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About the Stress in America™ Survey

Since 2007, the American Psychological Association has commissioned an annual nationwide survey as part of its Mind/Body Health campaign to examine the state of stress across the country and understand its impact. The *Stress in America* survey measures attitudes and perceptions of stress among the general public and identifies leading sources of stress, common behaviors used to manage stress and the impact of stress on our lives. The results of the survey draw attention to the serious physical and emotional implications of stress and the inextricable link between the mind and body.

For a Healthy Mind and Body, Talk to a Psychologist

APA's Mind/Body Health campaign educates the public about the connection between psychological and physical health and how lifestyle and behaviors can affect overall health and wellness. This multifaceted social marketing campaign addresses resilience and the mind-body connection through the Internet, social media, strategic partnerships and a nationwide grassroots network of psychologists offering free educational programs in local communities.

About the American Psychological Association

The American Psychological Association, in Washington, D.C., is the largest scientific and professional organization representing psychology in the United States. APA's membership includes more than 134,000 researchers, educators, clinicians, consultants and students. Through its divisions in 54 subfields of psychology and affiliations with 60 state, territorial and Canadian provincial associations, APA works to advance the creation, communication and application of psychological knowledge to benefit society and improve people's lives.

Stress in America[™]

Are Teens Adopting Adults' Stress Habits?

Methodology	1
Are Teens Adopting Adults' Stress Habits?	3
Stressed Out Without Enough Sleep	14
Exercise: A Healthy Stress Reliever	20
Trying to Eat Our Way to Stress Relief	27
A Stress Snapshot	31
Appendix: Guidelines for Reading Questions and Interpreting Data	A-1

METHODOLOGY

The Stress in America[™] survey was conducted online within the United States by Harris Interactive, Inc. on behalf of the American Psychological Association between Aug. 3 and 31, 2013, among 1,950 adults ages 18+ and 1,018 teens, ages 13 to 17, who reside in the U.S. Results were weighted as needed for age, sex, race/ethnicity, education, region and household income. Propensity score weighting also was used to adjust for respondents' propensity to be online.

Throughout this report, different segments of adults and teens are discussed. For adults (n=1950 total), demographic subgroups include gender (men: n=847; women: n=1103); generation (Millennials [18- to 34-year-olds]: n=392; Generation Xers [35- to 48-year-olds]: n=379; Baby Boomers [49- to 67-year-olds]: n=808; Matures [68 years and older]: n=371); and region ([2013: East n=442; Midwest n=535; South n=578; West n=395]; [2012: East n=274; Midwest n=235; South n=382; West n=243]; [2011: East n=299; Midwest n=259; South n=389; West n=279]; [2010: East n=539; Midwest n=419; South n=640; West n=422]). Adults were also segmented by how many hours per night they sleep (fewer than eight hours: n=1374; at least eight hours: n=576), how often they exercise (less than once a week or not at all: n=795; once a week or more: n=1155) and their self-reported stress level (high stress [8, 9 or 10 on a 10-point scale]: n=386; low stress [1, 2 or 3 on a 10-point scale]: n=633). In addition, the sample size of parents with a child under age 18 in the household was 333.

Teens (n=1018) were segmented in similar ways including by gender (boys: n=432; girls: n=586); and age groups (younger teens [13- to 14-year-olds]: n=294; older teens [15- to 17-year-olds]: n=724). Additional segments for analysis included younger girls (n=160), older girls (n=426), younger boys (n=134), older boys (n=298), those with low reported stress in the past school year (n=174) or the past month (n=338), as well as those with high stress in the past school year (n=316) or past month (n=149). As with adults, the survey examined the amount of sleep teens get (fewer than eight hours on a school night [n=503]; at least eight hours on a school night [n=514]), as well as how often they exercise (less than once a week or not at all [n=216]; once a week or more [n=802]).

All sample surveys and polls, whether or not they use probability sampling, are subject to multiple sources of error, which are most often not possible to quantify or estimate, including sampling error, coverage error, error associated with nonresponse, error associated with question wording and response options, and post-survey weighting and adjustments. Therefore, Harris Interactive, Inc. avoids the words "margin of error," as they are misleading. All that can be calculated are different possible sampling errors with different probabilities for pure, unweighted, random samples with 100 percent response rates. These are only theoretical because no published polls come close to this ideal.

Respondents for this survey were selected from among those who have agreed to participate in Harris Interactive, Inc. surveys. The data have been weighted

METHODOLOGY (continued)

to reflect the composition of the U.S. population ages 18+. Because the sample is based on those who were invited and agreed to participate in the Harris Interactive, Inc. online research panel, no estimates of theoretical sampling error can be calculated.

Measuring Stress: 10-Point Scale vs. Perceived Stress Scale

Since APA's Stress in America research began, Americans' stress levels over the previous month have been measured using a 10-point scale, where 1 means "no stress at all" and 10 means "a great deal of stress." The average score has typically been reported. We have also reported the proportion who report "high" (8, 9 or 10 on the 10-point scale) or "low" stress (1, 2 or 3 on the same scale).

In 2013, the survey maintained the self-reported measure of stress using the 10-point scale described above. In addition, the survey included a 10-item scale, the Perceived Stress Scale (PSS), developed by Sheldon Cohen, PhD, a professor of psychology at Carnegie Mellon University.

10-point scale: On a scale of 1 to 10 where 1 means you have "little or no stress" and 10 means you have "a great deal of stress," how would you rate your average level of stress during the past month?

PSS 10-item scale: In the last month, how often have you ...? (very often, fairly often, sometimes, almost never, never)

- 1. Felt confident about your ability to handle your personal problems?
- 2. Felt that you were on top of things?
- 3. Been able to control irritations in your life?
- 4. Felt that things were going your way?
- 5. Felt nervous and stressed?
- 6. Been angered because of things that were outside your control?
- 7. Been upset because of something that happened unexpectedly?
- 8. Felt difficulties were piling up so high that you could not overcome them?
- 9. Found that you could not cope with all the things that you had to do?
- 10. Felt that you were unable to control the important things in your life?

Items were scaled on a 5-point scale ranging from 0 (never) to 4 (very often). Of the 10 items, four items were worded in a positive direction, so they were reverse-scored. The responses to the 10 items were then summed to create a psychological stress score, with higher scores indicating greater psychological stress.

The results of the two approaches for measuring stress were compared. We found a high correlation between the two (.682), meaning that those who reported a high stress level on the 10-point scale also had a high stress level on the 10-item scale. The single item question appears to be an efficient assessment of stress.



Stress in America"

Are Teens Adopting Adults' Stress Habits?

Despite our understanding that stress takes a toll on our physical and mental health, this year's Stress in America[™] survey reveals a portrait of American stress that is high and often managed in ineffective ways, ultimately affecting our health and well-being.

But the most concerning news is not what's happening to adults.

Survey findings suggest that the patterns of unhealthy behaviors we see in adults may begin developing earlier in our lives. Many American teens report experiencing stress at unhealthy levels, appear uncertain in their management techniques and experience symptoms of stress in numbers that mirror adults' experiences.1 These findings are especially sobering when paired with research that suggests physical activity, nutrition and lifestyle — all wellness factors the survey revealed to be affected by stress in teens and adults — not only contribute to adolescents' health now, but also to habits that can be sustained into adulthood.2

While the United States spends more than any other country on health care and leads the world in the quality and quantity of its health research, these trends do not add up to better health outcomes.³ The U.S. experiences poorer health outcomes than many other high-income countries, even while spending more money per person on health care. Compared to peers in these countries, Americans have less access to primary care, consume the most calories per person and are more likely to live in environments designed around automobiles. Research suggests that these factors contribute to the nation's poor health outcomes and survey findings show that stress influences our health behaviors, setting up teens and adults alike for potential chronic illnesses that affect quality of life and the country's health care expenditure.4

While no one can avoid all stressful situations, Stress in America[™] portrays a picture of high stress and ineffective coping mechanisms that appear to be ingrained in our culture, perpetuating unhealthy lifestyles and behaviors for future generations.



A Culture of Unhealthy Stress

Over the years, the Stress in America survey has found that Americans experience many stressful situations. Issues related to money and work continue to be the most commonly mentioned stressors for adults (71 percent report money, with 69 percent reporting work and 59 percent reporting the economy as significant sources of stress). These issues are complex and difficult to manage, often leading to more stress over time; in fact, 78 percent of American adults say their stress level increased or stayed the same over the past five years. Even more — 84 percent — say the same about the past year. All the while, American adults continue to report higher stress levels than what they believe to be healthy (5.1 vs. 3.6 on a 10-point scale, where 1 is "little or no stress" and 10 is "a great deal of stress") and 37 percent of adults say stress has left them feeling overwhelmed in the past month. Stress is also affecting adults' health — 30 percent say their stress level has a strong or very strong impact on their physical health and 33 percent say the same of the impact on their mental health.

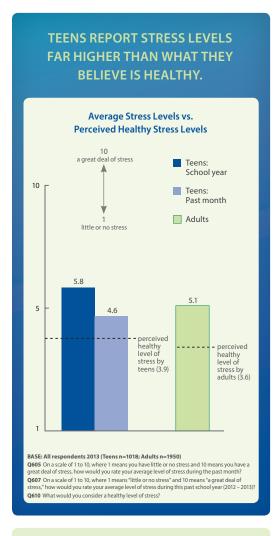


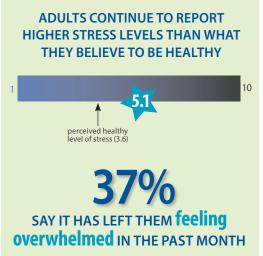
¹ 1,018 youth respondents ages 13 to 17.

² U.S. Department of Health and Human Services, Health Resources and Services Administration. (2003). U.S. teens in our world. Rockville, MD: U.S. Department of Health and Human Services.

⁴ Institute of Medicine. (2013). U.S. health in international perspective: Shorter lives, poorer health. Washington, DC: National Academy of Sciences.







While the news about American stress levels is not new, what's troubling is the stress outlook for teens in the U.S. In many cases, American teens report experiences with stress that follow a similar pattern to those of adults. They report stress at levels far higher than what they believe is healthy and their reported stress levels are even higher during the school year. Meanwhile, teens report that stress is having an impact on their performance at home, work and school.

Teens report that their stress level during the school year far exceeds what they believe to be healthy (5.8 vs. 3.9 on a 10-point scale) and tops adults' average reported stress levels (5.8 for teens vs. 5.1 for adults). Even during the summer — between Aug. 3 and Aug. 31, 2013, when interviewing took place — teens reported their stress during the past month at levels higher than what they believe to be healthy (4.6 vs. 3.9 on a 10-point scale). And more than one in 10 teens say they experience stress at extreme levels over the summer; 13 percent rated their summer stress level as an 8, 9 or 10 on a 10-point scale (high stress levels are defined as an 8, 9 or 10 with low stress levels being a 1, 2 or 3 on a 10-point scale). And that percentage actually doubles during the school year — 27 percent of teens report experiencing a level of stress that is an 8, 9 or 10 on a 10-point scale during the school year. What's more, few teens report their stress is on the decline: only 16 percent report that their stress level has declined in the past year. At the same time, 31 percent of teens say that their stress level has increased in the past year and 34 percent believe their stress levels will increase in the coming year.

While school is the most commonly mentioned source of stress for teens (83 percent report that school is a somewhat or significant source of stress), stress also appears to be affecting teens' performance at home and work, as well as school:

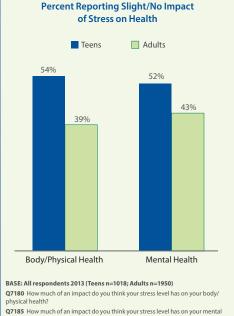
- Ten percent of teens report receiving lower grades than they are capable of due to stress.
- More than half (59 percent) of teens report that managing their time to balance all activities is a somewhat or very significant stressor.
- Due to stress, 40 percent of teens neglected their responsibilities at home and 21 percent say the same about work or school responsibilities.



- Twenty-six percent report snapping at or being short with classmates or teammates when under stress.
- Almost three in 10, or 29 percent of teens, report general procrastination due to stress.
- Social interactions, relationships and events often occupy much of teens' lives and 78 percent report that having good relationships with friends is very or extremely important to them. Despite this, stress caused 17 percent of teens to cancel social plans with friends or family in the last month.

Despite the impact that stress appears to have on their lives, teens appear less aware than adults of the impact that stress can have on their physical and mental health. Teens are more likely than adults to report that their stress level has a slight or no impact on their body or physical health (54 percent of teens vs. 39 percent of adults) or their mental health (52 percent of teens vs. 43 percent of adults). Yet teens report experiencing both emotional and physical symptoms of stress in similar proportions to adults, including feeling irritable or angry (40 percent of teens vs. 41 percent of adults), nervous or anxious (36 percent of teens vs. 37 percent of adults) and tired (36 percent of teens vs. 37 percent of adults).

TEENS ARE MORE LIKELY THAN ADULTS TO REPORT THAT THEIR STRESS HAS A SLIGHT OR NO IMPACT ON THEIR PHYSICAL OR MENTAL HEALTH. Percent Reporting Slight/No Impact of Stress on Health Teens Adults 54% 52%



Stress Affects Teens' Health and Well-Being, Whether Or Not They Know It

The impact of stress on teens' physical health is clear. In particular, longterm, high stress can weaken immune systems and exhaust the body.⁵ Research also shows that even otherwise healthy teens who experience consistent stress have higher levels of inflammation, which has long been associated with development of cardiovascular disease.⁶ Even the common cold is influenced by stress — people living with chronic stress get more frequent and severe viral infections.⁷

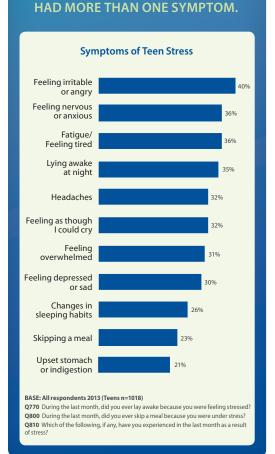
⁵ McNeely, C., & Blanchard, J. (2009). The teen years explained: A guide to healthy adolescent development. Baltimore, MD: Center for Adolescent Health at Johns Hopkins Bloomberg School of Public Health.

⁶ Fuligni, A. J., Telzer, E. H., Bower, J., Cole, S. W., Kiang, L., & Irwin, M. R. (2009, April). A preliminary study of daily interpersonal stress and C-reactive protein levels among adolescents from Latin American and European backgrounds. Psychosomatic Medicine. Advance online publication. doi:10.1097/PSY.0b013e3181921b1f

⁷ U.S. National Library of Medicine. National Institutes of Health. Health topics: Stress. In MedlinePlus.gov. Retrieved from http://www.nlm.nih.gov/medlineplus/stress.html



TEENS REPORT SYMPTOMS OF STRESS DURING THE PAST MONTH, WITH 74% REPORTING HAVING



When asked about experiences in the past month:

- Forty percent of teens report feeling irritable or angry and 36 percent report feeling nervous or anxious.
- Almost one-third (32 percent) of teens say stress makes them feel as though they could cry.
- Many teens report feeling overwhelmed (31 percent) and depressed or sad (30 percent) as a result of stress.
- More than one-third of teens report fatigue/feeling tired (36 percent) and having lain awake at night because of stress (35 percent).
- Nearly one-third of teens (32 percent) say they experience headaches, 26 percent report changes in sleeping habits, and 21 percent say they experience upset stomach or indigestion as a result of stress.
- Nearly one-quarter of teens (23 percent) have skipped a meal because of stress.

Regardless of the high levels of stress that teens report and the symptoms of stress they report experiencing, they often do not know what to do to manage their stress. Nearly half (42 percent) of teens say they either are not doing enough to manage their stress or they are not sure if they are doing enough to manage it. While 51 percent of teens report that stress management is very or extremely important to them, most teens do not regularly make time for stress management. More than one in 10 teens (13 percent) never set aside time to manage stress, while the majority (55 percent) only set aside time for stress management a few times a month or less.

When teens look to manage their stress, only a small number engage in physical activities for stress management, such as exercising or walking (37 percent) or playing sports (28 percent). Instead, many teens turn to sedentary activities to cope, such as playing video games (46 percent), surfing the Internet or going online (43 percent) and watching television or movies (36 percent). But those teens who do engage in more physically active stress management behaviors report lower stress levels and better health behaviors overall, especially when it comes to sleep, exercise and weight. It is critical to examine the effect of stress on teens' health,



THE REPORTED STRESS **LEVEL IN THE PAST** MONTH OF TEENS WHO exercise once or more per week

THE REPORTED STRESS **LEVEL IN THE PAST MONTH OF TEENS WHO** exercise less frequently



MORE TEENS ENGAGE IN SEDENTARY ACTIVITIES TO COPE WITH STRESS THAN USE PHYSICAL ACTIVITIES FOR STRESS MANAGEMENT.



especially their weight, as this generation of young people may be the first to have shorter life expectancies than their parents due to increased diagnoses of being overweight, obese and having chronic illnesses.8

Teens who exercise once a week or more report lower average stress levels in the past month than their peers who exercise less than once a week or not at all (4.4 vs. 5.1 on a 10-point scale).

In addition, only 30 percent of those who exercise once a week or more report increased stress levels over the past year, compared with 38 percent of teens who exercise less than once a week or not at all.

Teens of "normal weight," defined as having a body mass index (BMI) from 18 to 24, report lower stress levels than "obese/overweight" teens, defined as having a BMI of 25 and above (4.4 vs. 5.2 on a 10-point scale in the past month and 5.5 vs. 6.4 during the school year).

Teens who sleep longer fare better. The average stress level during the past school year for teens who slept less than eight hours on school nights is 6.5, compared to 5.2 for teens that slept at least eight hours on school nights.

In addition to marked differences in stress among teens who engage in active behaviors compared with those who engage in sedentary activities, the survey reveals that teens with high stress during the past school year are more likely to engage in sedentary behaviors than are teens with low stress during the past school year.

More than half (54 percent) of teens with high stress say they surf the Internet or go online to manage stress, compared to just 24 percent of teens with low stress.



⁸Olshansky, S. J., Passaro, D. J., Hershow, R. C., Layden, J., Carnes, B. A., Brody, J., . . . & Ludwig, D. S. (2005, March 17). A potential decline in life expectancy in the United States in the 21st century. New England Journal of Medicine. doi: 10.1056/NEJMsr043743

Teens with high stress report spending an average of 3.2 hours a day online compared with only two hours a day for teens with low stress during the past school year.

Almost half of teens with high stress (48 percent) say they watch television or movies for more than two hours a day. Only 20 percent of teens with low stress do the same.

More than half (52 percent) of teens with high stress report feeling tired due to stress. Just 16 percent of teens with low stress say the same.

Teens with high stress are much more likely (44 percent) to say they nap to manage stress than are teens with low stress (21 percent).



Teen Girls: Already Bearing the Brunt of Stress

Since the Stress in America survey first began tracking Americans' stress in 2007, women have consistently reported stress at rates higher than men and are more likely to report experiencing symptoms of stress and more trouble managing stress (trended stress data by gender is included as page 36 of this report).

Unfortunately, it looks like this pattern might emerge early in our lives. In fact, teen girls report an average stress level in the past month of 5.1 on a 10-point scale — higher than boys' reported average stress level of 4.1 and on par with what adults report experiencing (5.1). The survey also found that more teen girls than boys report symptoms of stress and are more likely to say their stress impacts their happiness a great deal or a lot.

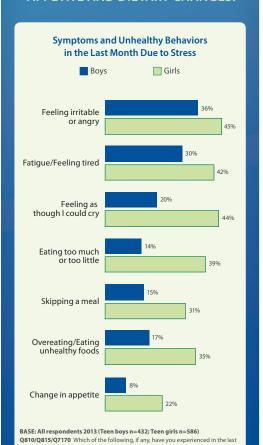
Thirty-seven percent of teen girls report feeling depressed or sad in the past month due to stress compared to 23 percent of teen boys.



Thirty-six percent of teen girls report increased stress levels over the past year compared with 27 percent of teen boys.

Teen girls report having more trouble managing stress than teen boys: Only 34 percent of teen girls say they are doing an excellent or very good job at managing stress compared with nearly half (47 percent) of teen boys.

MORE TEEN GIRLS THAN BOYS REPORT SYMPTOMS AND UNHEALTHY BEHAVIORS AS A RESULT OF STRESS, PARTICULARLY APPETITE AND DIETARY CHANGES.



More teen girls than boys report symptoms and unhealthy behaviors as a result of stress. Teen girls report appetite and dietary changes due to stress with more frequency than teen boys — a trend that continues among adults.

Forty-five percent of teen girls report feeling irritable or angry due to stress in the past month compared with 36 percent of teen boys.

Forty-four percent of teen girls report feeling as though they could cry due to stress in the past month compared with just 20 percent of teen boys.

Forty-two percent of teen girls report feeling tired due to stress in the past month compared with 30 percent of teen boys.

Stress appears to affect teen girls' relationship with food. In the past month, they report eating too much or too little because of stress (39 percent vs. 14 percent of teen boys), a change in appetite when stressed (22 percent vs. 8 percent of teen boys), skipping a meal due to stress (31 percent vs. 15 percent of teen boys) and overeating or eating unhealthy foods because of stress (35 percent vs. 17 percent of teen boys).

When it comes to adults, women are more likely to report skipping meals due to stress than men (36 percent vs. 23 percent), overeating or eating unhealthy foods because of stress (43 percent vs. 32 percent) and changes in appetite because of stress (21 percent vs. 14 percent) in the past month.



Teen girls also report feeling more social pressures than teen boys:

- More than one-third of teen girls (34 percent) say they feel pressure to be a certain way, compared to less than one-quarter of teen boys (22 percent).
- Sixty-eight percent of teen girls say that some aspect of their appearance is a somewhat or very significant source of stress, compared with 55 percent of teen boys.
- Thirty percent of teen girls say they feel bad when comparing themselves to others on social media (compared with only 13 percent of teen boys) and 39 percent say that how others perceive them on social media is a significant source of stress (compared with 29 percent of teen boys).



Setting a Bad Example

While teens' experiences with stress are less than positive, survey findings suggest that examples of healthy stress management may be hard for teens to find. Young people learn a lot about healthy behaviors from watching and imitating adults, especially their parents.9

Adults' average stress is 5.1 on a 10-point scale and 21 percent report experiencing extreme stress levels. More than six in 10 (61 percent) adults report that stress management is very or extremely important to them, yet they do not regularly make much time for it. In fact, half of adults (50 percent) set aside time for stress relief just a few times a month or less. Some adults do not take any action at all to help manage their stress — one in 10 adults (10 percent) say they do not engage in any stress management activities.

Nearly half (44 percent) of adults say they are either not doing enough or are not sure whether they are doing enough to manage their stress.



9NIH News in Health. (2013, February). Shape your family's habits. Retrieved from http://newsinhealth.nih. gov/issue/feb2013/feature1





Stress also affects many adults' happiness. More than one-third (36 percent) of adults say stress affects their overall happiness a great deal or a lot.

Parents of children under age 18 are challenged by unhealthy behaviors as a result of stress in the past month.

Almost half of parents say they have overeaten or eaten unhealthy food due to stress (45 percent vs. 38 percent of all adults) and report skipping meals because of stress (42 percent vs. 30 percent of all adults).

When it comes to sleep, more than half of parents (54 percent) have lain awake at night due to stress, compared to 43 percent of all adults.

Parents who sleep less than eight hours a night are nearly twice as likely as other adults who sleep less than eight hours a night (28 vs. 16 percent) to report they are not getting more sleep because they have too many things to do.

Adults struggle to manage their stress and tend to rely on sedentary activities that may actually add to their stress in the long run. While 43 percent of adults exercise or walk and 9 percent play sports to manage stress, screen time wins when compared to physical activities for stress management — 62 percent of adults engage in stress management activities involving screen time:

- Forty-two percent surf the Internet or go online to manage stress.
- Forty percent watch two or more hours of television or movies a day to manage stress.
- Twenty-one percent play video games to manage stress.
- Seven percent sound off on social media to manage stress.



OF ADULTS REPORT THEY ENGAGE IN STRESS MANAGEMENT ACTIVITIES INVOLVING SCREEN TIME:

42% surf the Internet or **qo online** to manage stress

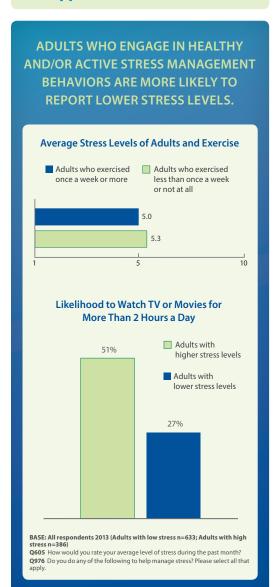
40% watch two or more hours of television or movies a day

TO MANAGE STRESS

21% play video games TO MANAGE STRESS

7% sound off on social media TO MANAGE STRESS

OF ADULTS WHO EXERCISE TO RELIEVE STRESS HAVE skipped exercise due to stress



Like teens, adults who engage in healthy and/or physical activities for stress management, such as exercising once a week or more, report lower average stress levels than adults who exercise less than once a week or not at all (5.0 vs. 5.3 on a 10-point scale). Similarly, adults with higher stress are more likely than those with lower stress in the past month to engage in unhealthy and/or sedentary stress management behaviors, such as watching two or more hours of television or movies a day to help manage or relieve stress (51 percent vs. 27 percent).

Survey findings suggest that it is difficult to commit to coping mechanisms that have the potential to help us live well. Adults do not regularly practice activities that most effectively help them manage stress. While some adults say that sedentary activities are very or extremely effective stress relievers, more adults say that physical activities for stress management, such as exercise or sports, are very or extremely effective.

About four in 10 adults say they surf the Internet or go online (43 percent) or watch television or movies for more than two hours a day (40 percent) to relieve stress. Of those who use these strategies, only around one-third say these activities are very or extremely effective stress management techniques (29 percent of those who go online and 33 percent of those who watch TV).

Of the 43 percent of adults who exercise or walk to relieve stress, nearly two-thirds (62 percent) say it is effective at relieving stress.

Stress can be a Catch-22. Forty-three percent of adults who exercise to relieve stress have actually skipped exercise due to stress.





Teens Need Help Coping

Although teens do not appear to recognize the potential impact of stress on their physical and mental health, they often struggle to cope. Only half of teens (50 percent) report feeling confident about their ability to handle their personal problems and 46 percent say they feel that they are on top of things fairly or very often. While their underdeveloped stress management skills are troubling, teens appear to be open to the role that professionals can play in managing stress. Teens are more likely than adults to report that psychologists can help a great deal or a lot with stress management (43 percent vs. 33 percent) and with making lifestyle and/or behavior changes (38 vs. 28 percent). However, only 5 percent of teens and adults report having seen a mental health professional for stress management.

Stress in America survey findings suggest that teens, while not always recognizing that stress affects their mental and physical health, do indeed feel the impact of stress. Many teens, especially teen girls, are mirroring adults' high-stress lives and potentially setting themselves up for a future of chronic stress and chronic illness. Teens' behaviors and stress are closely linked. And even though effective stress management is possible, the confluence of persistent stress, inability to effectively manage stress, and the challenges that their adult role models experience with stress and stress management put teens on an unhealthy trajectory. They do not have the support they need to develop effective stress management techniques or the skills required to identify and prevent long-term consequences of chronic stress.

In order to break this unhealthy legacy of stress in America, we need to focus on stress and mental health at a younger age. We need to create opportunities in schools, at home, in communities and in teens' interactions with health care professionals to teach younger Americans about the effects of stress, help them learn healthy ways to cope, and give them the tools to form healthy lifestyles and behaviors that can reverse their current trajectory of chronic illness, poor health and shorter lifespans. We need to give them the skills to take control over their lives in healthy ways and allow them to grow into healthy adults.





Stressed Out Without **Enough Sleep**

Sleep is a necessary human function — it allows our brains to recharge and our bodies to rest.1 When we do not sleep long or well enough, our bodies do not get the full benefits of sleep, such as muscle repair and memory consolidation.² Sleep is so crucial that even slight sleep deprivation or poor sleep can affect memory, judgment and mood.3 In addition to feelings of listlessness, chronic sleep deprivation can contribute to health problems, from obesity and high blood pressure to safety risks while driving.4 Research has shown that most Americans would be happier, healthier and safer if they were to sleep an extra 60 to 90 minutes per night.5

This year's Stress in America™ survey shows that stress may be interfering with Americans' sleep, keeping many adults and teens from getting the sleep they need to be healthy.



IS THE AVERAGE AMOUNT OF SLEEP PER NIGHT REPORTED BY ADULTS — THAT'S LESS THAN THE minimum recommendation of 7 to 9 hours

zZZ The Sleep-Stress Cycle

Survey findings show that stress may be getting in the way of quality sleep. American adults report sleeping an average of 6.7 hours a night less than the minimum recommendation of seven to nine hours.⁶ In addition, 42 percent of adults report that their sleep quality is fair or poor and 43 percent report that stress has caused them to lie awake at night in the past month.

Many report that their stress increases when the length and quality of their sleep decreases.

When they do not get enough sleep, 21 percent of adults report feeling more stressed. Adults with higher reported stress levels (8, 9 or 10 on a 10-point scale) fare even worse — 45 percent feel even more stressed if they do not get enough sleep. Five percent of adults with lower reported stress levels (1, 2 or 3 on the 10-point scale) say the same.

Only 20 percent of adults say the quality of their sleep is very good or excellent.

Thirty-seven percent of adults report fatigue or feeling tired because of stress.



¹ Division of Sleep Medicine at Harvard Medical School and WGBH Educational Foundation. (n.d.). Why do we sleep, anyway? Healthy Sleep. Retrieved from http://healthysleep.med.harvard.edu/healthy/matters/benefits-of-sleep/ why-do-we-sleep

² National Sleep Foundation. (n.d.). What happens when you sleep? Retrieved from http://www.sleepfoundation. org/article/how-sleep-works/what-happens-when-you-sleep

³ Division of Sleep Medicine at Harvard Medical School and WGBH Educational Foundation. (n.d.). Consequences of insufficient sleep. Healthy Sleep. Retrieved from http://healthysleep.med.harvard.edu/healthy/matters/

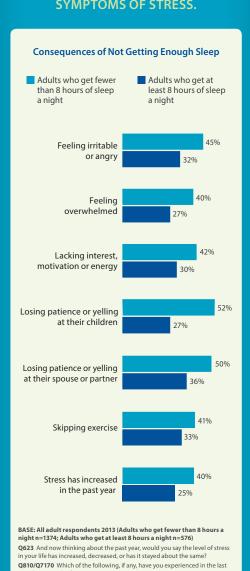
⁴ Spira, A. P., Gamaldo, A. A., An, Y., Wu, M. N., Simonsick, E. M., Bilgel, M., . . . & Resnick, S. M. (2013, October). Selfreported sleep and β -amyloid deposition in community-dwelling older adults. The Journal of the American Medical Association, Neurology. doi:10.1001/jamaneurol.2013.4258

⁵ American Psychological Association. (2004, May). More sleep would make most Americans happier, healthier and safer. Retrieved from http://www.apa.org/research/action/sleep-deprivation.aspx

⁶ National Sleep Foundation. (n.d.). How much sleep do we really need? Retrieved from http://www.sleepfoundation.org/article/how-sleep-works/how-much-sleep-do-we-really-need

STRESS AND SICED

ADULTS WHO SLEEP FEWER THAN EIGHT HOURS A NIGHT ARE MORE LIKELY TO REPORT SYMPTOMS OF STRESS.



Many adults report negative consequences from not getting enough sleep. More than half (53 percent) report feeling sluggish or lazy, 38 percent report feeling irritable, 29 percent report they have trouble concentrating and 25 percent report feeling no motivation to take care of responsibilities.

Adults who sleep fewer than eight hours a night report higher stress levels than those who sleep at least eight hours a night (5.5 vs. 4.4 on a 10-point scale).

On average, adults with lower reported stress levels report sleeping more hours a night than do adults with higher reported stress levels (7.1 vs. 6.2 hours). They are also more likely to say they have excellent or very goodquality sleep (33 percent vs. 8 percent) and get enough sleep (79 percent vs. 33 percent).

Adults who sleep fewer than eight hours a night are more likely to report symptoms of stress in the past month, such as feeling irritable or angry, than adults who sleep more than eight hours a night (45 percent vs. 32 percent of adults); feeling overwhelmed (40 percent vs. 27 percent); lacking interest, motivation or energy (42 percent vs. 30 percent); losing patience or yelling at their children (52 percent vs. 27 percent); losing patience or yelling at their spouse or partner (50 percent vs. 36 percent); and skipping exercise (41 percent vs. 33 percent). They are also more likely to say their stress has increased in the past year (40 percent vs. 25 percent).

Adults with high stress are more likely to say they are not getting enough sleep because their minds race (49 percent vs. 10 percent of adults with low stress).

Adults with high stress are also more likely than those with low stress to say they feel the effects of getting too little sleep:

- Sixty-eight percent say they feel sluggish or lazy vs. 36 percent of adults with low stress.
- Fifty-nine percent say they are irritable vs. 20 percent of adults with low stress.

he following things?

Q976 In the last month, when you were feeling stressed, did you do any of



STRESS CAUSED THEM TO lie awake at night IN THE PAST MONTH

TEENS WITH high stress SLEEP

- Forty-five percent say they have trouble concentrating vs. 12 percent of adults with low stress.
- Forty-five percent say they feel more stressed vs. 5 percent of adults with low stress.
- Twenty-seven percent say they feel sad or depressed vs. 2 percent of adults with low stress.

zzZ Stress Also Affects Teens' Sleep

Teens also report that stress has an impact on their sleep, and vice versa. Teens report sleeping far less than the minimum age-based recommendation of 8.5 to 9.25 hours.⁷ On average, teens say they sleep 7.4 hours a night on a school night and 8.1 hours a night on a non-school night. Nearly one-quarter of teens (24 percent) also report that their sleep quality is fair or poor.

TEENS WITH LOW STRESS ARE MORE LIKELY THAN TEENS WITH HIGH STRESS TO SAY THEY GET ENOUGH SLEEP. Percentage of Teens Who Say **They Get Enough Sleep** 90% 48% Teens with low stress Teens with high stress BASE: All teen respondents 2013 (Teens with low stress in past school year n=174; Teens with high stress in past school year n=316) Q760 How much sleep are you getting?

More than one-third of teens (35 percent) report that stress caused them to lie awake at night in the past month. And for teens who sleep fewer than eight hours per school night, many say their stress level has increased over the past year (42 percent), compared with 23 percent of teens who sleep at least eight hours per school night. In addition, 18 percent of teens say that when they do not get enough sleep they are more stressed and 36 percent of teens report feeling tired because of stress in the past month. Thirty-nine percent of teens with higher reported stress levels (8, 9 or 10 on a 10-point scale) during the past school year feel even more stressed if they do not get enough sleep, while only 3 percent of teens with lower reported stress levels (1, 2 or 3 on a 10-point scale) during the past school year say the same.

When they do not sleep enough, more than half of teens (53 percent) report feeling sluggish or lazy and 42 percent say they feel irritable. Thirtytwo percent say they are unable to concentrate and 23 percent report feeling no motivation to take care of responsibilities.

⁷ National Sleep Foundation. (n.d.). How much sleep do we really need? Retrieved from http://www.sleepfoundation.org/article/how-sleep-works/how-much-sleep-do-we-really-need





Teens with low stress during the past school year report sleeping more hours per night than do teens with high stress (7.8 vs. 6.9 hours).

Ninety percent of teens with low reported stress levels during the past school year say they get enough sleep, compared to less than half (48 percent) of teens with high reported stress levels during the past school year.

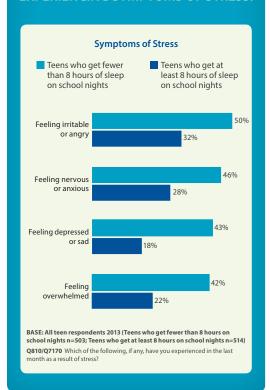
Teens with lower reported stress levels during the past school year are also more likely than highly stressed teens to say they have excellent or very good-quality sleep (59 vs. 22 percent). Teens with high reported stress levels during the past school year are more likely to report having trouble sleeping well — 43 percent say they do not get enough sleep because their mind races, compared to 9 percent of teens with low stress who say the same.

Teens who report experiencing high stress during the past school year are also more likely than those who report having low stress to say they feel the effects of getting too little sleep:

- Sixty-one percent of highly stressed teens say they feel sluggish or lazy vs. 42 percent of teens with low stress.
- Fifty-four percent of highly stressed teens say they are irritable vs. 25 percent of teens with low stress.
- Forty-four percent of highly stressed teens say they have trouble concentrating vs. 20 percent of teens with low stress.
- Thirty-nine percent of highly stressed teens say they are more stressed vs. 3 percent of teens with low stress.
- Twenty-six percent of highly stressed teens say they feel sad or depressed vs. 1 percent of teens with low stress.

When it comes to stress, teens who get fewer than eight hours of sleep on a school night appear to fare worse than teens getting eight hours of sleep on school nights:

TEENS WHO SLEEP FEWER THAN EIGHT HOURS ON A SCHOOL NIGHT ARE MORE LIKELY TO REPORT EXPERIENCING SYMPTOMS OF STRESS.





- Teens who sleep fewer than eight hours per school night report higher stress levels in the past month than teens who sleep at least eight hours per school night (5.2 vs. 4.1 on a 10-point scale).
- Teens who sleep fewer than eight hours on a school night are more likely than teens who sleep at least eight hours on a school night to report experiencing symptoms of stress, such as feeling irritable or angry (50 percent vs. 32 percent), nervous or anxious (46 percent vs. 28 percent), depressed or sad (43 percent vs. 18 percent) and overwhelmed (42 percent vs. 22 percent).

zzZ Younger Generations Are Not Sleeping Well, Often Due to Stress

Younger Americans (Millennials and Gen Xers) report getting fewer hours of sleep per night on average, and are more likely than other adults to say they do not get good-quality sleep and have more trouble achieving their sleep goals.8 Younger adults are more likely to say they feel stressed by a lack of sleep (Millennials: 29 percent; Gen Xers: 23 percent) than Boomers (19 percent) and Matures (7 percent). Millennials and Gen Xers are also more likely to report feeling sad or depressed because of stress (Millennials: 47 percent; Gen Xers: 42 percent; Boomers: 29 percent; Matures: 15 percent).

Gen Xers are most likely to say that they sleep fewer than eight hours a night (77 percent vs. 74 percent of Boomers, 66 percent of Matures and 64 percent of Millennials). They are also least likely to say they are getting enough sleep (45 percent vs. 74 percent of Matures, 56 percent of Boomers and 54 percent of Millennials).

Half of Gen Xers (49 percent) say their sleep quality is fair or poor, compared to 43 percent of Millennials, 42 percent of Boomers and 28 percent of Matures.

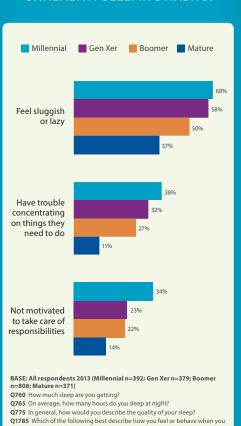


⁸ The four generations are defined as the following: Millennials (18- to 34-year-olds), Gen Xers (35- to 48-year-olds), Boomers (49- to 67-year-olds) and Matures (68 years and older).

Only 24 percent of Gen Xers say they are doing a very good or excellent job at getting enough sleep, despite the majority of this generation (61 percent) who say that getting enough sleep is extremely or very important to them. A wide gap between perceived importance and achievement of sleep goals also exists for Millennials (59 percent vs. 28 percent), Boomers (64 percent vs. 30 percent) and Matures (70 percent vs. 50 percent).

Gen Xers and Millennials are most likely to say lack of sleep makes them irritable (49 percent and 47 percent, respectively, vs. 30 percent of Boomers and 15 percent of Matures).

YOUNGER AMERICANS ARE MORE LIKELY TO REPORT CONSEQUENCES OF **UNHEALTHY SLEEPING HABITS.**



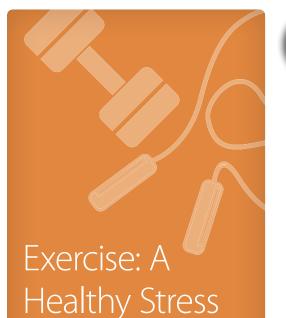
While Gen Xers report sleeping the fewest hours, Millennials report poorer sleep habits than other adults. In particular, Millennials are more likely to say they do not get at least eight hours of sleep because they stay up too late (52 percent compared with 36 percent of Gen Xers, 29 percent of Boomers and 22 percent of Matures).

Nearly one-third of Millennials also attribute lack of sleep to thinking of all the things they need to do or did not get done (31 percent compared with 27 percent of Gen Xers, 24 percent of Boomers and 14 percent of Matures).

More than one-third of Millennials say they do not sleep at least eight hours a night because they have too many things to do and do not have enough time (35 percent compared with 19 percent of Gen Xers, 13 percent of Boomers and 6 percent of Matures).

Younger Americans are also more likely to report consequences of unhealthy sleeping habits. When they do not get enough sleep, 60 percent of Millennials say they feel sluggish or lazy, compared to 58 percent of Gen Xers, 50 percent of Boomers and 37 percent of Matures; 38 percent of Millennials say they have trouble concentrating on things they need to do, compared to 32 percent of Gen Xers, 27 percent of Boomers and 11 percent of Matures; and 34 percent of Millennials say they are not motivated to take care of responsibilities, compared to 23 percent of Gen Xers, 22 percent of Boomers and 14 percent of Matures.





When it comes to good health, physical activity matters. Exercise and physical activity improve overall fitness, body mass index, and cardiovascular and muscular health.1 Studies even show exercise can relieve stress, reduce depression and improve cognitive function.^{2,3,4}

Reliever

Although many respondents to the Stress in America™ survey report that they experience positive benefits from exercise, such as feeling good about themselves, being in a good mood and feeling less stressed, few say they make the time to exercise every day. In fact, the survey found that more than one-third of adults (37 percent) report exercising less than once a week or not at all.

SAY THEY HAVE **skipped exercise/physical activity** IN THE PAST MONTH WHEN THEY WERE FEELING STRESSED

Only 17 percent of adults report exercising daily.

Fifty-three percent of adults say they feel good about themselves after exercising, 35 percent say it puts them in a good mood and 30 percent say they feel less stressed.

Fewer than half (43 percent) of adults say they exercise to manage stress and 39 percent say they have skipped exercise or physical activity in the past month when they were feeling stressed.

Sixty-two percent of adults who say they exercise or walk to help manage stress say the technique is very or extremely effective. Forty-three percent of adults who report exercising specifically to help manage stress say they skipped exercise or physical activity in the past month when they were stressed.

Half of adults (50 percent) say that being physically active or fit is extremely or very important to them, yet only 27 percent report doing an excellent or very good job of achieving this.

Like adults, teens also report benefits from exercise, but face challenges when it comes to being physically active or fit.

Fifty-three percent of teens say they feel good about themselves after exercising, 40 percent say it puts them in a good mood and 32 percent say they feel less stressed after exercising. Regardless, one in five teens (20 percent) report exercising less than once a week or not at all.

¹ U.S. Department of Health and Human Services, (2008), Chapter 2: Physical activity has many health benefits, *In Physical* Activity Guidelines for Americans. Retrieved from http://www.health.gov/paguidelines/guidelines/chapter2.aspx

³ American Psychological Association. (n.d.). Exercise fuels the brain's stress buffers. Retrieved from http://www.apa.org/ helpcenter/exercise-stress.aspx

 $^{^4 \,} Harvard \, Health \, Publications, Harvard \, Medical \, School, Harvard \, Men's \, Health \, Watch. (2011, February). \, Exercising \, to \, relax. \, Retrieved from \, http://www.health.harvard.edu/newsletters/Harvard_Mens_Health_Watch/2011/February/exercising-particles. \, A control of the property of t$



Thirty-seven percent of teens say they exercise specifically to manage stress.

Sixty-eight percent of teens who say they exercise or walk to help manage stress say the technique is very or extremely effective.

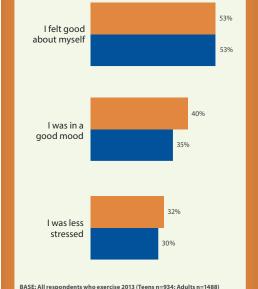
Twenty-eight percent of teens skipped exercise or physical activity in the past month when they were feeling stressed and 37 percent of teens who report using exercise to manage stress say they skipped exercise or physical activity in the past month when they were stressed.

LIKE ADULTS, TEENS ALSO REPORT BENEFITS FROM EXERCISE.



Adults

Teens



The majority of teens (62 percent) say that being physically active or fit is extremely or very important to them, yet only 51 percent report doing an excellent or very good job at achieving this.

Millennials are more likely than other generations to say they exercise weekly and recognize the positive benefits of doing so.⁵ Despite this, many Millennials still report skipping exercise because of stress.

Seventy-two percent of Millennials say they exercise once a week or more, compared with 59 percent of Gen Xers and Boomers and 56 percent of Matures.

Millennials are also more likely to report feeling less stressed after exercise (36 percent vs. 31 percent of Gen Xers, 28 percent of Boomers and 16 percent of Matures) and to say they exercise or walk to manage stress (50 percent vs. 44 percent of Gen Xers, 40 percent of Boomers and just 36 percent of Matures).



Q5020 Which of the following best describe the impact on you after you ex

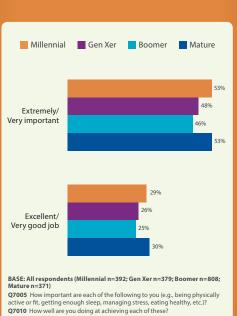
⁵ The four generations are defined as the following: Millennials (18- to 34-year-olds), Gen Xers (35- to 48-year-olds), Boomers (49- to 67-year-olds) and Matures (68 years and older).



However, Millennials are more likely to say that they have skipped exercise or physical activity in the past month when stressed (52 percent vs. 41 percent of Gen Xers, 33 percent of Boomers and 18 percent of Matures).

Despite the value that Millennials appear to place on being physically active or fit, they are not doing well at achieving this goal. Fifty-three percent say it is very or extremely important to them, yet only 29 percent say they are doing an excellent or very good job at it. Comparatively, 53 percent of Matures, 48 percent of Gen Xers and 46 percent of Boomers say being physically active or fit is very or extremely important to them, yet only 30 percent, 26 percent and 25 percent, respectively, say they are doing an excellent or very good job at it.

DESPITE THE VALUE THAT MILLENNIALS APPEAR TO PLACE ON BEING PHYSICALLY ACTIVE OR FIT, THEY ARE NOT DOING WELL AT **ACHIEVING THIS GOAL.**



Eighty-three percent of Millennials say they have tried to exercise more in the past five years, compared with 66 percent of Gen Xers, 63 percent of Boomers and 60 percent of Matures.

Physical Activity Seems to Help People Stress Less

Survey findings show that Americans spend much of their time engaged in sedentary activities — often more than three hours a day watching TV or going online. Many report turning to these activities to manage their stress. Yet people who engage in these activities to manage stress are less likely to say that the technique is effective, compared with those who engage in more physically active stress management strategies.

On average, adults report that they spend 3.9 hours a day watching TV, 3.7 hours a day going online and 3.4 hours a day sitting at a desk.

Forty-two percent of adults report going online to help manage stress and 40 percent say they watch TV or movies for more than two hours a day.



Only 29 percent of those who go online to manage stress and 33 percent of those who watch TV or movies to manage stress say these techniques are very or extremely effective. In contrast, among adults who exercise to manage stress (43 percent), 62 percent tout its effectiveness.

Adults who report the highest levels of stress in the past month (8, 9 or 10 on a 10-point scale) are less likely to say they exercise each week and more likely to say they have skipped exercise due to stress in the past month. Adults who report experiencing high stress are also more likely than adults who report experiencing low stress (1, 2 or 3 on the 10-point scale) to engage in sedentary activities for stress management.

PEOPLE WHO ENGAGE IN SEDENTARY **ACTIVITIES TO MANAGE STRESS ARE LESS** LIKELY TO SAY THAT THE TECHNIQUE IS **EFFECTIVE COMPARED WITH THOSE WHO ENGAGE IN MORE PHYSICALLY ACTIVE** STRESS MANAGEMENT STRATEGIES.



Adults reporting high stress levels are less likely than those reporting low stress levels to say they exercise at least once weekly (54 percent vs. 64 percent). Furthermore, those who exercise less than once a week or not at all report stress levels in the past month higher than those of adults who exercise once a week or more (5.3 vs. 4.9).

Adults reporting high stress are more than four times as likely as adults reporting low stress to say they have skipped exercise in the past month due to stress (64 percent vs. 15 percent).

Adults reporting high stress are more likely to say they engage in sedentary activities to manage stress. More than half report managing their stress by going online (53 percent vs. 31 percent of those reporting low stress) and watching TV or movies for more than two hours a day (51 percent vs. 27 percent of those reporting low stress).

Adults reporting high stress levels say they spend an average of 4.4 hours a day online, compared with 3.4 hours a day for adults reporting low stress levels.



Despite the fact that they report exercising less frequently than those with low stress, adults with high stress appear to be more aware of the effect that exercise has on their stress level. Among those who exercise, 33 percent of high-stress ad<mark>ults said</mark> t<mark>hey feel</mark> less stressed after exercising, compared with 18 percent of low-stress adults.

Teens also report spending much of their time engaged in sedentary activities, yet say that exercise offers more stress relief than other techniques they use to manage stress.

Teens report spending an average of 3.4 hours a day sitting at a desk, 2.8 hours a day watching TV and 2.7 hours a day going online.

More teens than adults say their sedentary stress management techniques are effective, but they still report exercise as the most effective stress management approach. Sixty-eight percent of teens who exercise or engage in physical activity to manage stress (37 percent) say it is extremely or very effective. Comparatively, 59 percent of teens who report playing video games to manage stress, 41 percent who report going online to manage stress and 39 percent who report watching TV or movies for more than two hours a day to manage stress say these are very or extremely effective stress management techniques.

Teens who report exercising at least once weekly report an average stress level in the past month of 4.4 on a 10-point scale, compared with 5.1 among teens who report exercising less than once a week or not at all.

Even more important, teens who report exercising at least once weekly report lower average stress levels during the past school year than teens who report exercising less than once a week or not at all (5.6 vs. 6.4 on a 10-point scale).

TEENS REPORT SPENDING AN AVERAGE OF



3.4 hours/day sitting at a desk



2.8 hours/day watching TV



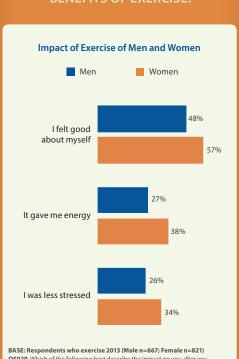


Teens who report high stress during the past school year also report spending an average of 3.2 hours online a day, compared with two hours among those with low reported stress levels during the past school year.

Despite their fitness goals, Millennials report spending more time engaging in sedentary activities than other generations. They also spend the most time engaged in screen time to help manage stress.

Millennials report spending an average of five hours a day online, compared with 3.7 hours for Gen Xers, 3.1 hours for Boomers and 2.5 hours for Matures.

WOMEN ARE MORE LIKELY THAN MEN TO REPORT THE BENEFITS OF EXERCISE.



Sixty-eight percent of Millennials say they engage in screen time (including going online, watching TV or movies for more than two hours a day, playing video games and sounding off on social media) to help manage stress, compared with 64 percent of Gen Xers, 59 percent of Boomers and 54 percent of Matures.

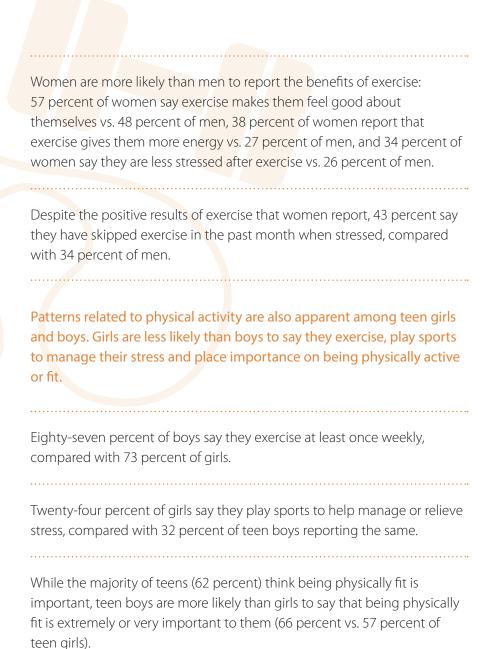
Millennials are more likely than other generations to say they nap or sleep to relieve stress — 41 percent of Millennials report this, compared with 33 percent of Gen Xers, 29 percent of Boomers and 20 percent of Matures.

Women Struggle With Exercise

While more women than men report positive results of exercise, they also report exercising less frequently. Compared with men, women are more likely to say they have skipped exercise in the past month when they were stressed.

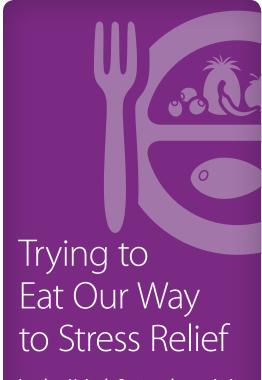
Seventy percent of men, compared with 56 percent of women, say they exercise once a week or more.







stress and eating



In the United States, the majority of adults are overweight or obese, increasing their risk for Type 2 diabetes, high blood pressure and heart disease.1 Obesity is a major contributor to preventive death in the U.S. and can raise morbidity risks associated with chronic diseases, such as hypertension, stroke, respiratory problems and various cancers.2 Research also shows connections between stress and food. People tend to seek high-calorie, high-fat foods during periods of stress, though in fact, when people are stressed, their bodies store more fat than when they are relaxed.3 While many factors contribute to the nation's weight challenges, the Stress in America™ survey suggests that stress influences our eating habits.

OF ADULTS SAY THEY eat to manage stress



Many adults report engaging in unhealthy eating behaviors as a result of stress and say that these behaviors can lead to undesirable consequences, such as feeling sluggish or lazy and feeling bad about their bodies.

Thirty-eight percent of adults say they have overeaten or eaten unhealthy foods in the past month because of stress. Half of these adults (49 percent) report engaging in these behaviors weekly or more.

Thirty-three percent of adults who report overeating or eating unhealthy foods because of stress say they do so because it helps distract them from stress

Twenty-seven percent of adults say they eat to manage stress and 34 percent of those who report overeating or eating unhealthy foods because of stress say this behavior is a habit.

In the past month, 30 percent of adults report skipping a meal due to stress. Forty-one percent of adults who report skipping a meal due to stress report doing it weekly or more.

The majority of adults (67 percent) who report skipping meals due to stress attribute it to a lack of appetite. Twenty-six percent say they skipped a meal because they did not have time to eat.



¹ Flegal, K. M., Carroll, M. D., Kit, B. K., & Ogden, C. L. (2012). Prevalence of obesity and trends in the distribution of body mass index among U.S. adults, 1999 - 2010. The Journal of the American Medical Association, 307(5), 491-497. doi:10.1001/iama.2012.39

² U.S. Department of Health and Human Services, National Institutes of Health, National Heart, Lung and Blood Institute, Obesity Education Initiative. (1998). Clinical guidelines on the identification, evaluation and treatment of overweight and obesity in adults: The evidence report (NIH Publication No. 98-4083). Retrieved from http://www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.pdf

³ Björntorp, P. (2001). Do stress reactions cause abdominal obesity and comorbidities? *The International Association* for the Study of Obesity, Obesity Reviews, 2(2), 73-86.



After having overeaten or eaten unhealthy foods, half of adults (49 percent) report feeling disappointed in themselves, 46 percent report feeling bad about their bodies and more than one-third (36 percent) say they feel sluggish or lazy. After skipping meals due to stress, 24 percent say they feel sluggish or lazy and 22 percent report being irritable.



Teens Display Similar Eating Habits as Adults

When it comes to their eating habits under stress, teens do not appear to be doing any better than adults. One example can be seen in the number of teens and adults who skip breakfast. While breakfast has long been credited as the meal that aids in concentration throughout the day, research also suggests that eating breakfast can reduce the risk of Type 2 diabetes, along with other metabolic conditions, such as hypertension and obesity.4 Yet half of teens (50 percent) who have skipped a meal in the past month due to stress say the last meal they skipped was breakfast vs. 45 percent of adults who say the same.

In the past month, 26 percent of teens say they have overeaten or eaten unhealthy foods because of stress. More than half of these teens (52 percent) engage in these behaviors weekly or more.

OF TEENS WHO HAVE SKIPPED A MEAL IN THE PAST MONTH **DUE TO STRESS SAY THE LAST MEAL** they skipped was breakfast

Among teens who report overeating or eating unhealthy foods because of stress, 33 percent say they did so because it helps distract them from what was causing them stress.

Almost one-quarter (24 percent) of teens report eating to manage stress and 37 percent of those who overate or ate unhealthy foods because of stress say that it is a habit.

Thirty-nine percent of teens report skipping meals due to stress weekly or more.

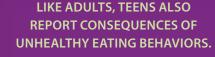
Odegaard, A. O., Jacobs Jr., D. R., Steffen, L. M., Van Horn, L., Ludwig, D. S., & Pereira, M. A. (2013). Breakfast frequency and development of metabolic risk. Diabetes Care. doi: 10.2337/dc13-0316

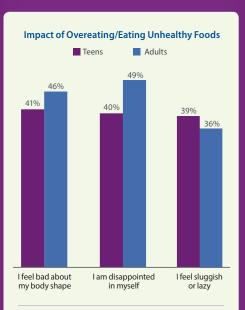


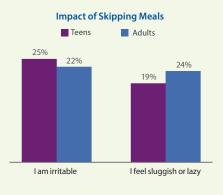
stress and eating

The majority of teens (67 percent) who report skipping meals due to stress say it was because of a lack of appetite and 25 percent say it was because they did not have time to eat.

Like adults, teens also report consequences of unhealthy stress-related eating behaviors. After overeating or eating unhealthy foods, teens report feeling bad about their bodies (41 percent), disappointed in themselves (40 percent) and sluggish or lazy (39 percent). After skipping meals due to stress, 25 percent of teens report being irritable and 19 percent say they feel sluggish or lazy.







BASE: Respondents who overate or ate unhealthy foods 2013 (Teens n=295: Q805 Which of the following best describe how you feel or behave after you [ate too

BASE: Respondents who skipped a meal 2013 (Teens n=250; Adults n=515)

uch/ate unhealthy foods/ate too much and ate unhealthy foods?

Women Struggle With Healthy Eating Behaviors

Women of every age are more likely than their male counterparts to report unhealthy eating behaviors as a result of stress.

Forty-three percent of women report having overeaten or eaten unhealthy foods in the past month due to stress, compared to 32 percent of men.

When asked why they overate or ate unhealthy foods, 30 percent of women said they could not stop themselves, compared with 19 percent of men reporting the same. What's more, 30 percent of women, compared with 24 percent of men, say they eat to manage stress.

Thirty-six percent of women report skipping a meal in the past month due to stress compared with 23 percent of men.

Among women and men who skipped a meal, 71 percent of women and 59 percent of men say it was because they did not have an appetite.

The trend toward unhealthy eating behaviors is especially troubling among older teen girls (ages 15 to 17). Thirty-seven percent eat to manage stress, compared with 20 percent of younger teen girls (ages 13 to 14) and teen boys overall (18 percent).





When asked why they skipped a meal, 73 percent of older teen girls say they did not have an appetite.



Millennials Engage in Unhealthy Eating **Behaviors Due to Stress**

Millennials are more likely than other generations to say they eat too much or eat unhealthy foods due to stress — 50 percent say they have done so in the past month, compared to 36 percent of Gen Xers, 36 percent of Boomers and 19 percent of Matures. 5 Millennials are also most likely to say they ate unhealthy foods or overate because of a food craving (62 percent vs. 52 percent of Gen Xers and 53 percent of Boomers).

Millennials are most likely to report eating to manage stress (36 percent vs. 30 percent of Gen Xers, 25 percent of Boomers and just 10 percent of Matures).

Millennials are more likely to say they skipped a meal in the past month because of stress (43 percent vs. 33 percent of Gen Xers, 24 percent of Boomers and 10 percent of Matures).

Similar numbers of Millennials, Gen Xers and Boomers say that skipping meals to manage stress is a habit (16 percent, 14 percent and 15 percent, respectively).

Millennials are most likely to report feeling sluggish or lazy after skipping a meal (28 percent), compared with 22 percent of Gen Xers and 20 percent of Boomers.



⁵ The four generations are defined as the following: Millennials (18- to 34-year-olds), Gen Xers (35- to 48-year-olds), Boomers (49- to 67-year-olds) and Matures (68 years and older).





A Stress Snapshot

Since 2007, the Stress in America™ survey has examined how stress affects Americans' health and wellbeing. Survey findings reveal that people continue to experience stress higher than what they believe to be healthy, struggle to achieve their health and lifestyle goals, and manage stress in ineffective ways.

This year, the survey also explored the relationship between stress and health behaviors like sleep, exercise and eating — behaviors that people report are important to them but that appear to be negatively affected by stress.



High Stress Does Not Appear to Be Going Away

Survey results show that adults are living with stress that is higher than what they believe to be healthy and that they are not having much success at managing or reducing their stress.

On a scale of 1 to 10 (where 1 is "little or no stress" and 10 is "a great deal of stress"), adults' average reported stress level is a 5.1, higher than the level of stress they believe is healthy (3.6).

Forty-two percent of adults report that their stress level has increased and 36 percent say their stress level has stayed the same over the past five years.

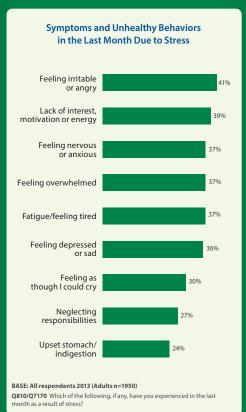
Thirty-six percent of adults say their stress has increased and nearly half (48 percent) say it has stayed the same in the past year.

Sixty-one percent of adults say that managing stress is extremely or very important, but only 35 percent say they are doing an excellent or very good job at it.

Sixty-two percent of adults say they have tried to reduce stress in the past five years, but only 37 percent say they were successful at doing so.



THE MAJORITY OF PEOPLE REPORT EXPERIENCING SYMPTOMS OF STRESS IN THE PAST MONTH.



Money (71 percent), work (69 percent) and the economy (59 percent) are the most commonly reported sources of stress.

The majority of people report experiencing some symptoms of stress — 67 percent report experiencing emotional symptoms of stress and 72 percent report experiencing physical symptoms of stress. Specific symptoms reported in the past month include feeling irritable or angry (41 percent); feeling a lack of interest, motivation or energy (39 percent); feeling nervous or anxious (37 percent); feeling overwhelmed (37 percent); fatigue or feeling tired (37 percent); feeling depressed or sad (36 percent); feeling as though they could cry (30 percent); neglecting responsibilities (27 percent); and experiencing upset stomach or indigestion (24 percent).

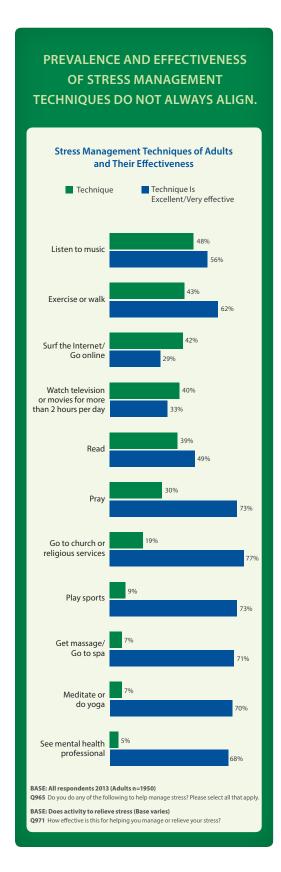
Despite the physical and emotional symptoms of stress that adults report, many do not perceive an impact of stress on their health. Regardless of reported symptoms, 39 percent of adults say their stress levels have slight or no impact on their physical health, with 43 percent saying the same about their mental health.

Adults' stress levels appear to have an impact on their personal relationships as well. Adults report losing patience with others due to stress and many adults say others often tell them they seem stressed.

Nearly half (46 percent) of adults say they lost patience or yelled at their spouse, partner or children when stressed in the last month. Additionally, 46 percent report that someone tells them they seem stressed at least once a month.

More than half (54 percent) of adults say their personal relationships (for example, spouse, kids, partner) are a very or somewhat significant source of stress in their lives.





Adults Struggle to Manage Stress Effectively

Although people consistently report stress at levels in the past month that are higher than what they believe to be healthy, many say they are not sure whether they are doing enough to manage their stress; still others admit outright that they are not doing enough to manage their stress. When people report engaging in specific stress management techniques, many say that such techniques are only somewhat or not at all effective.

Nearly half of adults (44 percent) say they are not doing enough or are not sure whether they are doing enough to manage their stress, but as many as one in five Americans (19 percent) say they never engage in stress management activities.

The most commonly reported stress management activities include listening to music (48 percent), exercising or walking (43 percent), going online (42 percent), watching TV or movies for more than two hours a day (40 percent) and reading (39 percent).

A majority of adults (62 percent) who exercise or walk to manage stress say it is extremely or very effective, with 56 percent saying the same about listening to music and 49 percent saying the same about reading. Fewer say that going online (29 percent) and watching TV or movies for more than two hours a day (33 percent) are extremely or very effective stress management techniques.

Adults also see stress benefits in mental health care. Of the 5 percent of adults reporting that they visited a mental health professional for help managing stress, 68 percent report that it was extremely or very effective.

Stress also appears to be a barrier that prevents people from making lifestyle changes and leads them to engage in unhealthy behaviors.

In the past five years, the majority of adults have tried to make a behavior change and many are still trying. Of those who tried, more than one in





10 (13 percent) say they have not been able to make a lifestyle change because they are too stressed. Seventy-eight percent say they have tried to eat a healthier diet in the past five years, but 52 percent of those are still trying to meet this goal. Sixty-nine percent have tried to exercise more, but 50 percent of those are still trying; 61 percent have tried to get more sleep, with 53 percent of those still trying.

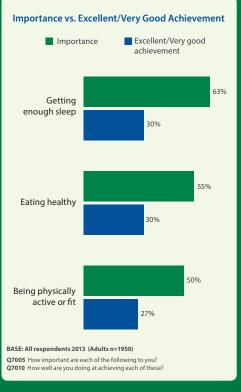
Many adults report lying awake at night (43 percent), overeating or eating unhealthy foods (38 percent), and skipping meals (30 percent) due to stress in the past month.

Sixty-three percent of adults report that getting enough sleep is extremely or very important to them, but only 30 percent say they are doing an excellent or very good job at achieving this goal.

Fifty-five percent say that eating healthy is extremely or very important to them, but only 30 percent say they are doing an excellent or very good job at this.

Half (50 percent) of adults say that being physically active or fit is extremely or very important to them, but only 27 percent say they are doing an excellent or very good job at this.





Teens Under Pressure

Teens report experiencing stress in ways that are similar to adults. They say their stress levels are higher than they believe is healthy, do not appear to understand the impact of stress on their physical or mental health, and report that stress affects their personal relationships.

Teens report that during the school year they have an average stress level of 5.8 on a 10-point scale, compared with a level of 4.6 during the summer. Furthermore, 31 percent of teens say their stress levels have increased over the past year.



For teens, the most commonly reported sources of stress are school (83 percent), getting into a good college or deciding what to do after high school (69 percent), and financial concerns for their family (65 percent).

Half (51 percent) of teens say that managing stress is extremely or very important, with 41 percent saying they are doing an excellent or very good job at this.

The most commonly reported stress management techniques among teens are listening to music (67 percent), playing video games (46 percent), going online (43 percent), spending time with family or friends (43 percent), and exercising or walking (37 percent).

Many teens report lying awake at night (35 percent), overeating or eating unhealthy foods (26 percent), and skipping meals (23 percent) due to stress in the past month.

Forty percent of teens report feeling irritable or angry, 36 percent report feeling nervous or anxious, 36 percent report feeling fatigued or tired, and 31 percent report feeling overwhelmed due to stress in the past month.

Almost one in three teens report skipping exercise or physical activity in the last month when they were feeling stressed (28 percent).

More than half (54 percent) of teens say that their stress has slight or no impact on their physical health, with 52 percent saying the same about their mental health.

More than one-guarter of teens (26 percent) say they snapped at or were short with classmates or teammates when stressed in the last month. Fifty-one percent of teens say someone tells them they seem stressed at least once a month.

MOST COMMONLY REPORTED **SOURCES OF STRESS FOR TEENS**

- G INTO A GOOD COLLEGE/ **DECIDING WHAT TO DO AFTER** HIGH SCHOOL
- L CONCERNS FOR THEIR FAMILY



Younger Generations Struggle to Manage Stress

Younger Americans report higher average levels of stress in the past month and appear to experience more challenges managing their stress than older Americans.

For all generations, a gap exists between the percentage of adults who say stress management is important and the percentage who say they manage their stress effectively. The gap for younger Americans, however, is widest (Millennials: 35-point gap; Gen Xers: 31-point gap; Boomers: 22-point gap; Matures: 7-point gap).1

Millennials and Gen Xers report higher average stress levels than other adults (Millennials: 5.7 on a 10-point scale; Gen Xers: 5.7; Boomers: 4.9; and Matures: 3.5). These younger generations are also most likely to report that their stress levels have increased in the past year (Millennials: 45 percent; Gen Xers: 36 percent; Boomers: 33 percent; Matures: 21 percent). Millennials are more likely than the other three generations to say that they think their stress will increase in the next year (Millennials: 28 percent; Gen Xers: 17 percent; Boomers: 9 percent; Matures: 12 percent).

Millennials and Gen Xers also are more likely to report feeling irritable or angry in the past month due to stress (Millennials: 50 percent; Gen Xers: 48 percent; Boomers: 35 percent; Matures: 25 percent). They also are more likely to report feeling anxious or nervous (Millennials: 44 percent; Gen Xers: 46 percent; Boomers: 31 percent; Matures: 21 percent).

FOR ALL GENERATIONS, A GAP **EXISTS BETWEEN THE PERCENTAGE OF ADULTS WHO SAY STRESS MANAGEMENT IS IMPORTANT AND** THE PERCENTAGE WHO SAY THEY MANAGE THEIR STRESS EFFECTIVELY. Importance vs. Achievement Importance Excellent/Very good achievement Millennial Gen Xer Boomer Mature BASE: All respondents 2013 (Millennial n=392; Gen Xer n=379; Boome n=808; Mature n=371) **Q7005** How important are each of the following to you (e.g., managing st being physically active or fit, getting enough sleep, eating healthy, etc.)? **Q7010** How well are you doing at achieving each of these?

Women Continue to Face an Uphill Battle With Stress

While most men and women say that stress management is important to them, women seem to have more trouble than men in reaching their stress management goals and are also more likely to report symptoms of stress. However, women are more likely to recognize that their stress affects their health and are more likely to think psychologists can help with stress management.



¹ The four generations are defined as the following: Millennials (18- to 34-year-olds), Gen Xers (35- to 48-year-olds), Boomers (49- to 67-year-olds) and Matures (68 years and older).

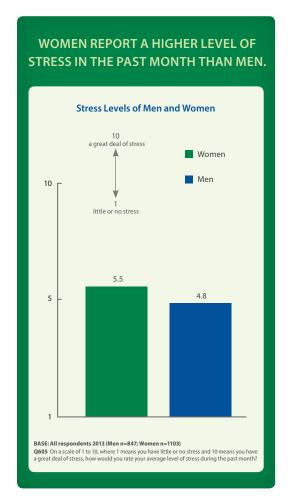
Women report a higher level of stress in the past month than men (5.5 vs. 4.8 on a 10-point scale) and are more likely to say their stress is extreme (24 percent of women vs. 17 percent of men rating their stress level as an 8, 9 or 10 on a 10-point scale).

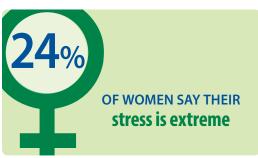
In the past five years, 66 percent of women report having tried to reduce their stress levels, compared with 57 percent of men. Only 32 percent of women say they have reduced their stress, compared with 43 percent of men.

In the past month, more women than men reported signs and symptoms of stress, including:

- Having a lack of interest, motivation or energy (44 percent vs. 33 percent of men).
- Feeling overwhelmed (44 percent vs. 28 percent of men).
- Experiencing fatigue (41 percent vs. 32 percent of men).
- Being unable to control the important things in their life very or fairly often (27 percent vs. 21 percent of men).
- Being unable to cope with all the things that they had to do very or fairly often (19 percent vs. 13 percent of men).

Despite the challenges they report, women appear to be more aware than men of the impact stress can have on their lives. Women are more likely to say stress has a strong or very strong impact on their physical health (34 percent vs. 25 percent of men) and their mental health (36 percent vs. 29 percent of men). They are also more likely than men to say that a psychologist can help a great deal or a lot with stress management (36 percent vs. 30 percent of men).





Americans Nationwide Try to Manage Stress

Across all regions of the country, few adults report doing an excellent or very good job at managing stress. The majority report they have tried to reduce stress, but only a small percentage report success in doing so. Adults in the West report higher levels of stress than people living in





other regions, yet they are most likely to say their stress management is extremely or very important. They are also increasingly likely to say they are doing an excellent or very good job of managing their stress.

Fewer than four in 10 adults report doing an excellent or very good job at managing stress (East: 34 percent; Midwest: 36 percent; West: 37 percent; South: 33 percent).

The majority of adults say they have tried to reduce their stress in the past five years (East: 62 percent; Midwest: 58 percent; West: 64 percent; South: 63 percent). Nevertheless, fewer than four in 10 say they have been successful (East: 33 percent; Midwest: 40 percent; West: 38 percent; South: 36 percent).

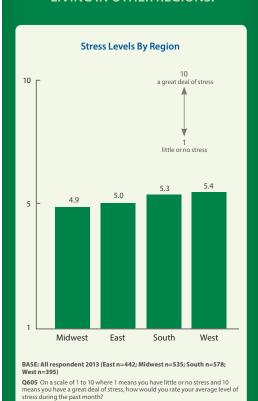
On average, people living in the West and the South report higher levels of stress in the past month (West: 5.4; South: 5.3) than Americans living in other regions (East: 5.0; Midwest: 4.9).

People living in the West are most likely to say that managing their stress is extremely or very important to them (East: 61 percent; Midwest: 61 percent; West: 67 percent; South: 57 percent). Westerners are also increasingly likely to say they are doing an excellent or very good job at managing their stress (2013: 37 percent; 2012: 35 percent; 2011: 35 percent; 2010: 24 percent).

While Easterners report lower average levels of stress in the past month than they did in previous years (2013, 5.0; 2012, 5.2; 2011, 5.4; 2010, 5.2; 2009, 5.5; 2008, 5.8; 2007, 6.2), they are most likely to think their stress level will increase in the coming year (East: 21 percent; Midwest: 13 percent; West: 15 percent; South: 18 percent).

Westerners and Southerners are most likely to report feeling irritable or angry in the past month due to stress (West: 44 percent; South: 44 percent) than those in the East and Midwest (East: 38 percent; Midwest: 38 percent). Additionally, Westerners are most likely to report feeling nervous or anxious (East: 37 percent; Midwest: 34 percent; West: 39 percent; South: 38 percent).

ON AVERAGE, PEOPLE LIVING IN THE WEST AND THE SOUTH REPORT HIGHER LEVELS OF STRESS IN THE **PAST MONTH THAN AMERICANS** LIVING IN OTHER REGIONS.



Guidelines for Reading Questions and Interpreting Data

There are multiple ways in which to ask questions and collect data when conducting survey research. It is important to think clearly about what the goal and purpose of each question is so that the best format can be selected. Once data are collected, reporting and interpreting the data accurately is as important as asking the questions. Maintaining an understanding of the question structure will allow for correct interpretation.

We have provided a few examples here to help *Stress in America*™ readers better understand the purpose of different question structures and the importance of using accurate language when interpreting the data. In this methodology, we do not cover every kind of question that can be asked in survey research; rather, we include a few question structures that we have found are commonly misreported.

Grid Question — evaluating multiple attributes or characteristics on the same scale:

WHAT IS A grid question?

- Allows respondents to evaluate multiple attributes or characteristics using the same scale
 - Attitudes, perceptions, behaviors, etc.
- Has scales that can vary and measure various attitudes or behaviors
 - Importance, agreement, likelihood, favorability, etc.

HOW IMPORTANT ARE EACH OF THE FOLLOWING TO YOU?					
	Extremely Important	Very Important	Important	Somewhat Important	Not at All Important
Having good relationships with my family	51%	26%	17%	5%	2%
Getting enough sleep	30%	33%	28%	7%	2%
Doing well in my career/ studies/school	30%	30%	27%	9%	3%
Having good relationships with my friends	29%	33%	28%	9%	2%
Managing stress	28%	33%	27%	8%	4%
Eating healthy	24%	31%	31%	12%	2%
Being physically active or fit	24%	26%	33%	14%	3%
BASE: All respondent (Adults n=1950)					

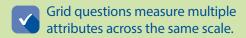
WHAT DOES A GRID QUESTION MEASURE?

- Measures the level of endorsement for a particular attitude, perception or behavior
- Evaluates attributes independently
- Provides insight into the strength and depth of feeling for each attribute

WHAT DOES A GRID QUESTION NOT MEASURE?

- Does **not** measure absolutes
- Does <u>not</u> ask respondents to "rank" attributes
 - Reporting should reflect that respondents did not "rank" items against each other

GRID QUESTIONS: Key Takeaways



They are "rating" questions, not "ranking" questions.

They measure attributes as they relate to each other, but not absolutes.

They indicate the level of endorsement (e.g., importance, agreement, etc.) for each attribute.

REPORTING: When reporting on data collected in a grid question, it is important to remember what these questions do and do not measure.

Correct

Type of Reporting

... when reporting on individual attributes evaluated in the grid

Seventy-seven percent of adults think having good relationships with family is extremely or very

important.

Seventy-seven percent of adults think having good relationships with family is important, with 51 percent saying it is extremely important and 26 percent saying it is very important.

Having good relationships with

Incorrect

family is the most important thing in people's lives (51 percent).

... when comparing multiple attributes

Many adults believe that having good relationships with family (51 percent), doing well in my career/studies/school (30 percent) and having good relationships with friends (29 percent) are extremely important to them.

The areas of life most commonly seen as important are having good relationships with family (51 percent), doing well in my career/studies/school (30 percent) and having good relationships with friends (29 percent).

The most important areas of life are having good relationships with family (51 percent), doing well in my career/studies/school (30 percent) and having good relationships with friends (29 percent).

Americans rank having good relationships with family (51 percent) ahead of doing well in my career/studies/school (30 percent).

Having good relationships with family (51 percent) is more important than having good relationships with friends (29 percent).

... when comparing subgroups on individual attributes

Women (80 percent) are more likely than men (73 percent) to think having good relationships with family is extremely or very important.

More women (80 percent) than men (73 percent) think having good relationships with family is extremely or very important. Women think that having good relationships with family (80 percent extremely or very important) is more important than having good relationships with friends (65 percent).

Rationale

The question measures the degree of importance placed on each item.

In each of these examples, the incorrect statement is misleading because the finding is reported as if the question asked for a "ranking," rather than a "rating."

With the grid question format, respondents are not asked to make a direct comparison between the attributes that may have resulted in a different finding. As such, while we can discuss which attributes the sample is most likely to rate "important," we cannot state that one is more important than another.

WHAT IS A **simple** scaled question?

- · Asks about specific attitudes or behaviors
- · Has scales that can vary and measure various attitudes or behaviors
 - Importance, agreement, likelihood, favorability, etc.

WHAT DOES A SIMPLE **SCALED QUESTION MEASURE?**

The level of endorsement for a specific attitude, perception or behavior

WHAT DOES A SIMPLE SCALED **QUESTION NOT MEASURE?**

How the item being measured relates to other attitudes or behaviors

SIMPLE SCALED QUESTIONS: Key Takeaways



Simple scaled questions measure specific attitudes or behaviors.



Their findings indicate the level of endorsement (e.g., importance, agreement, etc.) for specific attitudes or behaviors.

Simple Scaled Question — eliciting a specific attitude or behavior from a respondent:

HOW WOULD YOU RATE YOUR OVERALL HEALTH?		
Excellent	7%	
Very Good	28%	
Good	45%	
Fair	18%	
Poor	3%	
BASE: All respondents (Adults n=1950)		

REPORTING: When reporting on simple scaled questions, it is important to remember that these questions answer only the specific question asked. Errors in reporting are less common than with grid questions, described previously.

Type of Reporting	Correct	Incorrect
when reporting on individual attributes	Most adults report their overall health as good (45 percent) or very good (28 percent). Very few (7 percent) would say their overall health is excellent.	Thirty-five percent of adults are in excellent or very good health. Most adults (45 percent) are in good health and very few (3 percent) are unhealthy.
when comparing subgroups	Both men (35 percent) and women (34 percent) are likely to think their health is excellent or very good.	Men and women are equally healthy (35 percent and 34 percent, respectively).
	Rationale	

The incorrect findings are not specific enough. The question specifically asked respondents to evaluate their own health; it does not represent objective measures of health or the opinion of a qualified health care professional, which may differ from the self-report.

Multiple Response Question — asking respondents to report on a range of behaviors, attitudes or perceptions:

DO YOU DO ANY OF THE FOLLOWING TO HELP MANAGE STRESS? PLEASE SELECT ALL THAT APPLY.

Top Ten Most Common Responses Listen to music 48% Exercise or walk 43% Surf the Internet/Go online 42% Watch TV or movies for more 40% than two hours per day Read 39% Spend time with friends or family 36% Nap/Sleep 32% Pray 30% Spend time doing a hobby 28% Eat 27% BASE: All respondents (Adults n=1950)

what is a multiple response question?

- Used to understand a range of attitudes, behaviors or perceptions
- Provides insight into the prevalence of different attitudes, behaviors or perceptions

WHAT DOES A MULTIPLE **RESPONSE QUESTION MEASURE?**

Measures the prevalence of attitudes, behaviors or perceptions

WHAT DOES A MULTIPLE RESPONSE **QUESTION NOT MEASURE?**

- Does **not** necessarily measure the frequency of a specific attitude, behavior or perception
- Does **not** necessarily measure the strength of the attitude or perception measured
- Does **not** specifically capture preference (i.e., "favorites") or rank order among attitudes, behaviors or perceptions

REPORTING: When reporting on data collected from a multiple response question, it is important to remember that these questions measure prevalence. They do not necessarily measure frequency, strength of endorsement or preference. Rather, these data are used to understand the range of behavior or attitudes on a given topic.

Type of Reporting	Correct	Incorrect
when reporting at the aggregate level	The most common ways people manage stress are listening to music, exercising or walking, and surfing the Internet.	Listening to music is the most frequent stress management technique.
	Roughly half of adults listen to music as a way to manage stress (48 percent).	
	Listening to music, exercising or walking, and surfing the Internet are the most popular ways to manage stress.	

Type of Reporting	Correct	Incorrect
when comparing multiple attributes	Exercising (43 percent) and surfing the Internet (42 percent) are equally likely to be used as stress management techniques.	Listening to music (48 percent) is done more frequently than exercising (43 percent) when it comes to stress management.
	Listening to music is more commonly mentioned as a stress management strategy than napping.	Adults exercise more than read to manage stress (43 percent vs. 39 percent).
	Listening to music (48 percent) is the stress management technique embraced by the highest percentage of adults, followed by exercising (43 percent).	Adults prefer listening to music (48 percent) over watching TV (40 percent) as a way to manage stress.

MULTIPLE RESPONSE OUESTIONS: Key Takeaways



Multiple response questions measure the prevalence of attitudes, behaviors and perceptions.



They provide insight into a range of behaviors or attitudes on a specific topic.



They do not necessarily measure the frequency of behaviors.



They do not necessarily measure the strength of an attitude or perception.

... when comparing subgroups on individual attributes

Women (48 percent) are more likely than men (29 percent) to say they read to manage their stress.

More men (29 percent) than women (14 percent) play video games to manage stress.

Women read more frequently than men as a stress management technique.

Men play video games more often than women to manage

Rationale

In reporting, use of the word "frequently" or "frequency" implies how often a behavior is done.

This question, as phrased, measures prevalence (i.e., how many people are doing these activities) rather than actual frequency (i.e., how many times per week or month they are doing each of these).

When reporting on subgroups, we know that more people from a particular subsample (e.g., women) engage in a behavior as compared to another subsample (e.g., men). The question does not address whether those women engaging in the behavior actually do so more often than men.

It is important to consider the whole question as it was asked. As such, results from this question cannot, for example, be used to measure the likelihood of listening to music overall — only the likelihood of listening to music for the specific purpose of managing stress.