meatless option in the NYP cafeteria over the past month.

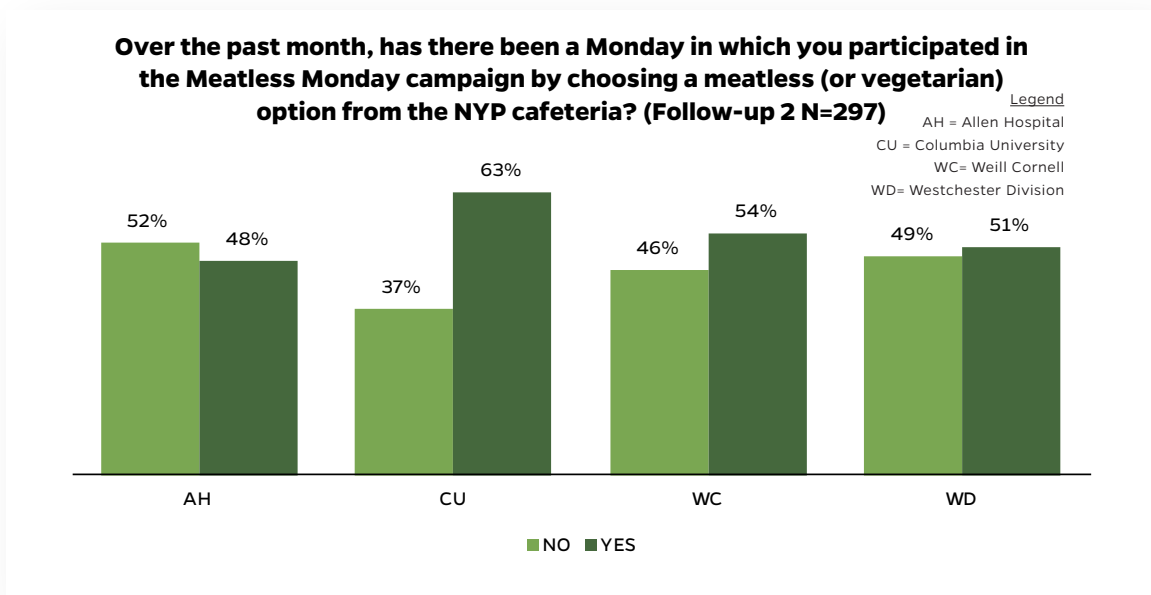


Figure 10

This past Monday, did the Meatless Monday campaign at NYP influence your decision to not eat meat, cut back on, or consider cutting back on the amount of meat you eat?

At follow-up 2, 27% stated that the Meatless Monday campaign at NYP influenced their decision to not eat meat, cut back on, or consider cutting back on the amount of meat they eat this past Monday.

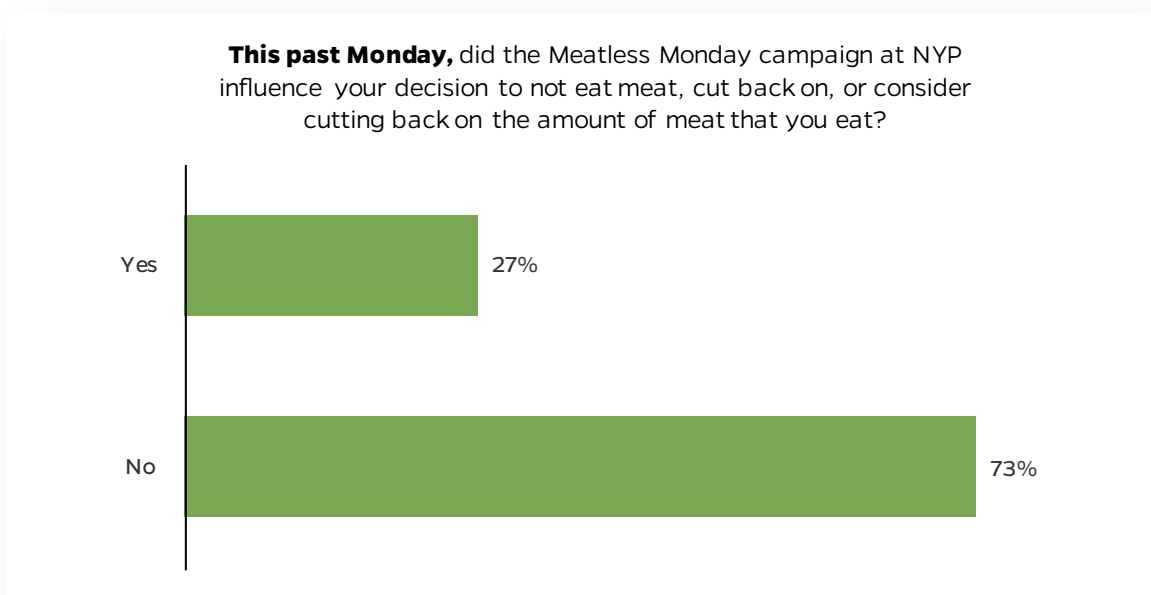


Figure 11

When broken down by sites, Columbia University site (CU) reported the greatest influence at 44% compared to the other sites for cutting back or considering cutting back on meat consumption.

The wide percentage range between the sites could be attributable to variation in promotion activities.

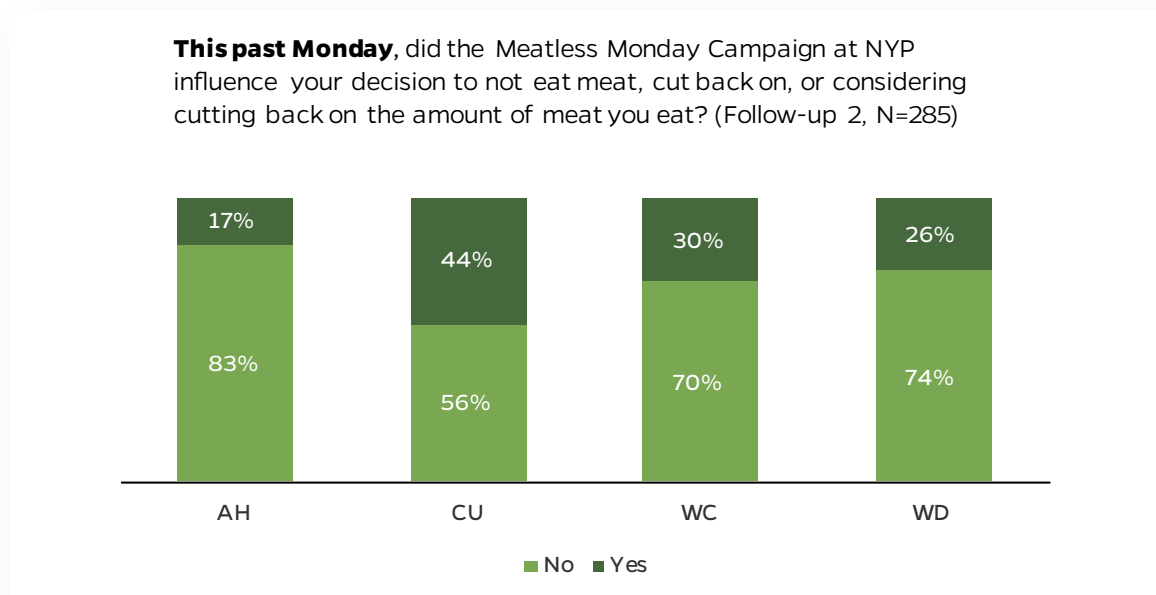


Figure 12

Yesterday, did the Meatless Monday campaign at NYP influence your decision to not eat meat, cut back on, or consider cutting back on the amount of meat you eat?

When participants were asked if the Meatless Monday campaign at NYP influenced their decision to not eat, cut back, or consider cutting back on the amount meat they eat outside of a Monday (any other day of the week), 23% responded yes in follow-up 2.

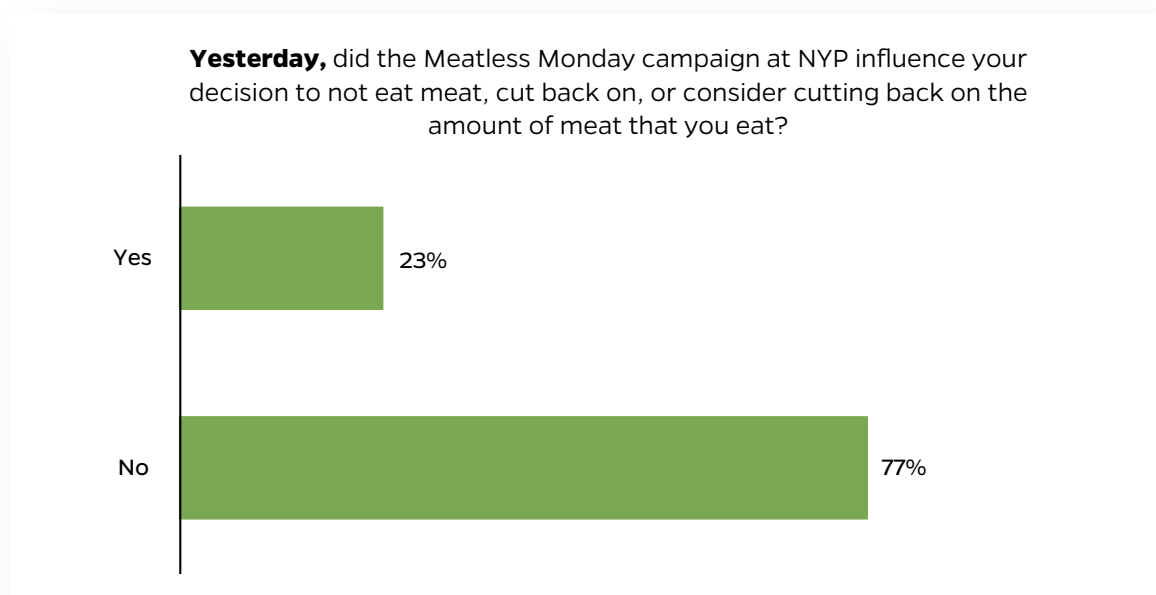


Figure 13

When the numbers were broken down by site, Allen Hospital had the highest number (86%) of participants not influenced by the Meatless

Monday Campaign at NYP to cut back or consider cutting back on meat consumption.

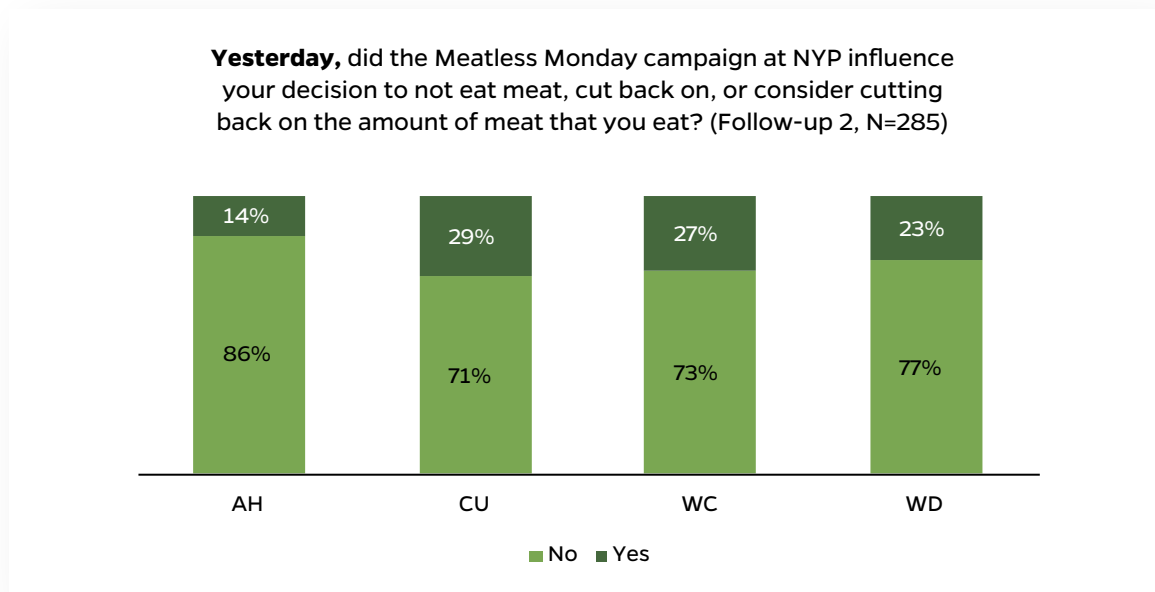


Figure 14

Has the campaign made an impact on awareness and food choices?

Fifty-four percent of the employees that saw, read, or heard the Meatless Monday message

at NYP chose a meatless or vegetarian option compared to 46% of those that did not see, read, or hear the Meatless Monday message. This is an indication that the campaign made an impact on awareness and food choices.

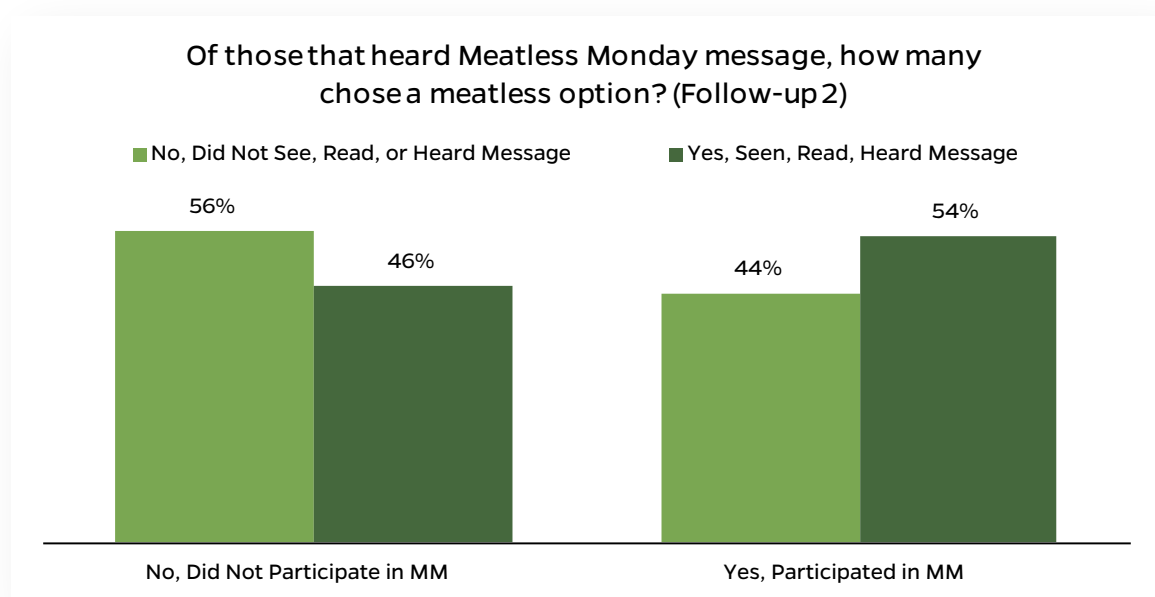


Figure 15

Additionally, across all surveys and sites, there was an increase in awareness about the messages

or materials for reducing meat consumption at NYP in both follow ups compared to baseline.

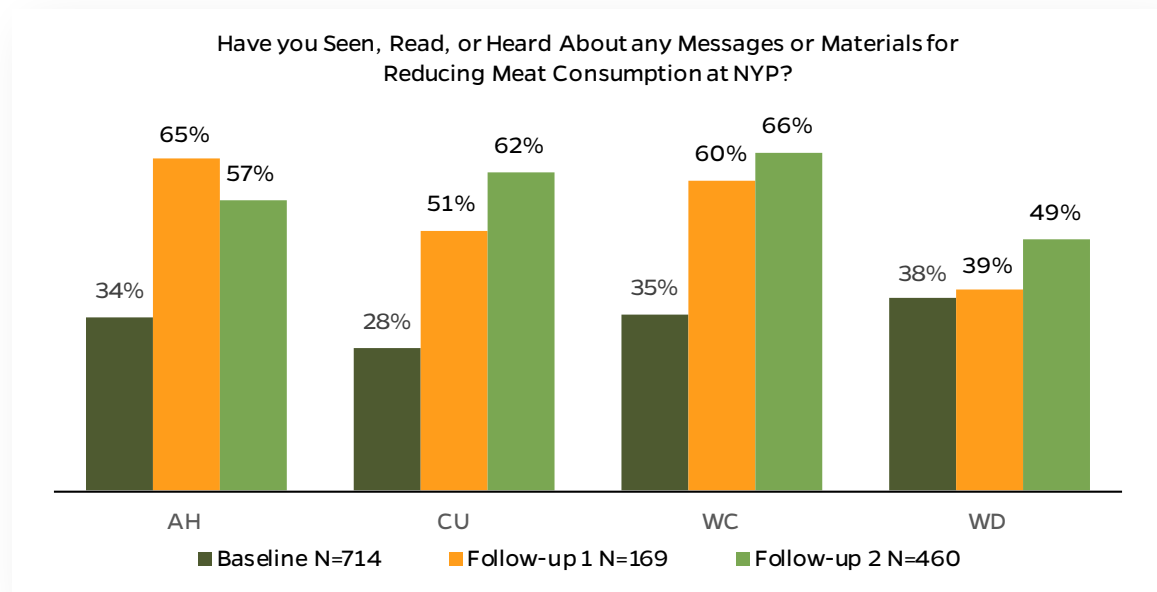


Figure 16

When asked where they've seen, read, or heard messages or materials about the Meatless Monday campaign at NYP, signs on tables and near

food items in the cafeteria and signs at entrance of cafeteria were most effective at promoting the message.

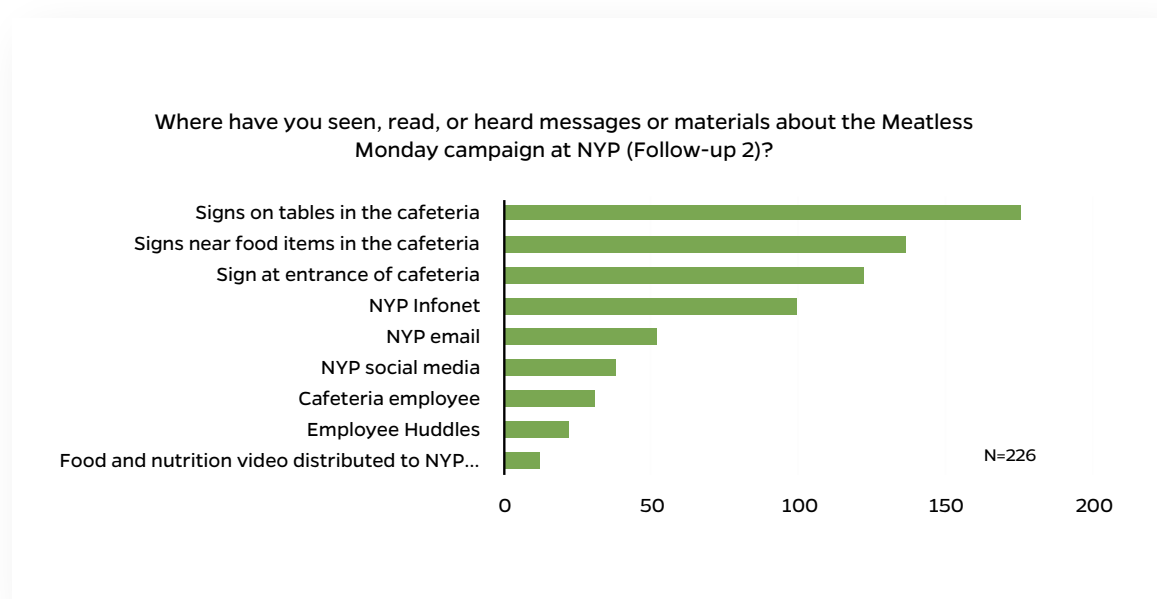


Figure 17

Lastly, when participants were asked in what way, if at all, has Meatless Monday changed your cooking and/or eating habits, the majority said they ate more fruits and vegetables and ate less meat. These behavior changes align with

the overall message of the Meatless Monday campaign—cutting meat one day a week and adding more vegetables, fruits and plant proteins to the plate.

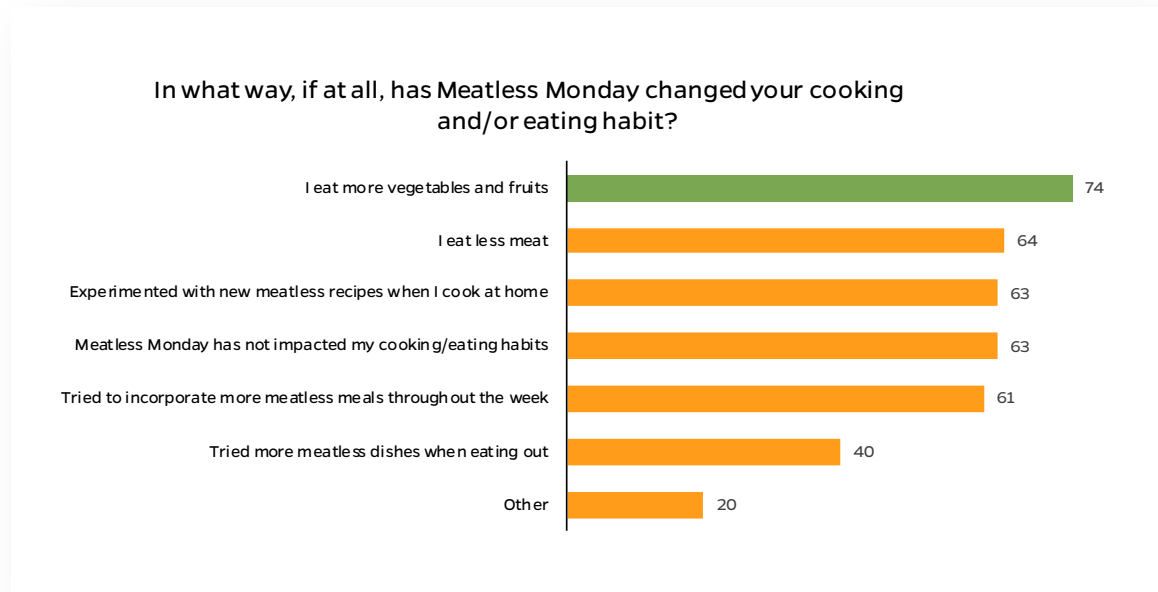


Figure 18

On average, 87% of the participants that took the survey at follow-up 1 and 2 agree that the Meatless Monday campaign at NYP shows that NYP cares about their health and the environment.

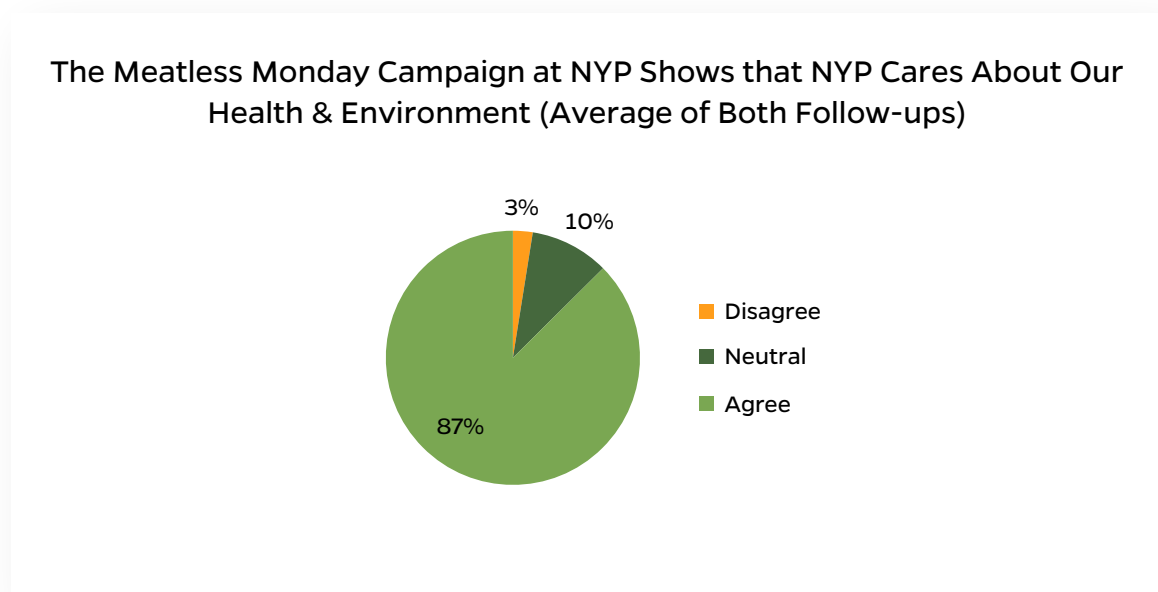


Figure 19

DISCUSSION

One goal of the Meatless Monday campaign at NewYork-Presbyterian Hospital (NYP) was to raise awareness among employees on the benefits of reducing meat consumption for their health and that of the environment through various menu changes, marketing and promotion strategies within the cafeteria setting. Simply put, the campaign succeeded. At baseline, only 33% of participants had read, heard, or seen any messages for reducing meat consumption at NYP and only 34% had heard of Meatless Monday. After implementing the campaign anywhere (i.e. also outside of NYP) (at follow-up 2), 60% reported hearing, seeing, or reading the Meatless Monday and meat reduction messages, an 82% increase. Interestingly, this varied greatly by site, with Weill Cornell having the highest awareness of the campaign messaging at 66% and Westchester having the lowest awareness at 49%.

At NYP, approximately 70% of participants noted 'eating healthy' as the primary reason for decreasing meat consumption, 10% higher than the 2017 Biennial Meatless Monday Consumer survey (DDG 2017). Enjoying meatless dishes, and environmental concerns were the second and third reasons for considering and/or decreasing meat consumption. The reasons for reducing meat did not change much over the course of the program; except for a slight increase in environmental motivation from 2% to 4% of the respondents.

Another important goal of the intervention was to influence behavior change among employees based on increased awareness and knowledge of the consequences of high meat consumption. Overall, the campaign influenced participants' decisions to eat less meat or to consider cutting back on meat consumption. However, the impact appeared to be influenced by whether or not participants heard the campaign message and the length of time the message was promoted. Several follow up questions were asked of those who had seen, heard or read about MM at NYP regarding whether the campaign had an impact on food choices at certain time points. The number one impact the campaign had on food choices was to eat more fruits and vegetables, followed by eating less meat. Many

others were also motivated to experiment with cooking meatless dishes at home.

Overall, it appears that Meatless Monday had a small, but positive impact on patrons of the NYP cafeteria with noted benefits including reduction in meat consumption as well as other changes in cooking and eating habits throughout the week; however, more can still be done as 40% of the patrons were not aware of the Meatless Monday campaign at all, even though it had been implemented for a year and a half.

Strengths and Weaknesses

Consistent implementation was the weakest part of this evaluation and created challenges for the program. In the fall of 2018 and throughout program and survey periods (Feb 2018 - July 2019), the researchers made several site visits to check implementation and visibility of the campaign. They found that implementation varied greatly across sites. High implementation was not well achieved at any of the study sites. Weill Cornell was most consistent at displaying visible signs and table tents; Columbia Milstein had moderately consistent implementation; however, Allen and Westchester did not implement consistently from week to week. As a result, Allen and Westchester were categorized as low implementers while the others are considered moderate implementers.

Among all of the sites, the most consistent promotion strategies were the discount of the Meatless Monday item on the menu, employee huddles (as reported) and signage at cafeteria entrances. In the survey results, table tents and visible signage were the most influential for customers choosing the Meatless Monday options; however, these two actions were inconsistent, not visible or discontinued at the low implementation sites.

As mentioned above, the first follow-up survey was delayed and only completed by 179 customers due to implementation issues and staff/volunteer availability. After this, the research team waited a few months to achieve more uniform implementation across sites and to conduct a second follow up. This was completed in the summer of 2019, nearly 18 months after the launch of the campaign. Consequently, this later follow-up demonstrated a small but lasting effect

of the Meatless Monday Campaign. Customers still recognized the campaign visuals, purchased vegetarian items on Monday and were more committed to reducing meat in their diet—even after nearly two years of the campaign.

Finally, due to small numbers, this analysis does not address whether changes were statistically significant.

Key Takeaways

Despite the challenges with implementation, there are several lessons/best practices we learned throughout the study:

1. Promotion and consistent implementation are key to visibility, engagement and impact. To ensure promotions are executed according to agreed upon specifications, consider standardized training for all programmatic staff.
2. Programs such as this are accepted and welcomed by consumers. The majority of employees were positive about the program and appreciated that it demonstrated NYP's concern about employee health and the environment.
3. Communication between departments is essential, as well as engagement from food service managers and staff for proper dissemination.
4. Utilize an internal "ambassador/champion" to create greater ownership and commitment to program.
5. Continuous monitoring and evaluation and corrections (where necessary) are imperative for successful implementation throughout the intervention.
6. To bring about behavior change, promotion and messaging must be relatable, health focused and continuous.

APPENDIX A

NYP Baseline Consumer Screener

Screener questions (to be asked/answered by intern) *Interns will be positioned at the cafeteria entrances

1. Would you like to complete a brief three-minute NYP survey about nutrition and receive a \$1 discount on your cafeteria purchase today?
 - 0) No (Not interested; Thank for time)
 - 1) Yes

2. Are you a NYP staff member? *Do not include: volunteers
 - 0) No (Not eligible; Thank for time)
 - 1) Yes (Start survey; Intern gives iPad to participant; Give discount ticket after survey completion)

NYP BASELINE CONSUMER SURVEY

Your participation in this survey is completely voluntary and all of your responses are anonymous. None of the responses will be connected to identifying information. Thank you!

1B. Which of the following categories best describes your occupation?

- a) Doctor
- b) Nurse
- c) Administrative staff
- d) Support staff

2B. How often do you eat at the NYP cafeteria?

- a) Every day
- b) 3-4 times a week
- c) About once a week
- d) About once a month
- e) Once or twice a year

3B. Have you ever purchased a meatless entrée/meal offered at the NYP cafeteria?

- 0) No
- 1) Yes

4B. Are you currently trying to cut back on the amount of meat you eat?

- a) Yes, I am actively trying to cut back
- b) No, but I have cut back on meat in the past
- c) No, but I am considering cutting back
- d) No, I am not considering cutting back (Skip to question 6B)
- e) I do not eat meat
- f) I'm not sure

5B. What is the primary reason you do not eat meat, cut back on, or are considering cutting back on the amount of meat you eat? Please select one.

- a) Eat healthier
- b) I enjoy meatless dishes
- c) Save money
- d) Environmental concerns
- e) Animal welfare concerns
- f) Other (please specify)

6B. Have you seen, read, or heard about any messages or materials for reducing meat consumption at NYP?

- 0) No
- 1) Yes

7B. Have you heard of Meatless Monday?

- 0) No (Skip to end; Survey completed)
- 1) Yes
- 2) I'm not sure

8B. Did Meatless Monday influence your decision to not eat meat, cut back on, or consider cutting back on the amount of meat you eat?

- 0) No
- 1) Yes

END OF SURVEY; Thank you for completing this survey!

APPENDIX B

NYP FOLLOW-UP CONSUMER SURVEY

Your participation in this survey is completely voluntary and all of your responses are anonymous. None of the responses will be connected to identifying information. Thank you!

1F. Which of the following categories best describes your occupation?

- a) Doctor
- b) Nurse
- c) Other Clinical staff
- d) Administrative staff
- e) Support staff

2F. How often do you eat at the NYP cafeteria?

- a) Every day
- b) 3-4 times a week
- c) About once a week
- d) About once a month
- e) Once or twice a year

3F. Are you currently trying to cut back on the amount of meat you eat?

- a) Yes, I am actively trying to cut back
- b) No, but I have cut back on meat in the past
- c) No, but I am considering cutting back
- d) No, I am not considering cutting back
- e) I do not eat meat
- f) I'm not sure

4F. Have you ever purchased a meatless entrée/meal offered at the NYP cafeteria?

- 0) No
- 1) Yes

5F. How appealing do you find the meatless options available in the NYP cafeteria?

- 1) Very unappealing
- 2) Unappealing
- 3) Appealing
- 4) Very appealing

6F. Have you seen, read, or heard about any messages or materials for reducing meat consumption at NYP?

- 0) No (Skip to question 9F)
- 1) Yes

7F. Do you know the name of the campaign for reducing meat at NYP?

- 0) No (Skip to question 9F)
- 1) Yes

8F. Please write the name of the campaign for reducing meat at NYP.

_____ (If correct, skip to question 10F)

- 9F. Have you seen, read, or heard any messages or materials about the Meatless Monday campaign at NYP?
- 0) No (Skip to end; Survey completed)
 - 1) Yes
- 10F. Where have you seen, read, or heard messages or materials about the Meatless Monday campaign at NYP? Select all that apply.
- a) Signs on tables in the cafeteria
 - b) Signs near food items in the cafeteria
 - c) Sign at entrance of cafeteria
 - d) Cafeteria employee
 - e) NYP social media
 - f) NYP email
 - g) NYP Infonet
 - h) Employee Huddles
 - i) Food and nutrition video distributed to NYP employees
- 11F. For how long have you seen, read, or heard messages or materials about the Meatless Monday campaign at NYP?
- a) **Less than one** month
 - b) The past **one** month
 - c) The past **two - three** months
 - d) The past **four - five** months
 - e) The past **six** months or more
- 12F. Over the past month, has there been a Monday in which you participated in the Meatless Monday campaign by choosing a meatless (or vegetarian) option from the NYP cafeteria?
- 0) No (Skip to question 14F)
 - 1) Yes
- 13F. Over the past month, how many Mondays have you participated in the NYP Meatless Monday campaign?
- a) I participated on ONE Monday this month.
 - b) I participated on TWO Mondays this month.
 - c) I participated on THREE Mondays this month.
 - d) I participated on FOUR Mondays this month.
- 14F. When you think about Meatless Monday at NYP, which statements do you agree with? Please select all that apply.
- a) Meatless Monday has a positive effect on people's health.
 - b) Meatless Monday has a positive effect on the environment.
 - c) Meatless Monday encourages people to cut out meat on Mondays.
 - d) None of the above.
- 15F. **Over the past month**, did the Meatless Monday campaign at NYP influence your decision to not eat meat, cut back on, or consider cutting back on the amount of meat you eat?
- 0) No
 - 1) Yes
- 16F. **This past Monday**, did the Meatless Monday campaign at NYP influence your decision to not eat meat, cut back on, or consider cutting back on the amount of meat you eat?
- 0) No
 - 1) Yes

17F. **Yesterday**, did the Meatless Monday campaign at NYP influence your decision to not eat meat, cut back on, or consider cutting back on the amount of meat that you eat?

- 0) No
- 1) Yes

18F. In what way, if at all, has Meatless Monday changed your cooking and/or eating habits? Select all that apply.

- a) I've experimented with new meatless recipes when I cook at home.
- b) I've tried to incorporate more meatless meals throughout my week.
- c) I've tried more meatless dishes when eating out.
- d) I eat more fruits and vegetables.
- e) I eat less meat.
- f) Meatless Monday has not impacted my cooking/eating habits.

19F. How much do you agree or disagree with the following statement? **The Meatless Monday campaign at NYP shows that NYP cares about our health and environment.**

- 1) Strongly Disagree
- 2) Disagree
- 3) Agree
- 4) Strongly Agree

END OF SURVEY; Thank you for completing this survey!

APPENDIX C

Meatless Monday - *NewYork-Presbyterian* Creative Material as Delivered

PRODUCING A 1/4 LB. BURGER USES ENOUGH H₂O TO FILL 10 BATHTUBS

#MeatlessMonday

NYP BeHealthy **Meatless Monday** NYP green BE THE DIFFERENCE

MEAT PRODUCTION USES 33% OF THE EARTH'S ENTIRE LAND SURFACE

#MeatlessMonday

NYP BeHealthy **Meatless Monday** NYP green BE THE DIFFERENCE

GLOBAL MEAT PRODUCTION CREATES MORE GREENHOUSE GAS THAN THE ENTIRE TRANSPORTATION SECTOR

#MeatlessMonday

NYP BeHealthy **Meatless Monday** NYP green BE THE DIFFERENCE

9,775,000 GALLONS OF WATER

That's the amount of water we'd save if everyone at NewYork-Presbyterian skips just one 1/4 lb. beef burger on Monday. Let's make a splash!

#MeatlessMonday

NYP BeHealthy **Meatless Monday** NYP green BE THE DIFFERENCE

MOST AMERICANS EAT 1 1/2 TIMES MORE PROTEIN THAN THEY NEED EACH DAY

This excessive amount of protein often comes from eating too much meat. Just choose to eat more vegetables throughout the day.

#MeatlessMonday

NYP BeHealthy **Meatless Monday** NYP green BE THE DIFFERENCE

HOLD THE PASTRAMI! CHOOSE A HUMMUS PLATTER INSTEAD TO DECREASE YOUR RISK OF HEART DISEASE!

Eating hummus or chickpeas instead of meat can help prevent heart disease and achieve a healthy weight.

#MeatlessMonday

NYP BeHealthy **Meatless Monday** NYP green BE THE DIFFERENCE

158,700 MILES DRIVEN

That's the amount of emissions we'd save if everyone at NewYork-Presbyterian chose to eat just one less serving of beef on a single Monday.

#MeatlessMonday

NYP BeHealthy **Meatless Monday** NYP green BE THE DIFFERENCE

DECREASE YOUR CHANCE OF GETTING DIABETES BY ABOUT 15%

Just skip a serving of meat every day and replace it with a vegetable protein like black beans or tofu.

#MeatlessMonday

NYP BeHealthy **Meatless Monday** NYP green BE THE DIFFERENCE

HEART SMART - THE INTELLIGENT CHOICE IS MEATLESS

By eating more veggies, fruits, beans and nuts - instead of meat - you can significantly lower your risk of heart disease.

#MeatlessMonday

NYP BeHealthy **Meatless Monday** NYP green BE THE DIFFERENCE

LOVE YOUR VEGGIES? YOUR HEART SURE DOES

In fact, any reduction in meat consumption may improve your heart-health. Let's try a tasty meatless meal today.

#MeatlessMonday

NYP BeHealthy **Meatless Monday** NYP green BE THE DIFFERENCE

POWER YOUR iPhone FOR SIX MONTHS

The energy required to produce a single 1/4 lb. burger would be enough power to charge your iPhone for six months!

#MeatlessMonday

NYP BeHealthy **Meatless Monday** NYP green BE THE DIFFERENCE

SKIP THE MEAT, NOT YOUR HEART BEAT

Just replace the 2 oz. of processed meat on your sandwich every day with grilled vegetables, a ripe tomato or fresh leafy greens, and you'll reduce your risk of heart disease. Let's do lunch!

#MeatlessMonday

NYP BeHealthy **Meatless Monday** NYP green BE THE DIFFERENCE

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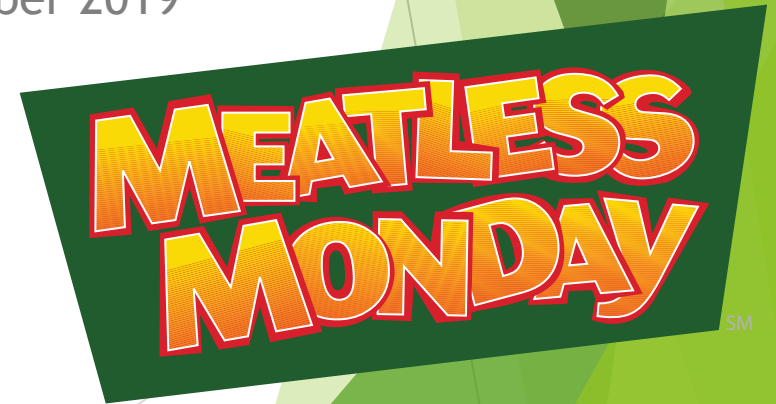
A Community Takes a Bite out of Climate Change by Turning Food Choices into Climate Action

Becky Ramsing, MPH, RDN

Center for a Livable Future

Johns Hopkins School of Public Health

APHA, November 2019



Presenter Disclosures

Becky Ramsing

(1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose

Learning Outcomes

- ▶ Identify and evaluate **community outreach and policy options** that support a shift in dietary patterns toward more plant-based diets.
- ▶ Describe **key components** of a successful community wide Meatless Monday campaign that can be expanded

BEDFORD 2020

Small steps make a difference.

Mission: To lead, organize and promote a community wide effort to reduce greenhouse gas emissions 20 percent by 2020 and to create a sustainable community that conserves its natural resources.



Our Task Forces



Energy



Food and Agriculture



Transportation



Waste and Recycling



Water and Land Use



Business



Civic



Religion



Schools

Meatless

MONDAYS

with

BEDFORD
2020 

IN COOPERATION
WITH



Meatless MONDAYS

Reducing Our Community's Carbon Footprint
Mondays: February 5 – April 23, 2018

The Campaign

- ▶ 12-weeks; Feb-April, 2018
- ▶ Volunteers (20) - pledges
- ▶ Business partners (40)
- ▶ Communication
 - ▶ Weekly emails
 - ▶ Social Media - 823 Instagram followers

The Evaluation

- ▶ Surveys (3)
- ▶ Key informant interviews
- ▶ Communication metrics

Campaign Strategies

- ▶ **Entry level communication** - Me Monday ease of adoption
 - ▶ Messages related to climate b health, cost, water-quality
- ▶ **Social norming** - friends, neighbors other influencers are doing some it must be acceptable or desirable
- ▶ **Collective action** emphasized

We reduced our collective carbon footprint by by 22,894.08 kg CO₂ eq.!

This is equivalent to

- Driving 56,113 less miles,
- Using no electricity in 3.4 homes for 1 year, or
- Recycling 8 tons of waste instead of sending it to a landfill.

Great job everyone!

Meatless Monday in the Community

Bedford:
Population
18,000

Posters at
places of
worship

Town Board
Resolution

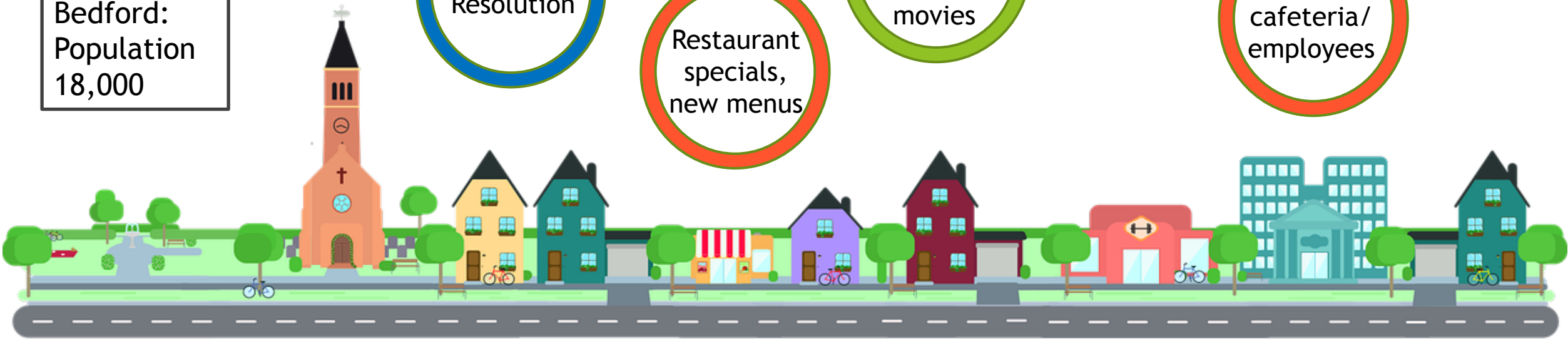
Restaurant
specials,
new menus

Library
book
displays,
movies

Promoted
at
businesses

Hospital
cafeteria/
employees

Spanish
materials
at food
pantry



Bedford 2020 Meatless Monday Timeline

172/320 households

171/320 households

Pledge drive

Pre-survey

Campaign

Post-survey

6 month survey

Summit January 2018

Volunteer outreach

Household pledges (320)

Weekly newsletters with recipes, tips

Meatless Monday materials

150/320 households



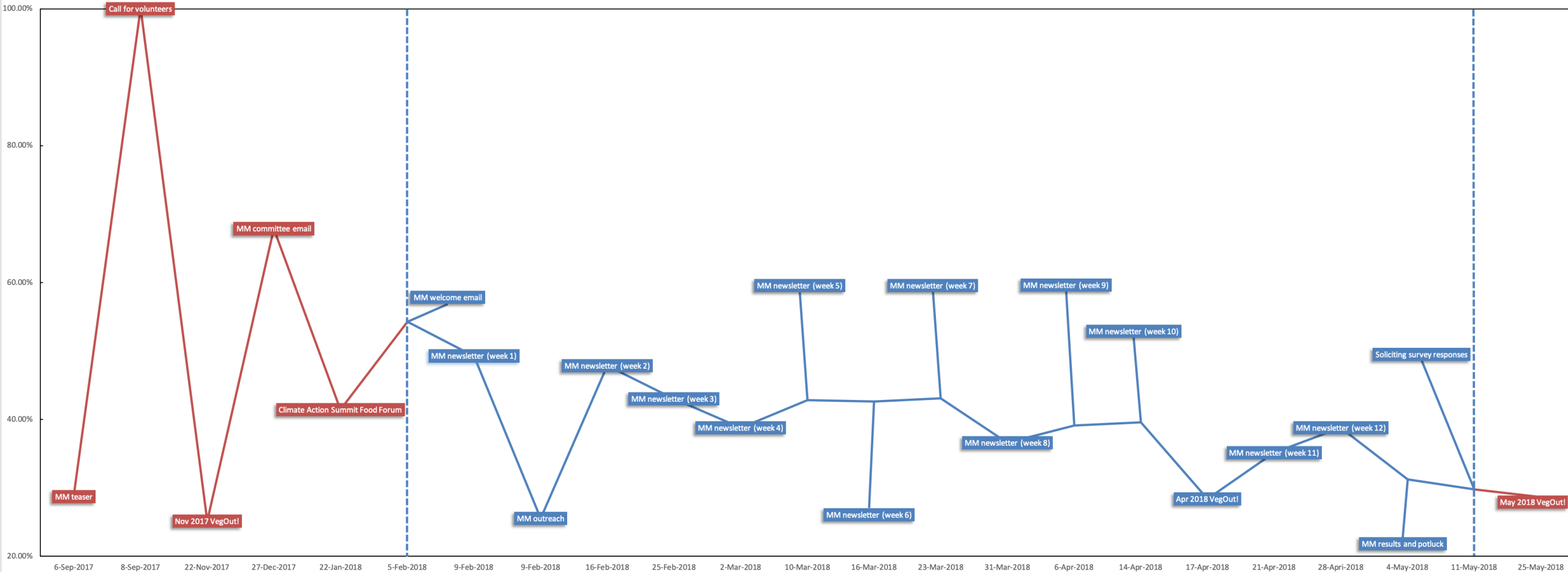
Meatless
MONDAYS
with **REDFORD** 2020
IN COOPERATION WITH **Meatless Monday**

**Mark Bittman's
Paella with
Tomatoes and Eggs**



The Communication Campaign

Meatless Mondays with Bedford 2020 Outreach Timeline

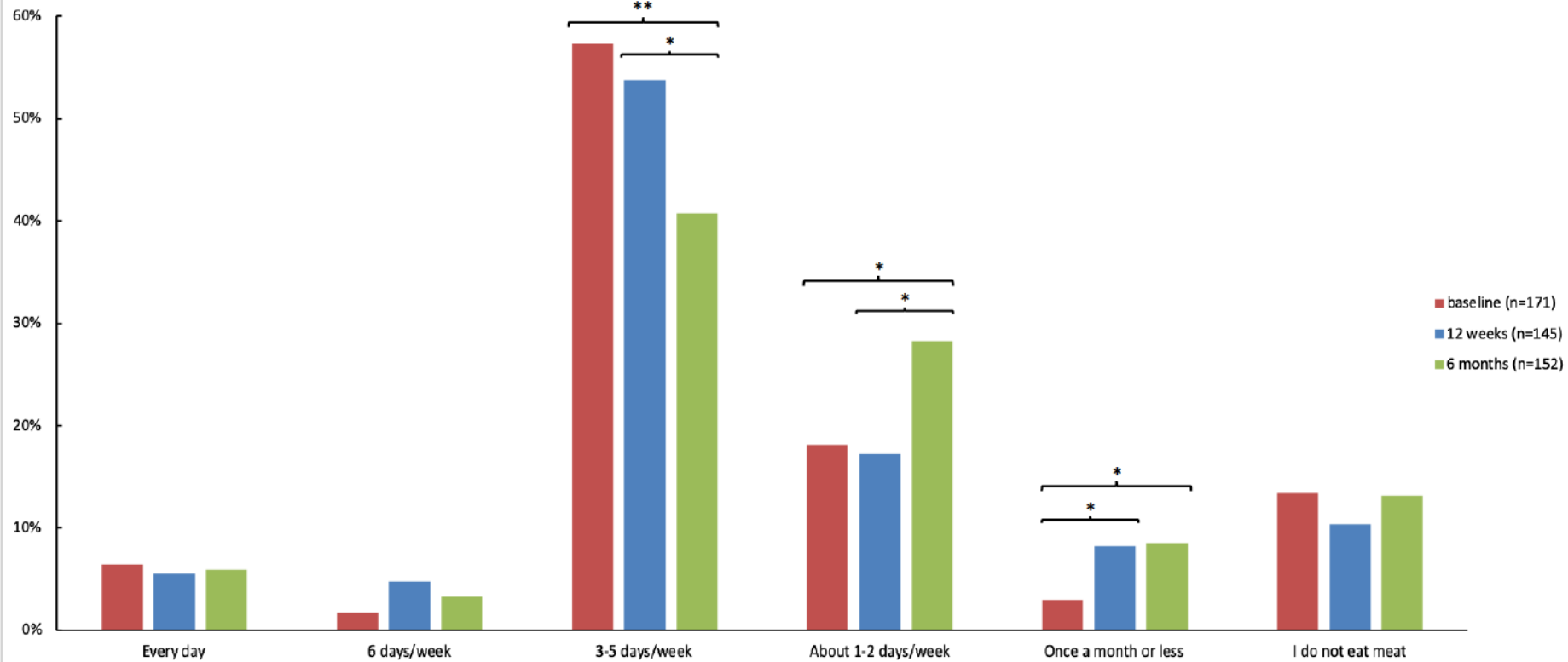


The Survey Participants

- ▶ For all surveys, the majority were over 45 (60% between 45 and 64)
- ▶ Across all three surveys, some areas were more well-represented than what would be expected from the general population:
 - ▶ **45-54 and 55-64 age ranges**
 - ▶ **women**
 - ▶ **individuals with higher levels of education**
- ▶ *All general population statistics were taken and adapted from the 2017 American Community Survey estimates provided by the Census Bureau for the town of Bedford.*

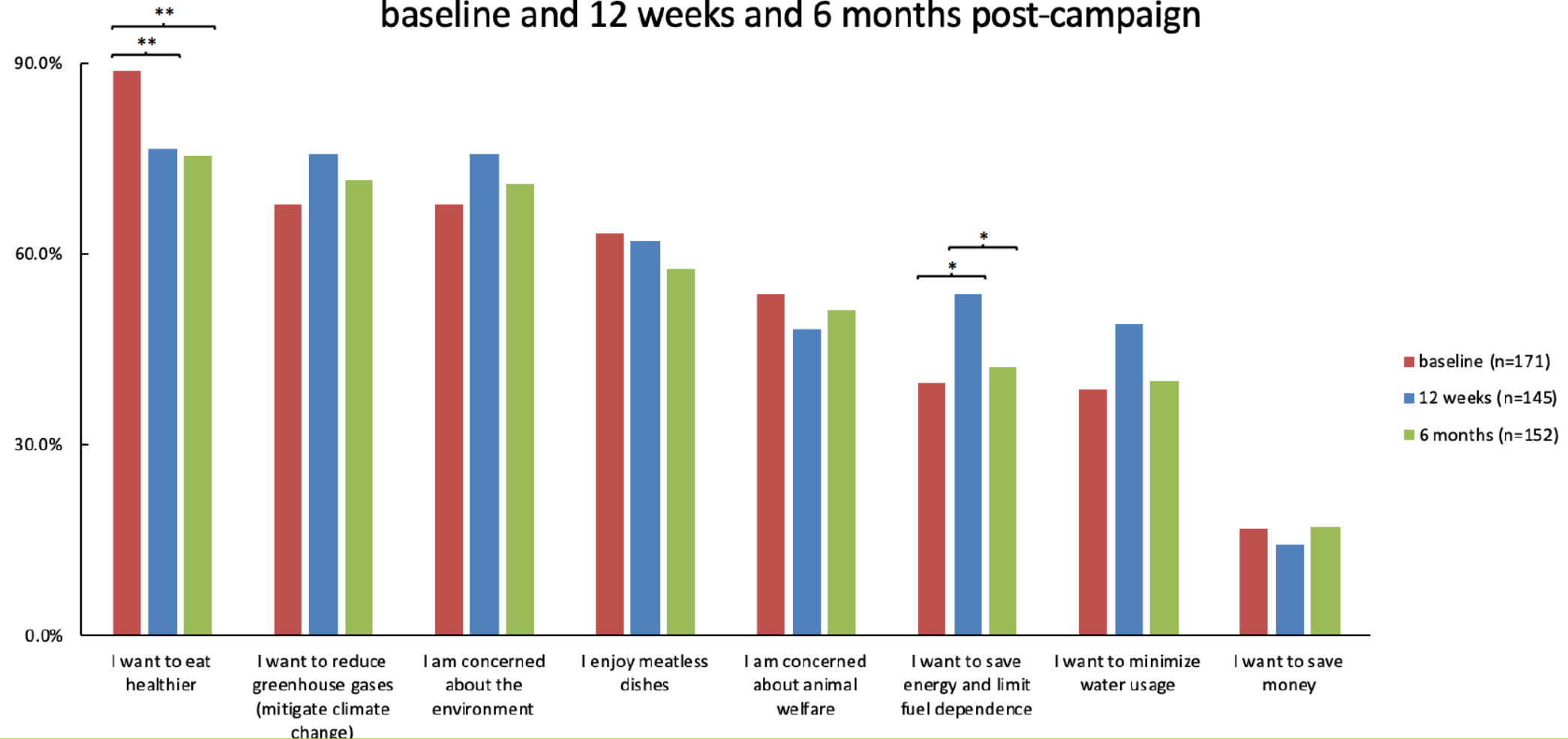
Consumption Changes

Comparing the meat consumption habits of survey respondents at baseline and 12 weeks and 6 months post-campaign

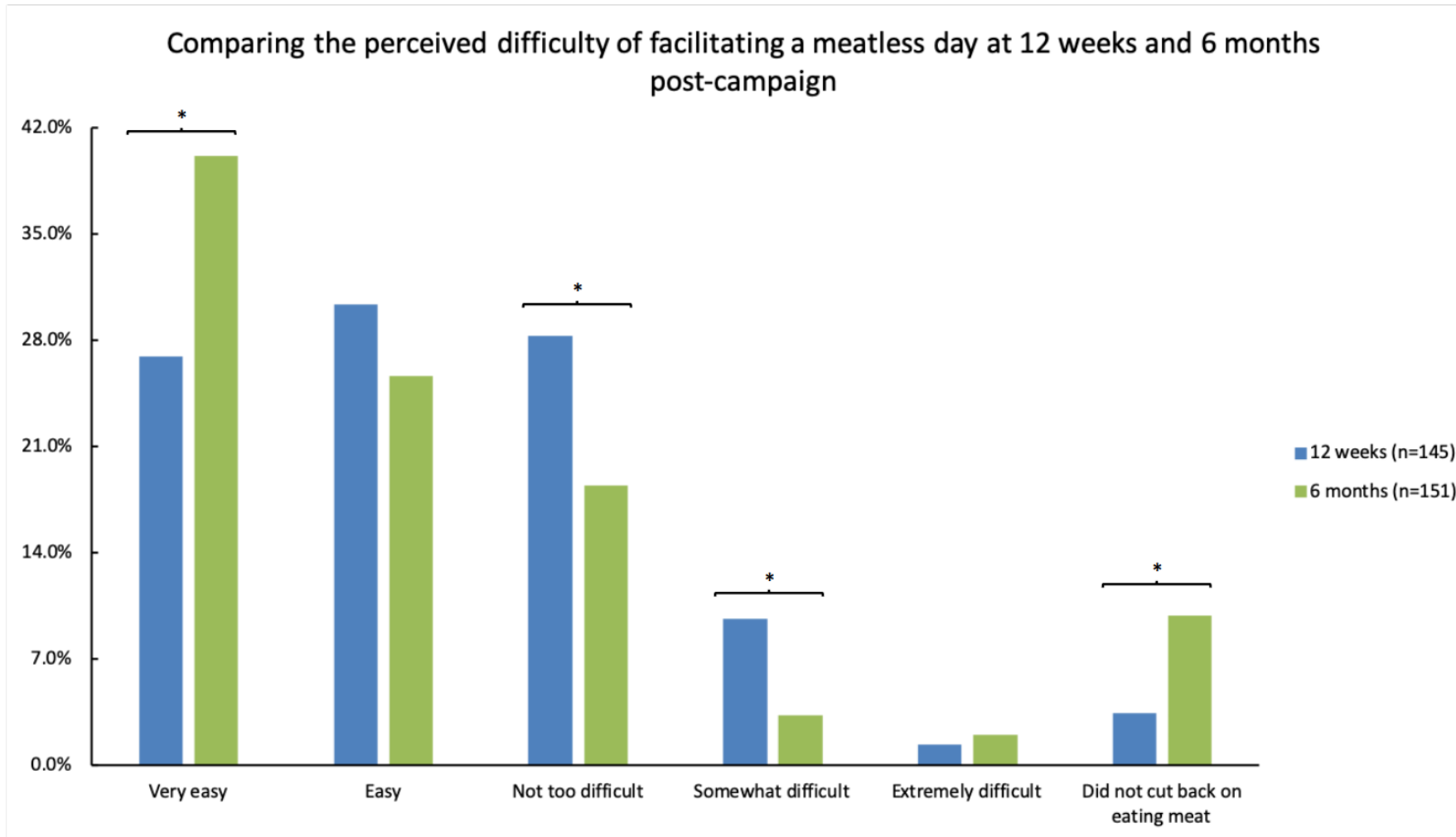


Why Bedford Citizens Reduce Meat

Comparing survey respondents' reported rationales for reducing meat at baseline and 12 weeks and 6 months post-campaign

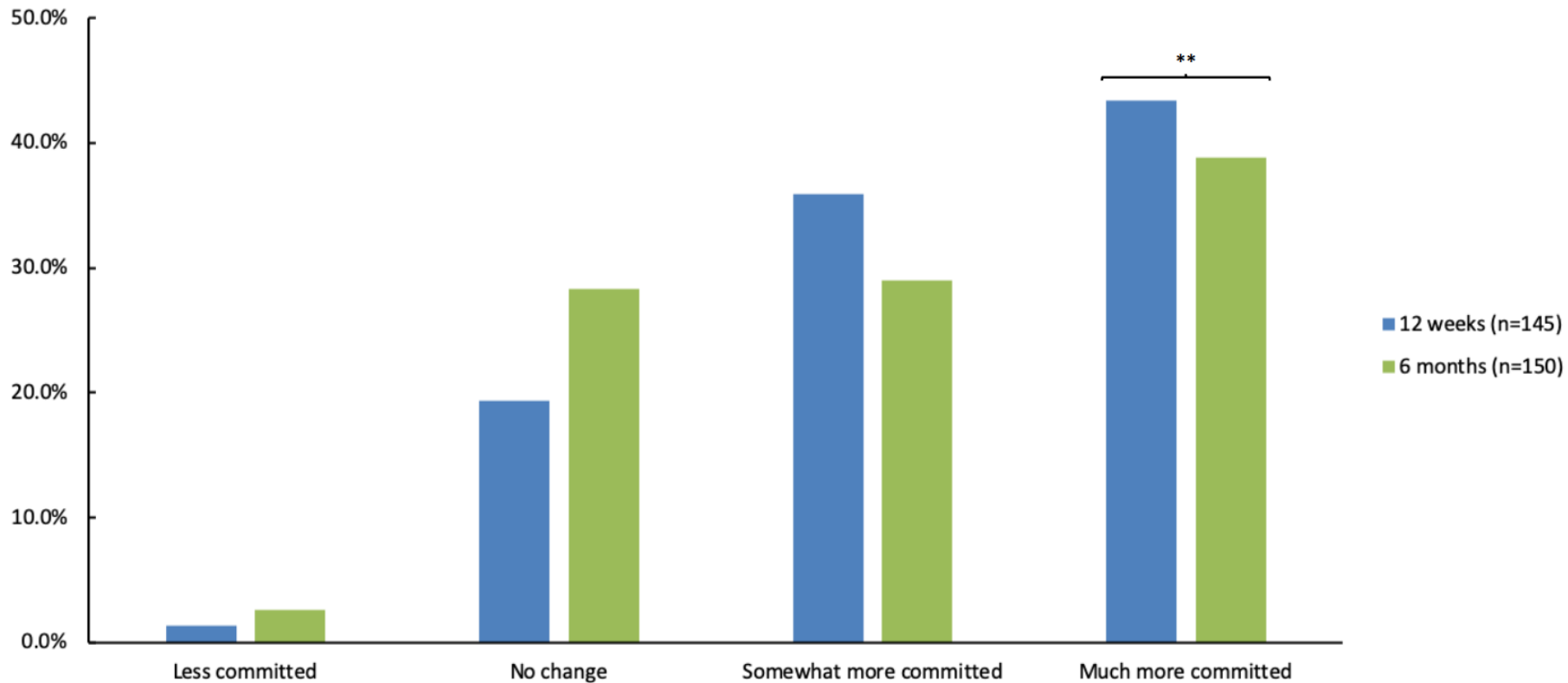


Are Meatless Choices Easy?



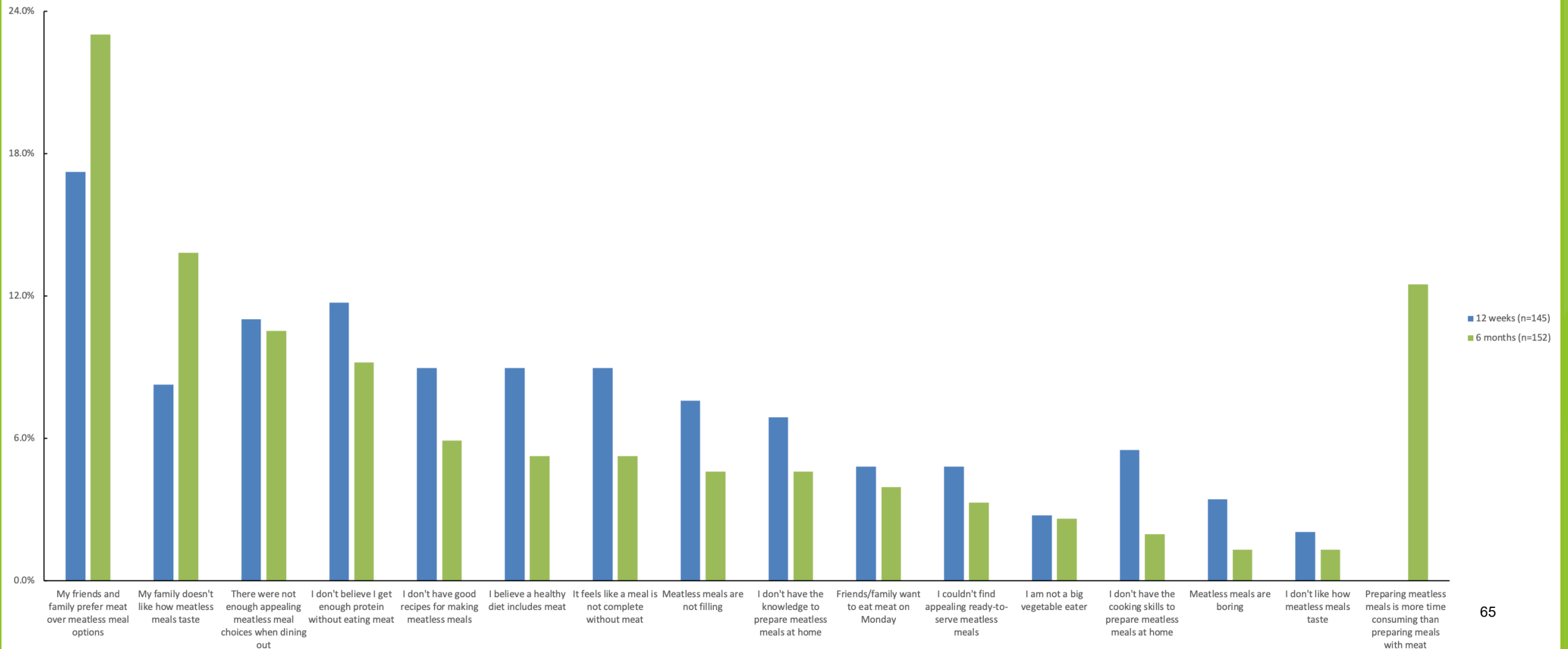
Commitment to Continue Meatless Monday

Comparing the changes in commitment among survey respondents at 12 weeks and 6 months post-campaign



Challenges Reducing Meat

Comparing the challenges respondents experienced while reducing their meat consumption 12 weeks and 6 months post-campaign



Other results

- ▶ **The majority of participants reported eating less meat since signing the pledge (asked only at 6 months)**
 - ▶ 16% a lot less, 41% slightly less. 41% no change; only 2% of respondents reported eating more.
- ▶ **The majority plan to reduce meat once a week**
 - ▶ 64% plan to reduce their meat consumption at least one day a week moving forward; 20% of respondents probably; only 3% definitely not
- ▶ **Decreasing meat was generally not difficult 6 months later**
 - ▶ Except in the case of family and friend preferences
 - ▶ Health is less of a reason for decreasing meat; environment and climate issues are generally more important

Key Informant Interviews

- ▶ Bedford 2020 board member (involved in passing town resolution), participant
- ▶ Volunteer and participant (2)
- ▶ Executive Chef at Village Social
- ▶ Owner of Reading Room (café and market)



Stories from the field - Mogan Anthony

Chef Anthony noted that, on both a personal and professional level, the vegetarian meals allowed him and his staff the agency to push the envelope of American cuisine, allowing them to experiment with new techniques and ingredients.

He found that the more lasting, impactful changes would be from the plant-based options that were incorporated into the weekend menu due to the higher volume of patrons that would dine in on Saturdays and Sundays.

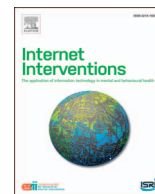


From the Bedford 2020 Leadership

“We saw a great level of awareness throughout our community around this issue. Bedford 2020 certainly now has a springboard from this current baseline awareness in the community to launch another plant-based-eating-for-the-climate campaign. We brought in new constituents - very important to environmental organization who can now introduce people to other ways to fight climate change.”

Summary

- ▶ Awareness of the climate impact of food grew
- ▶ The community's commitment to reducing meat remained strong even 6 months after the Campaign.
- ▶ People who participated in Meatless Monday made changes in how they cooked, ate out at restaurants and how often they ate meat.
- ▶ Stakeholder involvement and civic engagement were key to promotion, initiation, and maintenance of sustainable, plant-forward diets at the community level.
- ▶ Much of the success of this program is attributed to the robust volunteer program and the support of business partners, media and community members.



Weekly enrollment and usage patterns in an Internet smoking cessation intervention



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Keywords:

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ABSTRACT

Background: Previous analyses of Google search queries identified circaseptan (weekly) rhythms in smoking cessation information seeking, with Google searches for “quit” and “smoking” peaking early in the week. Similar patterns were observed for smoking cessation treatment seeking, such as calls to quitlines. These findings suggest that smoking cessation behaviors may have a weekly rhythm that could be leveraged to improve smoking cessation efforts.

Aims: To assess whether weekly enrollment and usage patterns exist for an Internet smoking cessation intervention.

Methods: We used process data from a large, longstanding Internet smoking cessation intervention (www.becomeanex.org). Pearson's chi-squared tests were performed to identify day-of-the-week differences in enrollment, first visit to site community pages, and quit date. Differences were considered statistically significant at the 1% level if $p < 0.00167$ due to multiple comparisons. Regression analysis was used to examine differences in engagement activity based on the day of the week a user enrolled.

Results: Website users ($n = 69,237$) were more likely to enroll on the site at the beginning of the week (Mondays and Tuesdays) ($p < 0.0001$). Current smokers who selected quit dates ($n = 5574$) preferred quit dates that came early in the week (Sundays and Mondays) compared to other weekdays ($p < 0.0001$). Generally, there were no significant differences in overall website utilization metrics by day of enrollment, but there were some exceptions. Use of interactive features to select quit dates, track cigarette use, and record coping strategies was generally lower for Friday/Saturday enrollees.

Conclusions: Consistent with prior research, the beginning of the week appears to be a time when individuals are more likely to enroll in an Internet smoking cessation intervention and engage with its core features. Emphasizing marketing and promotional efforts during the beginning of the week could result in greater reach of Internet smoking cessation interventions.

1. Introduction

In the United States, 68.8% of smokers are interested in quitting (Babb et al., 2017), with two-thirds of all adult smokers making a past year quit attempt (Lavinghouze et al., 2015). However, smokers are often unsuccessful in their attempts to quit. In 2010, the six-month point prevalence of smoking abstinence was only 6.2% (Centers for Disease Control and Prevention, 2011). Novel and cost-effective smoking cessation treatment strategies that have the capacity to reach

and engage large numbers of smokers are needed to reduce smoking prevalence.

Public health campaigns that promote Mondays as a day for smokers to quit and recommit to quitting can augment current approaches to smoking cessation. A number of studies suggest that the beginning of the week represents a time when interest and engagement in health behavior change may peak. A study by Ayers et al. (2014a) found that Google search queries for the term “healthy” between 2005 and 2012 showed a pronounced early week spike with Monday and Tuesday

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having about 200% more queries than any of the other days of the week. A separate analysis of Google searches for the term “diet” yielded similar results with searches occurring most frequently at the beginning of the week, month, and year (Dai et al., 2014). Day-of-the-week variation has also been observed in weight loss rhythms and physical activity behaviors. Orsama et al. (2014) identified weekly weight rhythms among participants who lost weight. Participants tended to weigh the least on Fridays and the most on Sundays or Mondays. Similarly, Dai et al. (2014) identified fluctuations in gym attendance at an undergraduate institution with attendance at its highest at the beginning of the week and tapering throughout the week.

To observe day-of-the-week patterns specific to smoking cessation, Ayers et al. (2014b) used Google's public query archive (google.com/trends) global daily relative search volumes to assess smoking cessation related searches (e.g., “quit” and “smoking”) from 2008 to 2012. Cessation queries peaked early in the week, declining through Saturday with a modest Sunday rebound. Similar early week patterns have been observed in quitline usage. Calls to the Victoria, Australia quitline from August 1, 2000 through July 31, 2001 peaked Monday to Wednesday, with calls occurring on each of these days with a frequency that was three times that of Sundays (Erbas et al., 2006). In the United States, Johnson (2011) sampled 16 state quitlines and noted increased call volumes at the beginning of the week and decreased volumes at the end of the week. Collectively, these studies suggest that health information seeking behaviors may have a weekly rhythm which could be leveraged to increase the overall population impact of behavior change interventions.

The goal of this study was to build on previous analyses to determine if day-of-the-week engagement patterns with a smoking cessation intervention extend beyond search engine queries and quitline calls to the Internet. Hundreds of thousands of smokers register on Internet smoking cessation programs each year (Balmford et al., 2009; McCausland et al., 2011; Nash et al., 2015; van Mierlo et al., 2012), making them an ideal environment to study patterns of health information seeking and treatment uptake. Internet smoking cessation interventions can reach large numbers of smokers, are highly scalable, and have been shown to yield quit rates comparable to other intervention modalities (Civljak et al., 2013; Graham et al., 2016). If day-of-the-week patterns are present for enrollment in these kinds of programs, it could represent a potential lever to further expand their reach through marketing and promotion efforts targeted on day-of-the-week. Likewise, if day-of-the-week patterns are present for engagement in Internet smoking cessation programs, this could inform [relatively simple] ways to increase engagement by capitalizing on natural variations in treatment utilization. Identifying approaches to increase either the reach and/or effectiveness of Internet interventions – and understanding the subsets of users for whom such approaches may be most effective – is critical to optimizing their potential impact. This paper examines if enrollment, quit date selection, and use of the online community were more frequent earlier in the week. We also investigate whether the use of site features varied by the day of the week a user enrolled.

2. Material and methods

2.1. Intervention

We examined data from BecomeAnEX.org, a free, publicly-available Internet smoking cessation program, developed and managed by Truth Initiative (Richardson et al., 2013; McCausland et al., 2011). BecomeAnEX provides guidance on quitting, an interactive quit plan, and a large and active online community. The content of the site was developed in partnership with the Mayo Clinic Nicotine Dependence Center and is consistent with national treatment guidelines for treating tobacco dependence (Fiore et al., 2008). BecomeAnEX provides problem-solving and skills training designed to enhance self-efficacy through a series of

interactive exercises and didactic content; help in selecting and using FDA-approved smoking cessation pharmacotherapies; and intra-treatment social support in the form of a large online community. The site also employs a series of email campaigns to keep users engaged with the site. Emails were only sent to users who opted in to receive email from BecomeAnEX. The email campaigns included a welcome series, a quit date series, and a reactivation series that attempted to bring users back to the site if they became inactive. All user actions on the website are stored in a relational database with timestamps. Specifically of interest in the current investigation were date-based actions that users took on the site, such as setting a quit date. We were also interested in interactions with the online community given previous research that has demonstrated its links to ongoing website utilization and abstinence (Graham et al., 2015; Papandonatos et al., 2016; Richardson et al., 2013).

2.2. Recruitment and registration process

The data used in these analyses were collected from September 1, 2011 through February 29, 2012. This period was selected because there were no research studies running and thus the registration process and utilization metrics reflect the experience of typical users. During this time, BecomeAnEX was supported by a comprehensive national online advertising campaign which included banner ads and search engine ads using a cost-per-click model. Spending for the advertising campaign remained static on a month-to-month basis and was evenly distributed throughout the week. Clicking on an ad took users to a landing page associated with the ad (i.e., same imagery, call to action phrasing). Registration included personal information (name, username, password), demographic information (gender, race, ethnicity), smoking history (current smoking status, reasons for quitting), and source of recruitment (where they learned about BecomeAnEX). The question about current smoking status included options to self-identify as “health professionals” or “looking for someone else” if they were not current or former smokers. All content on the website was viewable without registering, but if a user wanted to utilize the interactive tools or post in the online community, they were required to register. Following registration, users were taken to “My Quit Plan” which presented a sequence of recommended steps to prepare for cessation and tracked completed steps. The first action that the site recommended was to set a quit date, with general guidance to quit within 2–4 weeks but the flexibility to select any quit date.

2.3. Sample description

All users included in these analyses voluntarily registered on BecomeAnEX with no incentive for enrollment. Registration required users to agree with the website Terms of Service and Privacy Policy which stated that usage patterns may be reviewed for quality improvement and research purposes.

2.4. Measures

These analyses focused on website utilization metrics obtained via automated tracking software and selected information from registration data. Website utilization data were obtained via Adobe Analyst software (Adobe Systems Incorporated, 2016), a customizable web analytics tool that is used to monitor, report on, and optimize use of the website. General utilization metrics examined in this study included: number of logged in return visits, number of minutes spent on site, and the number of pages viewed. Every page view by a participant is recorded in a relational database, and page views are grouped into sessions. The duration of a session is defined as the time elapsed between the first page view and the last page view in a given session. Number of minutes spent on site is calculated by totaling the duration of all sessions within a specified time period. If a user stays on the same page for

longer than 30 min, the system marks the session as inactive and the next return visit is defined as a new session. Data were also extracted on the number of times a quit date was set and the use of interactive features. Date-stamped events were extracted for website enrollment, date of first visit to the community pages, and quit dates. Because website utilization tends to show a steep attrition after initial use (Eysenbach, 2005), we focused our analyses on utilization metrics during the first three months following site registration. Self-reported age and smoking frequency (i.e., daily, most/some days, not at all) provided during registration were also examined in these analyses.

2.5. Statistical analysis

Descriptive analyses were used to characterize users according to age, smoking frequency, number of site visits, time on site, number of page views, and to calculate the proportion of participants who set a quit date or visited the site's community pages. Variables related to the use of interactive tools were dichotomized to indicate any usage by site visitors for subsequent analyses.

Pearson's chi-squared goodness-of-fit tests and tests of independence were performed to identify day-of-the week differences in day of enrollment, day for selected quit date, and use of the online community. Given the use of multiple comparisons, we used a Bonferroni correction of 1/6 since we had six hypothetical comparisons to use for Monday (Dunn, 1961). A difference was considered statistically significant at the one-percent level if the *p*-value was less than 0.00167. For effect size, we reported the difference between the observed and expected frequency of an outcome variable based on a uniform distribution of Internet activity across the seven days of the week. We expected the frequency of an activity to be 14.3% if the activity was distributed evenly across the week. We also report the difference between the observed frequency of activities on Monday versus the observed frequency of activities on other days of the week.

We investigate whether the use of site features varied by the day of the week a user enrolled. Pearson's chi-squared goodness-of-fit tests were also used to identify significant differences in dichotomized community engagement variables based on the day of the week a user enrolled or selected a quit date. Again, a difference was considered statistically significant at the one-percent level if the *p*-value was less than 0.00167. To explore the distributional differences in day of the week enrollment and quit date selection on website utilization variables (i.e. number of visits, time on site, page views, number of community pages visited, and number of times using the cigarette tracker), Poisson, ordinary least squares, and logistic regressions (depending on the outcome variable) were run to capture relative day of the week differences. Results from these regressions were considered statistically significant at the one-percent level if the *p*-value was less than 0.01.

3. Results

3.1. Sample characteristics

A total of 79,328 individuals registered on the site during the study period. We excluded 892 individuals who indicated they were health professionals and 9199 individuals who indicated they were searching for information for another person. There were an additional 9079 individuals for whom this information was missing which were kept in the sample; these individuals had minimal site usage and their inclusion did not significantly change the results. The final analytic sample included 69,237 users (Table 1). Mean age of the analytic sample was 35 years (SD = 11). Sixty-two percent of users were daily smokers, 24% smoked on most days, and 8.7% were former smokers (self-identified). Users learned about the program primarily through online banner ads (21.7%), search engines (13.0%), quit lines (9.8%), and social networking sites (8.0%).

Table 1
Demographic and smoking characteristics and website utilization metrics among BecomeAnEX users (N = 69,237).

Variable	% (n)
Age by category ^a	
< 18	0.6 (370)
18–24	12.8 (7776)
25–34	45.9 (27,934)
35–44	19.6 (11,908)
45–54	14.0 (8492)
55+	7.1 (4354)
Smoking frequency	
Every day	61.5 (42,602)
Most days or some days	24.4 (16,930)
Does not smoke anymore or trying to stay quit	8.7 (6006)
Not at all	3.0 (2063)
Unknown	2.4 (1636)
Number of visits to the site months 0–3, mean (SD), [range]	1.3 (6.8), [0–787]
Number of return visits months 0–3	
0 return visits	16.1 (11,148)
1 visit	74.9 (51,838)
2 visits	5.3 (3697)
3 or more visits	3.7 (2554)
Time on site in minutes months 0–3, mean (SD), [range]	10.7 (288.6), [0–59,966]
Number of page views months 0–3, mean (SD), [range]	10.2 (157.2), [0–25,223]
Set quit date ^b	8.1 (5574)
Visited community	18.3 (12,666)

^a Age was optional at registration and was missing for 8403 users.

^b Among current smokers.

3.2. Site usage

Among registered users, 16.1% (*n* = 11,148) did not return to the site, 74.9% (*n* = 51,838) had one return visit, and 9.0% (*n* = 6231) had more than one return visit (Table 1). Users with at least one return visit spent an average of 12.7 min on the site. Time spent on the site varied highly among all users, which is typical of website utilization patterns (Mean: 10.7 min; Range: 0–1000 h; SD: 4.8 h). Users viewed an average of 10 webpages on the site (not unique) within the first three months after enrollment. Page views also varied across users (Range: 0–25,223; SD: 157.2). The number of visits to the site, time on site, and number of page views variables were positively skewed.

3.3. Website enrollment and engagement patterns by day of the week

3.3.1. Website enrollment

Users were more likely to have enrolled on Mondays and Tuesdays as compared to other days of the week (*p* < 0.0001); enrollment rates did not differ between Mondays and Tuesdays (Fig. 1). The observed proportion of enrollment occurring on Mondays was 8.4% greater (1.2 percentage point increase from a 14.3% base) than the expected proportion if enrollment were evenly distributed throughout the week. Enrollment on Tuesdays was 12.9% greater (1.8 percentage point increase) than the same even weekly distribution. General utilization metrics (number of visits, time on site, number of page views, number of community pages visited, and number of times using the cigarette tracker) did not differ for Monday/Tuesday enrollees vs. later week enrollees.

The day of enrollment distribution differed for daily smokers compared to most/some days smokers (*p* < 0.0001) (Fig. 2). The enrollment pattern of daily smokers mirrors the overall pattern displayed in Fig. 1. The non-daily smokers had a relatively lower enrollment on Tuesdays (*p* < 0.0001) and a higher enrollment on Saturdays (*p* < 0.0001). There was no significant difference in enrollment between the groups on any other day of the week.

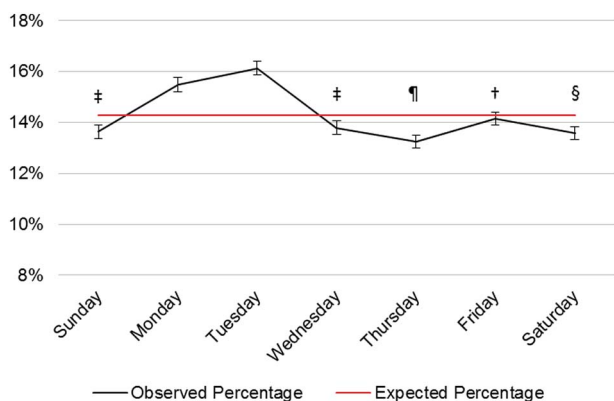


Fig. 1. BecomeAnEX enrollment by day of the week ($n = 69,237$). Significance indicated relative to observed Monday activity: † $p < 10^{-10}$, ‡ $p < 10^{-15}$, § $p < 10^{-20}$, ¶ $p < 10^{-25}$.

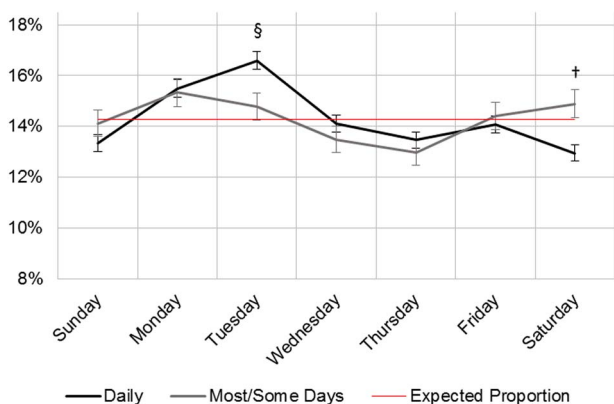


Fig. 2. Day of enrollment by smoking frequency for daily ($n = 42,602$) and non-daily (16,930) smokers. Significant differences: † $p < 10^{-10}$, § $p < 10^{-20}$.

3.3.2. Quit dates

A total of 5574 current smokers (9.4%) selected a quit date as part of their progress through the EX Quit Plan. There was an overall trend toward selection of quit dates earlier in the week (Sunday–Tuesday) compared to later in the week (Wednesday–Saturday) ($p < 0.0001$); however, Thursdays did not significantly differ from Sundays–Tuesdays for quit date selection (Fig. 3). For initial quit dates, dates that fell on Mondays occurred at a proportion that was 1.7 percentage points greater than expected from an even distribution of 14.3% daily. The higher rate of selection for Sunday, Tuesday and Thursday quit dates did not significantly differ from Mondays.

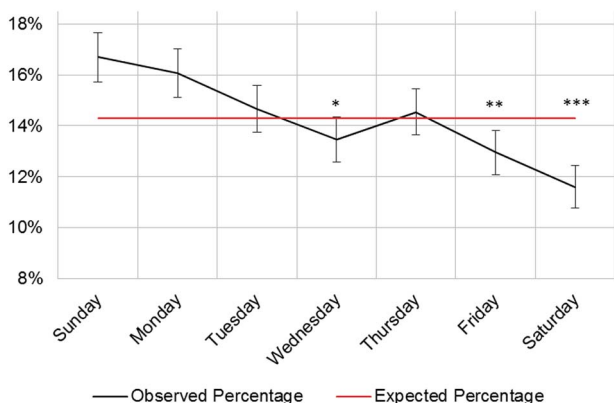


Fig. 3. Initially selected quit day ($n = 5574$). Significance indicated relative to observed Monday activity: * $p < 0.00167$, ** $p < 0.0001$, *** $p < 10^{-5}$.

Users were able to select a new quit date throughout the program. Of the 5574 users who set quit dates within the first three months of enrollment, 521 (9.3%) of them reselected their quit dates.

Of those who reselected their quit dates, Monday quit dates were most popular (19.6%) and Thursdays were least popular for new quit dates (10.0%). The differences between all days for new quit dates was not significant. There were no significant differences in site activity (number of visits, time on site, number of page views, number of community pages visited, and number of times using the cigarette tracker) for individuals selecting quit dates on different days of the week.

3.3.3. Feature utilization patterns

The day of the week users first visited the site's online community mirrors the weekly pattern found for enrollment. For the users that ever visited the online community, 83% did so on the day they enrolled. There were no significant differences in the proportion of users who visited the community by day of enrollment ($p = 0.022$). Generally, use of site features (email opt in ($p = 0.187$), text messaging opt in ($p = 0.065$), sent a message ($p = 0.222$), read/wrote/comment (on) a blog ($p = 0.448/0.498/0.014$), read tutorial ($p = 0.498$), wall posts ($p = 0.038$)) did not vary by day of enrollment or day on which quit dates fell, but there were exceptions. The likelihood of setting a quit date differed across all days based on day of enrollment ($p < 0.0001$) (Fig. 4). The use of the quit date feature was highest for Wednesday enrollees, with 10.4% setting a quit date and lowest for Saturday enrollees with 7.9% setting a quit date. Use of the quit date feature was comparable among Monday–Thursday enrollees, but lower among Friday–Sunday enrollees compared to Wednesday enrollees (all $p < 0.002$). Use of a feature to track smoking behavior also demonstrated the same pattern, with a higher percentage of Monday–Thursday enrollees using the feature as compared to Friday, Saturday and Sunday enrollees ($p < 0.0001$). Use of a feature to record coping strategies also varied by day of enrollment, with comparable use among Sunday through Thursday enrollees, but lower use among Friday and Saturday enrollees compared to Wednesday enrollees ($p = 0.001$).

4. Discussion

This study found some evidence for an organic weekly pattern of engagement with an online smoking cessation intervention. This pattern was most clearly observed for website enrollment, which was most likely to occur on Mondays and Tuesdays. Quit dates generally tended to occur early in the week, although Thursdays emerged as a popular day as well. It may be that the majority of smokers set a quit date on the

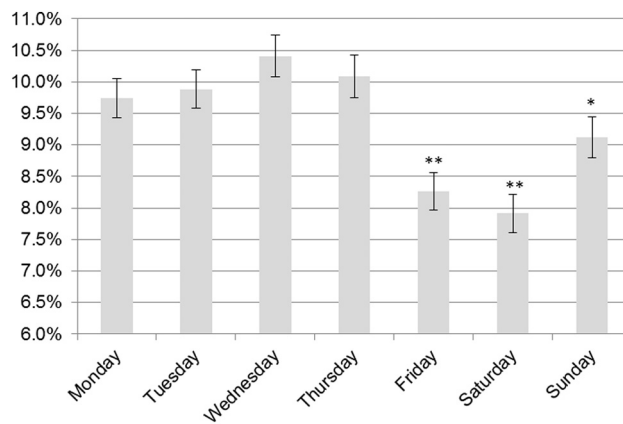


Fig. 4. Percentage setting quit dates by day of enrollment among current smokers ($n = 59,532$). Significance indicated relative to observed Wednesday activity: * $p < 0.01$, ** $p < 0.0001$.

day that they register, but some prefer to browse the site and take advantage of the content and tools before committing to a quit date that occurs several days later. Individuals that enrolled on the site Monday through Thursday set quit dates and used the site's main interactive features at higher rates than Friday through Sunday enrollees. These weekly patterns may indicate general fluctuations in smokers' interest in and commitment to smoking cessation behaviors. Results demonstrating higher rates of enrollment at the beginning of the week are consistent with findings from studies of Internet search queries (Ayers et al., 2014a, 2014b; Dai et al., 2014), quitline usage (Erbas et al., 2006), and behavior change initiation (Dai et al., 2014; Orsama et al., 2014).

These findings suggest that Internet smoking cessation interventions could leverage the beginning of the week as a time when larger numbers of smokers are likely to seek out cessation resources to expand their reach through novel marketing and promotion strategies. Advertising content could be tailored to weekly patterns and advertising volume could be distributed strategically throughout the week. Targeted online advertising by day of the week has been used successfully in other industries (Hanafizadeh and Behboudi, 2012) and there is compelling evidence that email open rates across industries are highest early in the week compared to other weekdays (Experian Marketing Service, 2014; Ellering, 2016; Kershner, 2015). Future research should consider the cost effectiveness of increasing media purchases early in the week to take advantage of the increased audience and active information seekers. Likewise, public health campaigns could make an impact further upstream by ensuring that smokers are aware of easily accessible cessation treatment options like Internet interventions at the times when they may be most receptive to such messaging. Our results suggest that the timing of such campaigns may need to be different for daily smokers than for non-daily smokers. The more even distribution of enrollment across days for non-daily smokers could indicate that this group is less intentional about their day of the week enrollment choice. The higher relative enrollment of non-daily smokers on Saturdays is interesting and potentially connected to social smoking behavior, but this dataset cannot differentiate between types of non-daily smokers. This is an important area for future research given that 21.8% of smokers in the US are non-daily users (Centers for Disease Control and Prevention, 2011). Finally, there may be opportunities to increase intervention effectiveness for certain subgroups of users based on day-of-enrollment patterns. It will be important to understand the ways in which feature utilization patterns connect to smoking outcomes and whether the lower rates of feature utilization among later week enrollees signal a risk for poorer outcomes.

Given that this study was observational in nature, we cannot make causal statements about the links between day-of-enrollment patterns and website enrollment or engagement. The results based on quit date selection are based on a much smaller (but still large) sample and should be interpreted accordingly. We applied a 1/6 Bonferroni correction, but some secondary analyses compared multiple outcomes and the correction ratio could have been higher. *p*-Values are provided. This study was also limited by the lack of ability to identify potential mechanisms underlying day-of-the-week patterns. Future research should attempt to determine the drivers of treatment initiation and engagement and how they map to day-of-week fluctuations. As with most web-based interactions, there is some risk of inclusion of malicious users in the dataset that may have altered our findings, but this risk is mitigated by the required email and reCAPTCHA security at registration. Strengths of the study include the large longitudinal dataset in which we were able to explore different types of website engagement. Additionally, data are not self-reported and thus issues of bias and recall are minimized. Our results build on earlier surveillance-focused research and include metrics of both treatment enrollment and engagement from a treatment modality that has not previously been examined (i.e., Internet smoking cessation program).

5. Conclusions

This study builds on previous research suggesting that the beginning of the week is a time when individuals are more likely to seek out and engage with an Internet smoking cessation treatment intervention. These findings have implications for the development of messaging strategies in public health and advertising campaigns, and for potential opportunities to optimize Internet interventions for certain subgroups of users. Leveraging these organic patterns among smokers may serve to increase the public health impact of existing programs and is worthy of future research.

Funding

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Conflict of interest

SC and ALG are employed by Truth Initiative, which runs the BecomeAnEX website. At the time the study was conducted MJJ was employed by the Monday Campaigns, a non-profit public health initiative that dedicates the first day of every week to health.

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Letters

RESEARCH LETTER

Circaseptan (Weekly) Rhythms in Smoking Cessation Considerations

Smokers' rhythms in contemplating quitting or making quit attempts are poorly understood. Tobacco control has focused on annual events (eg, New Year's Day), but circaseptan (weekly) time cycles may likewise exist. For example, many illnesses such as strokes are more common on Mondays.¹ Do cessation behaviors also have weekly rhythms?

Methods | Traditional survey-based assessments are inadequate to capture weekly cessation rhythms. However, examining how individuals search online takes surveying them to the next level by revealing both the searcher's thoughts, through the types of queries undertaken, and their actions toward behavior change, through engaging in the search behavior itself.² Global Google cessation query trends in English, French, Mandarin/Cantonese, Portuguese, Russian, and Spanish were monitored from January 2008 through 2012 (google.com/trends). In English, all queries including "quit" and "smoking" (eg, "quit smoking help") were combined into a single trend. This was repeated for "arrêter de fumer," "戒烟," "parar de fumar," "бросить курить," and "dejar de fumar." Because raw volumes are misleading (all searches may decline on Saturday), a normalized, daily ratio of cessation queries to all queries was analyzed (relative search volume [RSV]).

A continuous wavelet transform was used to isolate the weekly component of the time series.³ This is preferred over a regression because it is assumption free. The resulting series was intuitively compared as daily ratios (eg, [Monday-Tuesday]/Tuesday) after adding the mean RSV because the wavelet is mean centered. Confidence intervals ($\alpha = 0.05$) were simulated using bootstraps from the ratio's sampling distribution.

Results | Weekly, cessation queries in English peaked early, declined thereafter, then rebounded on Sunday (Figure). The trend lines neatly overlapped, with the variance between weeks less than within weeks (intraclass correlation coefficient, 0.03 vs 0.62). Patterns were similar across languages, with higher volume earlier in the week and mostly on Monday.

Monday query volumes were 25% (95% CI, 24%-26%) higher than the combined Tuesday through Sunday mean for all languages. Cessation queries in English on Monday were 1% (95% CI, -1% to 3%) greater than on Tuesday, 11% (95% CI, 9%-14%) greater than on Wednesday, 22% (95% CI, 19%-26%) greater than on Thursday, 67% (95% CI, 62%-73%) greater than on Friday, 145% (95% CI, 134%-157%) greater than on Saturday, and 59% (95% CI, 54%-64%) greater than on Sunday. For

French, Portuguese, and Spanish, queries were significantly higher on Monday than on other days. Mandarin/Cantonese and Russian queries were significantly higher on Monday compared with all other days except Sunday. In total, of 36 comparisons, Monday volumes were significantly greater 33 times, indistinguishable twice, and smaller once, an unlikely finding ($P < .001e^{-5}$).

Raw search volumes were estimated by applying the mean global monthly volume for "quit smoking" and its next 100 related terms from Google Adwords (adwords.google.com) to our results. For this sample of Google queries in English, there were 153 800 more searches on Monday than the Tuesday through Sunday mean, totaling 8 000 000 each year.

Discussion | Just as illness has a weekly clock, so do cessation behaviors. The discovery of weekly rhythms in quitting contrasts with previous scientific understanding and can be harnessed to improve cessation advocacy.

Individual quitting behaviors have been described as "chaotic."⁴ A bird's-eye view of the population, however, suggests anything but chaos. Quitting behaviors are not spontaneous events but are instead an aggregate phenomenon partially governed by a weekly clock. To fully appreciate the microdecision to quit, we must begin exploring macrodynamics, such as interconnectedness,⁵ in lieu of individual psychology.

Given that most cessation contemplations do not result in successful quits, public health advocates can use these findings to facilitate quitting by providing resources (staffing smoking cessation lines) when more smokers are engaged in the quit process through day-of-the-week targeting. Hypothetically, 145% more susceptible English-speaking smokers may need resources on Monday than on Saturday.

Finally, developing research agendas and advocacy priorities around weekly rhythms in cessation is justified by our findings. Weekly clocks likely impact other behaviors, and ours are just initial steps toward a more substantial (and novel) research program to discover these patterns.

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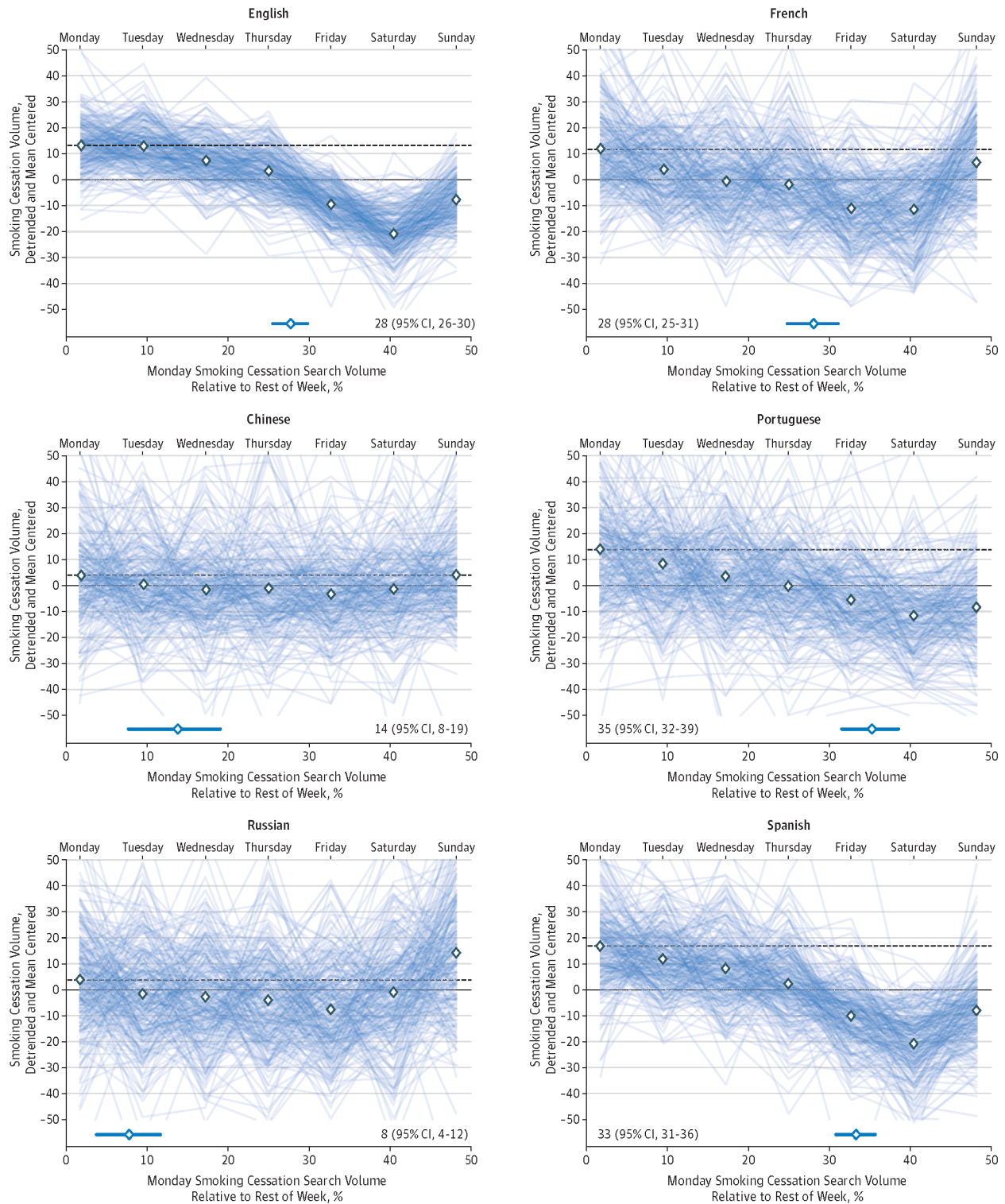
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Figure. Daily Trends in Smoking Cessation Google Queries



The main panels in each graph show segments of the weekly trend lines (light blue curves) for searches in the indicated languages from 2008 to 2012 layered over one another, with the mean for each day of the week, as estimated from the wavelet-reconstructed time series, indicated by an open diamond; reference lines (dashed lines) for the Monday means were added to aid

interpretation. In the bottom portion of each panel is illustrated the Google search volume for Monday (open diamonds) relative to the combined Tuesday through Thursday means; horizontal error bars represent the 95% CIs. Smoking cessation volume on each graph is represented as a relative search volume (ie, a normalized daily ratio of cessation queries to all queries).

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Author Contributions: Dr Ayers had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Study concept and design: Ayers, Althouse, Johnson, Cohen.

Acquisition of data: Ayers, Althouse.

Analysis and interpretation of data: Ayers, Althouse, Cohen.

Drafting of the manuscript: Ayers, Althouse.

Critical revision of the manuscript for important intellectual content: Ayers, Althouse, Johnson, Cohen.

Statistical analysis: Ayers, Althouse.

Obtained funding: Cohen.

Administrative, technical, or material support: Althouse, Johnson.

Study supervision: Cohen.

Conflict of Interest Disclosures: Drs Ayers and Althouse share an equity stake in a consulting group, Directing Medicine LLC, that helps public health investigators implement some of the ideas embodied in this work. The data generation procedures, however, rely on public archives. There are no other reported conflicts of interest.

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Role of the Sponsors: The funders had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; and preparation, review, or approval of the manuscript; and decision to submit the manuscript for publication.

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**Using Monday Cues to Reduce Teacher Stress:
a Pilot Program in Baltimore City Public Schools
November 5, 2019**

Presenter: Ron Hernandez, MBA, Managing Director, The Monday Campaigns

Tamar Mendelson, PhD, Bloomberg Professor of American Health, Director for the Center for Adolescent Health,
Johns Hopkins Bloomberg School of Public Health

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Associate Professor of Pediatrics, Johns Hopkins Bloomberg School of Public Health

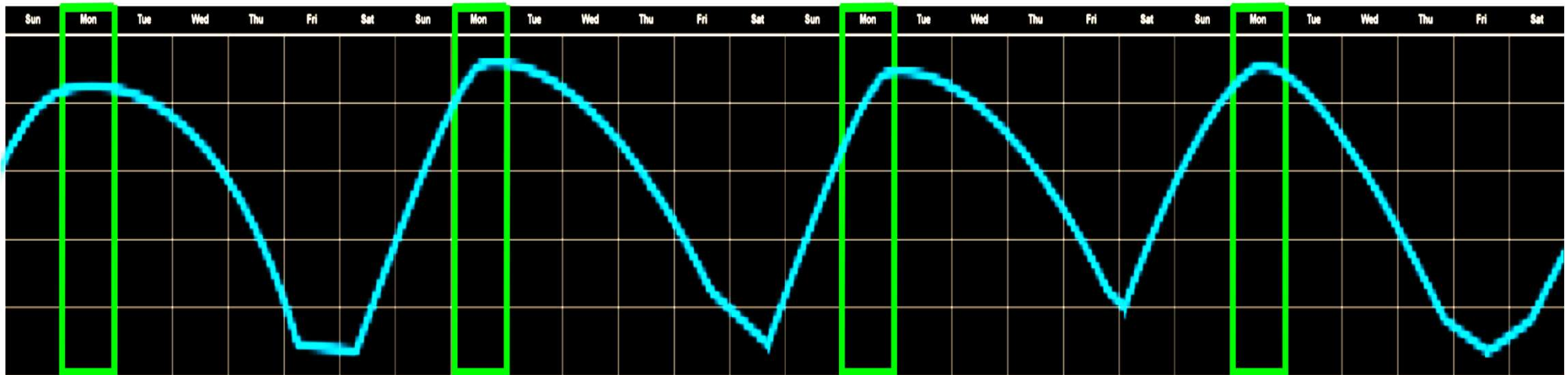
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Johns Hopkins Bloomberg School of Public Health.

The content is solely the responsibility of the authors and does not necessarily represent
the official views of the Lerner Center for Public Health Promotion.

Overview of Today's Presentation

- ✓ Learn background on The Monday Campaigns and the Monday periodic cue
- ✓ Understand the DeStress Monday program
- ✓ Describe stress reduction outcomes of program for teachers and students
- ✓ Have framework to introduce DeStress Monday program
- ✓ Access resources to implement a weekly DeStress Monday program

The Monday Cue and Health Behavior



JAMA Internal Medicine
Formerly Archives of Internal Medicine



AMERICAN JOURNAL OF
Preventive Medicine

What's the Healthiest Day?

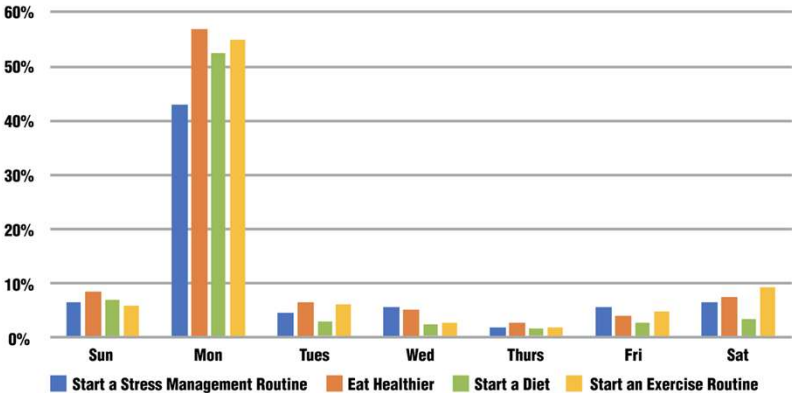
Circaseptan (Weekly) Rhythms in Healthy Considerations



Reported Intentions Favor Monday

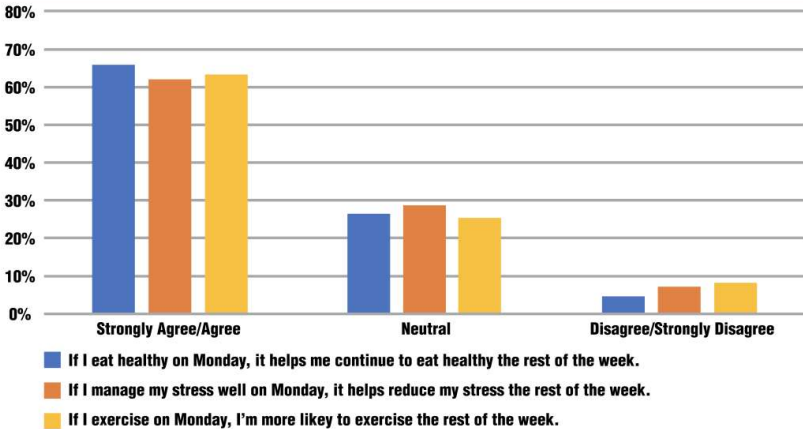
There's an upsurge of healthy intentions on Mondays.

What day of the week are you most likely to...?



Monday helps people sustain healthy behaviors.

Does Monday affect your intentions for the rest of the week?



Data Decisions Group, 2017. Survey of 1,000 U.S. respondents

The Monday Campaigns: Mission and Background

Mission

- Reduce incidence of chronic, preventable disease by providing tools for sustainable healthy behavior

Background

- Initiatives originated by Sid Lerner, in association with leading public health schools
- Collaborate with organizations who can effect adoption of Monday practices to large populations
- Free concepts, research, and creative materials



The Monday Campaigns Portfolio

OVERALL WELLNESS



NUTRITION



PHYSICAL ACTIVITY



STRESS MANAGEMENT

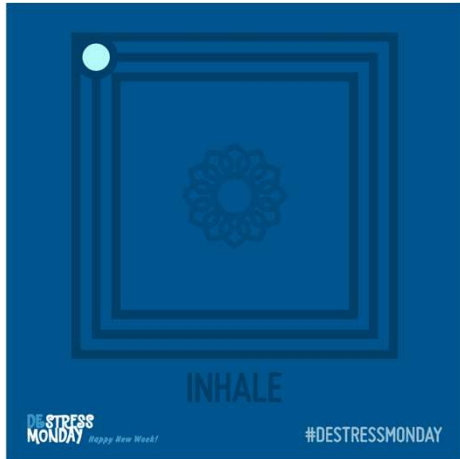


TOBACCO CESSATION



DeStress Monday – Program & Portfolio

Breathing




Mindfulness

TAME YOUR "MONKEY MIND"

Bring your mind under control from a constant chattering of distracting and unwanted thoughts.

1. Sit quietly and focus on your breath.
2. As competing thoughts surface, once again become aware of your breath.
3. The monkey mind will naturally subside and allow you to return to calm.



#DeStressMonday DeStressMonday.org **DE STRESS MONDAY**

Positivity

CHEERS TO A NEW PERSPECTIVE!

This Monday, see the glass half-full. A positive outlook can make you happier and healthier.




#DeStressMonday DeStressMonday.org **DE STRESS MONDAY**

Movement

TAP INTO YOUR INNER CRANE THIS MONDAY WITH TWO TAI CHI MOVES

Destress with Tai Chi, a mind-body martial art that joins the breath with standing poses.



#DeStressMonday DeStressMonday.org **DE STRESS MONDAY**

DeStress Monday at School – a Pilot Program & Study

- Mixed-methods pre-/post- pilot study evaluating DeStress Monday effects among 50 teachers in 3 Baltimore City Schools
- Study aims
 - 1) Evaluate email and website feasibility for delivery
 - 2) Explore potential impact
 - 3) Gather feedback from teachers to refine
- Study Design
 - Pre-program focus group to refine content for program
 - Pre- and Post- surveys – assess teacher psychological functioning and media usage
 - Post-program focus groups – explore teacher experience with emails and website, program content

DeStress Monday at School – Focus Group for Content

- “For You” and “For Your Class” content orientation
- Videos for yoga most instructive
- Animated content with images and sounds to help guide meditation practice
- Illustrations to model self-care

DeStress Monday at School - Implementation

For Teachers



For Classroom Use



DeStress Monday at School - Implementation

9-Week Curriculum

For Teachers

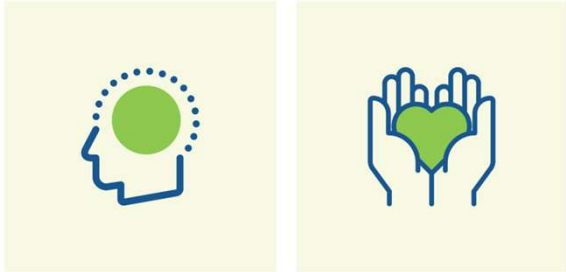
Each Monday during the program, new practices will be placed in this section for teachers. They're grouped under five themes – Starting the Day, Boosting Energy, Improving Focus, Calming the Mind and Connecting. Visit [the curriculum page](#) for a helpful overview.



Starting the Day for Teachers

Boosting Energy for Teachers

Improving Focus for Teachers



Calming the Mind for Teachers

Connecting for Teachers

For the Classroom

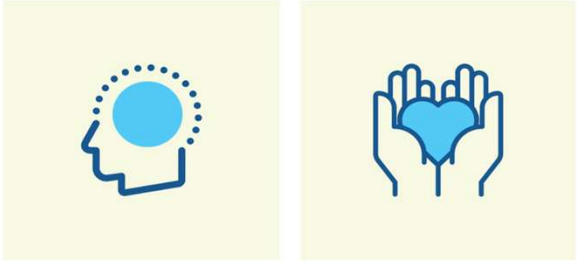
This section features the weekly classroom practices that correspond to the five themes, so you and your students can learn together. Each week, new practices will be added, so be sure to stop back regularly. Visit [the curriculum page](#) for a helpful overview.



Starting the Day for the Classroom

Boosting Energy for the Classroom

Improving Focus for the Classroom



Calming the Mind for the Classroom

Connecting for the Classroom

DeStress Monday at School - Implementation

9 -Week Curriculum

- Email distributed directly to teachers every Sunday night for Monday prep
- Video and audio meditation content
- In-class guidance sessions (when experts avail)

CLEAR THE WAY TO REFRESH YOUR INTENTIONS

This week, gently erase stressful feelings and anxiety so your positive thoughts can shine through.

- Take long, deep breaths until you feel calm and centered.
- Identify a thought that causes you stress or unhappiness. Imagine it drifting further and further away with each breath.
- When your mind is clear, set a healthy, positive intention for the week, such as being more compassionate.



DeStress Monday

FEEL THE GROOVE AND MAKE YOUR MOVES

Shake your bones and start your Mondays with some dancing.

Here's how to do it:

Step 1: Put on a song.
Step 2: Move your legs.
Step 3: Pump your arms.

Now you're dancing!



DeStress Monday


MINDFUL EATING: FOOD FOR THOUGHT

Examine a cranberry. Notice its round shape, red color, firmness and faint smell.

Place the cranberry on your tongue and roll it around. Feel the shape. Slowly bite down and inhale deeply to smell the fragrant aromas.

Begin to chew, focusing on the tart taste and pulpy texture. Savor the vibrant flavor. As you swallow, concentrate on the sensation of the berry going down your throat.

From this single cranberry, think of all the other foods we eat and how they're made. Feel gratitude for nature's bounty.



DeStress Monday

EMOTIONAL BLIZZARDS

CALMING THE STORM

1. Imagine your thoughts and worries are like snowflakes in a shaken snow globe.
2. Breathe slowly. Visualize your negative feelings falling down.
3. Settle your mind as the snowflakes begin to rest on the ground.
4. Spend a mindful minute or two to imprint your positive, serene feelings.



DeStress Monday
Happy New Week!

THIS MONDAY, SPREAD THE LOVE.

Random acts of kindness help others and make you feel better too.



#DeStressMonday DeStressMonday.org **DeStress Monday**

DeStress Monday at School - Implementation

Website with weekly curriculum

Refresh Resources Programs About Subscribe Contact Us

Teachers' Program

Welcome to a new stress reduction program designed especially for teachers by Johns Hopkins University and The Monday Campaigns. The goal is to help you start the week in a positive frame of mind and manage stress throughout the week. Each Monday, you'll receive an email with new stress reduction practices along with complementary exercises that can be used in the classroom. Watch this short introductory video and be sure to check back each week for new practices!

Curriculum

Take a look at the list of exercises designed to help reduce stress for you and your students. Not all exercises are available at the program's start. Each week, new exercises will be brought online and the link will then become active.

For Teachers

Starting the Day

- Setting Intentions
- Tree Pose
- Sun Salutation
- A Mindful Morning

Boosting Energy

- Warrior Pose
- Dance Break
- Chair Yoga
- Mindful Walking

Improving Focus

- Mindful Eating
- Mindful Listening
- Mindful Moments
- Mindful Drawing

Calming the Mind

- Settling the Mind
- Challenging Emotions
- Deep Breathing
- Mindful Coloring

Connecting with Others

- Be Kind to Yourself
- Kindness to Others
- Empathy
- Compassion

For the Classroom

Starting the Day

- Setting Intentions
- Tree Pose
- Sun Salutation
- Mindful Breathing

Boosting Energy

- Warrior Pose
- Dance Break
- Soundball
- Mindful Walking

Improving Focus

- Mindful Eating
- Mindful Listening
- Rainbow Walk
- Mindful Drawing

Calming the Mind

- Mind Jar
- Challenging Emotions
- Nature Sounds
- Mindful Coloring

Connecting with Others

- Be Kind to Yourself
- Kindness Garden
- Empathy
- Compassion

Weekly emails for Monday activity

DESTRESS MONDAY AT SCHOOL

Welcome to Week 3 of DeStress Monday at School!

This week and next week we'll focus on practices for [boosting energy!](#)

Monday is a great day to increase your energy, so that you can participate fully and wholeheartedly in the week. Some Mondays we may wake up feeling refreshed and energetic. Other Mondays we may feel tired from a late night or long weekend; we may feel weary at the thought of the week ahead. Use these practices to help you tap into your own energy, strength, and vitality on a Monday or on any other day of the week!

Week 3 – Boosting Energy

Warrior Pose

WARRIOR POSE: STRENGTH AND FOCUS

Warrior I is a simple and popular yoga pose that helps increase your balance, focus and determination. It's one of several Warrior poses that bring a variety of movements to your routine, benefiting your health physically and mentally.

- Stand with your arms extended at your side. Spread your feet under your feet.
- Looking ahead, take your left foot and "step" about 6-8 feet, palm down, with toes to line up with your shoulders. Bend your right knee forward and your arms back, along the top of your torso.
- Extend and bend your left knee over your ankle, lifting your hips and lowering the torso until the position and breathe through the five seasons. Repeat on your opposite side.

DeStress Monday at School - Implementation

Introductory and instructional videos



DeStress Monday at School - Introduction



DeStress Monday at School - Tree Pose

In-person instruction
(when possible)



Outcomes

“Probably every day I would say I implemented some portion of it, whether the yoga or the breath, or the eating, like we were talking about, little things.”

- Female teacher, School #1

“I just used the self-care...It’s been positive. I’ve practiced this stuff...[it’s] another reminder, another platform, to do similar techniques, de-stress, relax, calm down.”

- Male teacher, School #2

- Improvements in:
 - Work-related Stress - Perceived Stress Scale
 - Duration of Sleep - Sleep Disturbance
 - Sleep Medications - Sleep Quality
 - Indicators for Depression & Anxiety
- 95% described the practices as helpful
- 85% reported using practices
- 78% requested continuation of program

Phase II Pilot conducted with 150 additional teachers in Baltimore and Florida schools. *Data currently being analyzed.*

Outcomes

Measures	Baseline Score M (SD)	Post-Program Score M (SD)	t-score (df 39)	p-value
TCI – Work-Related Stress	3.63 (.93)	3.24 (.85)	3.50	0.001
PSQI – Duration of Sleep	1.2 (.94)	.83 (1.03)	2.94	0.01
PSQI – Sleep Disturbance	2.15 (1.22)	1.61 (1.07)	2.76	0.01
PSQI – Sleep Medications	.71 (1.10)	.41 (.89)	2.22	0.03
PSQI – Sleep Quality	1.76 (.89)	1.22 (1.01)	3.72	0.001
FFMQ – Nonjudge	3.05 (.71)	3.37 (.77)	-3.37	0.002

Pre-post changes in measures of mental health ($n = 41$)

Considerations for Using DeStress Monday

Identify interest and needs

- Buy-in from leadership
 - Highlight benefits
- Input from prospective participants
 - Understand participant needs, practices that support them
 - Preferred channels of communication and opt-in
- Make practices easy to execute



Considerations for Using DeStress Monday

Select practices from DSM portfolio

- Define content - from newsletter or website
- Select by interest area
- Duration



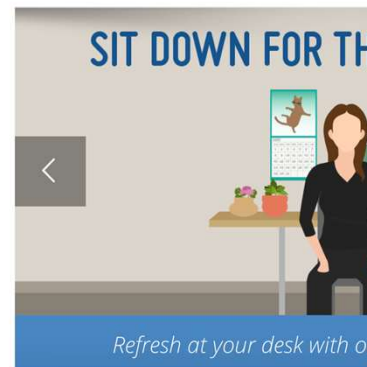
About Refresh Resources Programs Subscribe Contact Us Q

Refresh Your Mind Every Monday.

DeStress Monday shares regular tips and guides to help you start every week with a positive frame of mind. Begin with the Monday Refresh practice and enjoy the benefits all week long:

- 1 Breathe
- 2 Be Mindful
- 3 Shift to the Positive
- 4 Get Moving

www.destressmonday.org



BE YOUR CONFIDENT SELF

Research shows the more you believe in your ability to accomplish something, the more likely you'll be able to accomplish that thing.

- Recall a time when you felt truly confident, strong, and capable, whether at work or with family and friends.
- Take a moment and hold that image in your mind. Reflect on how it makes you feel, both physically and emotionally.
- Finally, reflect on how your confidence affected others, both in how they perceived you and changes in their mood or actions.

#DeStressMonday DeStressMonday.org

Happy New Week!

Research shows the more you believe in your ability to accomplish something, the more likely you'll be able to accomplish that thing. This has been demonstrated by the "placebo effect," where a change in self-expectations results in better health outcomes.

[This Monday, try out this mindfulness practice to build your self-confidence.](#)

Sign up for our Monday Refresh Newsletter

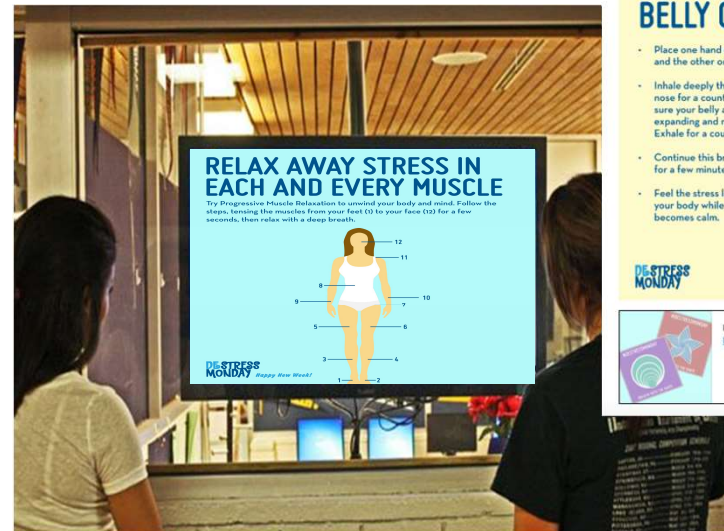
email address

Subscribe

Considerations for Using DeStress Monday

Confirm communication channels & access

- Ensure accessibility - technical, physical
- Facilitate weekly communications
 - Email (DSM subscription sign-up)
 - Text messages
 - Website
 - In-house signage or video monitors
 - “Positive intention” bulletin boards
 - Fliers & handouts
 - Social media accounts



When you're faced with stressful situations, an effective way to calm down is by practicing deep abdominal breathing, sometimes called "belly breath." It works by stimulating your body's natural relaxation response, which helps relieve muscle tension as well as lower your heart rate and blood pressure. By focusing your thoughts on the sensations of breathing, or even counting your breaths, you also help settle your mind.

BREATHE IN, BELLY OUT

- Place one hand on your chest and the other on your belly.
- Inhale deeply through your nose for a count of four, making sure your belly abdomen is expanding and not your chest. Exhale for a count of four.
- Continue this breathing cycle for a few minutes.
- Feel the stress leave your body while your mind becomes calm.



DE-STRESS MONDAY

Need something to focus on as you breathe? Try our helpful [breathing GIFs!](#)



Considerations for Using DeStress Monday

Evaluate

- Define measurable outcomes
 - Participation
 - Engagement
 - Continued practice
 - Self-reported data: reduced anxiety, better sleep
 - Other factors, as relevant to your organization’s goals

Perceived Stress Scale

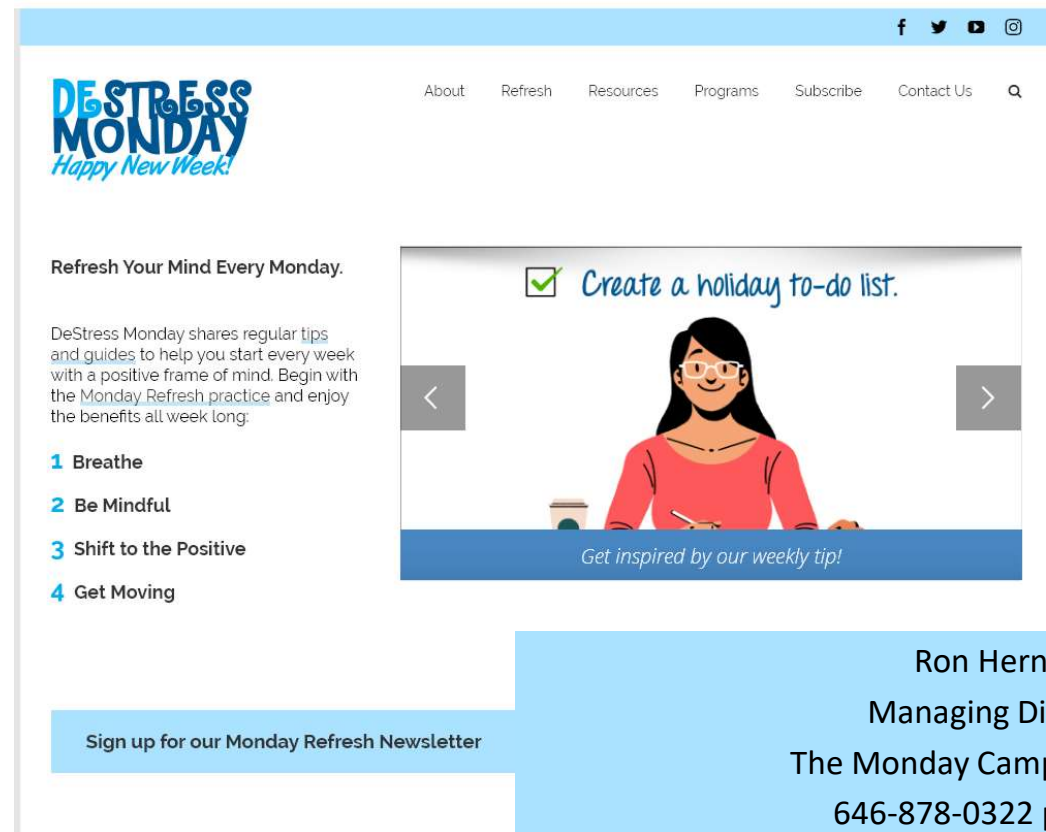
	Never	Almost never	Sometimes	Fairly often	Very often
1. In the last month, how often have you been upset by something that happened unexpectedly?	0	1	2	3	4
2. In the last month, how often have you felt that you were unable to control the important things in your life?	0	1	2	3	4
3. In the last month, how often have you felt nervous and “stressed”?	0	1	2	3	4
4. In the last month, how often have you felt confident about your ability to handle your personal problems?	0	1	2	3	4
5. In the last month, how often have you felt that things were going your way?	0	1	2	3	4
6. In the last month, how often have you found that you could not cope with all the things you had to do?	0	1	2	3	4
7. In the last month, how often have you been able to control irritations in your life?	0	1	2	3	4
8. In the last month, how often have you felt that you were on top of things?	0	1	2	3	4
9. In the last month, how often have you been angered because of things that were outside of your control?	0	1	2	3	4
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	0	1	2	3	4

DeStress Monday – Free Resources

DeStress Monday website:
www.destressmonday.org

FACEBOOK
facebook.com/destressmonday


twitter.com/destressmonday



The screenshot shows the DeStress Monday website homepage. At the top right, there are social media icons for Facebook, Twitter, YouTube, and Instagram. Below these are navigation links: About, Refresh, Resources, Programs, Subscribe, and Contact Us, along with a search icon. The main header features the 'DESTRESS MONDAY' logo in blue and white, with the tagline 'Happy New Week!' in a script font. The main content area is titled 'Refresh Your Mind Every Monday.' and includes a paragraph of text: 'DeStress Monday shares regular tips and guides to help you start every week with a positive frame of mind. Begin with the Monday Refresh practice and enjoy the benefits all week long:'. Below this is a numbered list of four items: 1 Breathe, 2 Be Mindful, 3 Shift to the Positive, and 4 Get Moving. To the right of the text is a large illustration of a woman with long black hair and glasses, wearing a red top, sitting at a desk with a coffee cup and a pen. Above her is a green checkmark icon and the text 'Create a holiday to-do list.'. Below the illustration is a blue banner with the text 'Get inspired by our weekly tip!'. At the bottom of the page, there is a light blue box with the text 'Sign up for our Monday Refresh Newsletter'.

Ron Hernandez
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END