

# 2013 *Sleep in America*<sup>®</sup> Poll

## Exercise and Sleep

### Summary of Findings

2.20.2013

#### National Sleep Foundation

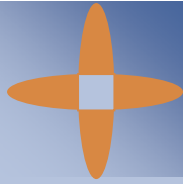
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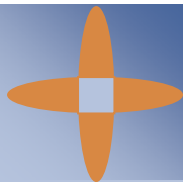
[www.sleepfoundation.org](http://www.sleepfoundation.org)





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## Objectives, Background and Purpose

The National Sleep Foundation commissioned WB&A Market Research to conduct a national survey of Americans regarding their sleep habits – the NSF 2013 *Sleep in America*® poll. This poll is an annual review of habits, behaviors and attitudes pertaining to sleep and sleep quality. The study includes measures of sleepiness, drowsy driving, sleep disorders and general health.

The National Sleep Foundation has conducted the *Sleep in America*® poll since 1991. The poll is representative of the U.S. population, age 23 to 60, with a primary focus of this year's poll being to evaluate the relationship between sleep and physical activity.

A total of 1,000 surveys were conducted yielding a maximum standard error of  $\pm 3.1$  percentage points at the 95% confidence level (see Appendix page 66 for detailed information on standard error). A representative sample was constructed with stratification by age and area of the country (Northeast, Midwest, West, and South) to determine the relationship between sleep quantity, sleep quality, sleep problems and physical activity. 500 surveys were completed via the Web and 500 via telephone interviews (see Appendix page 64 for detailed information on the methodology used to conduct the poll).

Details concerning the respondents' demographic information, such as: age, gender, ethnicity, region of residence, marital status, employment status, income and education level can be found in the Appendix (page 67).

When referring to this poll in an article or story, please refer to it as the “National Sleep Foundation 2013 poll” and link it to [www.sleepfoundation.org/2013poll](http://www.sleepfoundation.org/2013poll).

*NSF wishes to acknowledge the volunteer work of the members of its 2013 Poll Task Force:*

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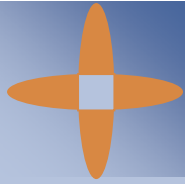
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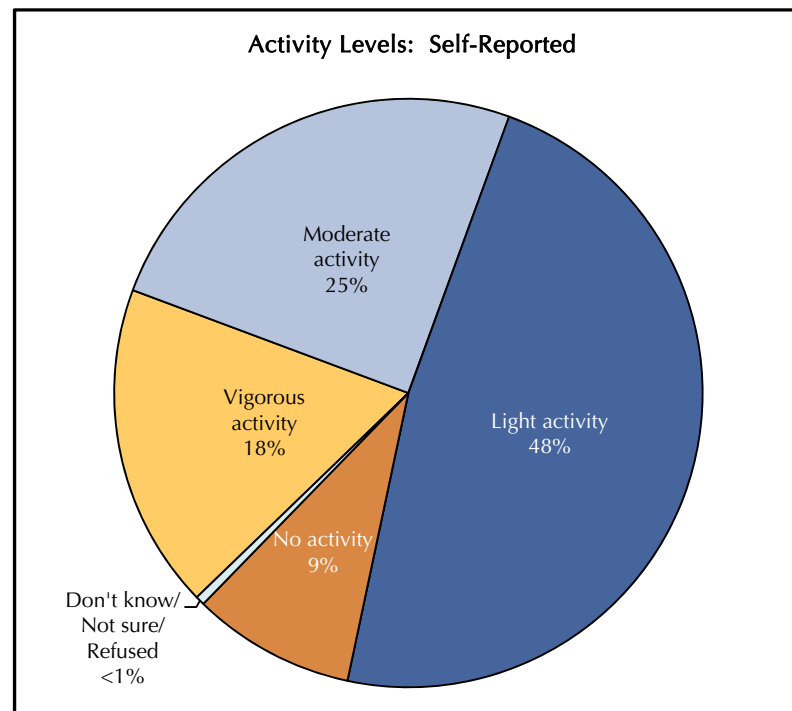


## Objectives, Background and Purpose

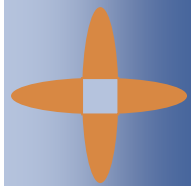
Using a self-reported measure of physical activity, for which respondents considered physical activity they did for at least 10 minutes in the past 7 days, participants were classified into four different activity levels: vigorous, moderate, light and no activity. This primary classification was used to contrast key sleep and sleep-health related variables collected in this 2013 *Sleep in America*<sup>®</sup> poll.

In this self-report measure, vigorous was defined as activities which require hard physical effort such as: running, cycling, swimming or competitive sports. The next level, moderate, was defined as activities which require more effort than normal such as: yoga, thai chi and weight lifting. Light activity was defined as walking, while those who do not do any activity classified themselves into the no activity level.

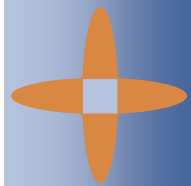
Throughout the report, segments are often referred to as vigorous exercisers, moderate exercisers, light exercisers and non-exercisers based on this measure of self-categorization. Below are the proportions of respondents who fell into each self-reported physical activity level.



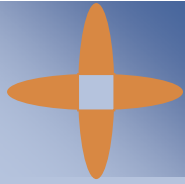
Base= Total sample (n=1,000)  
Q34



# Summary of Findings



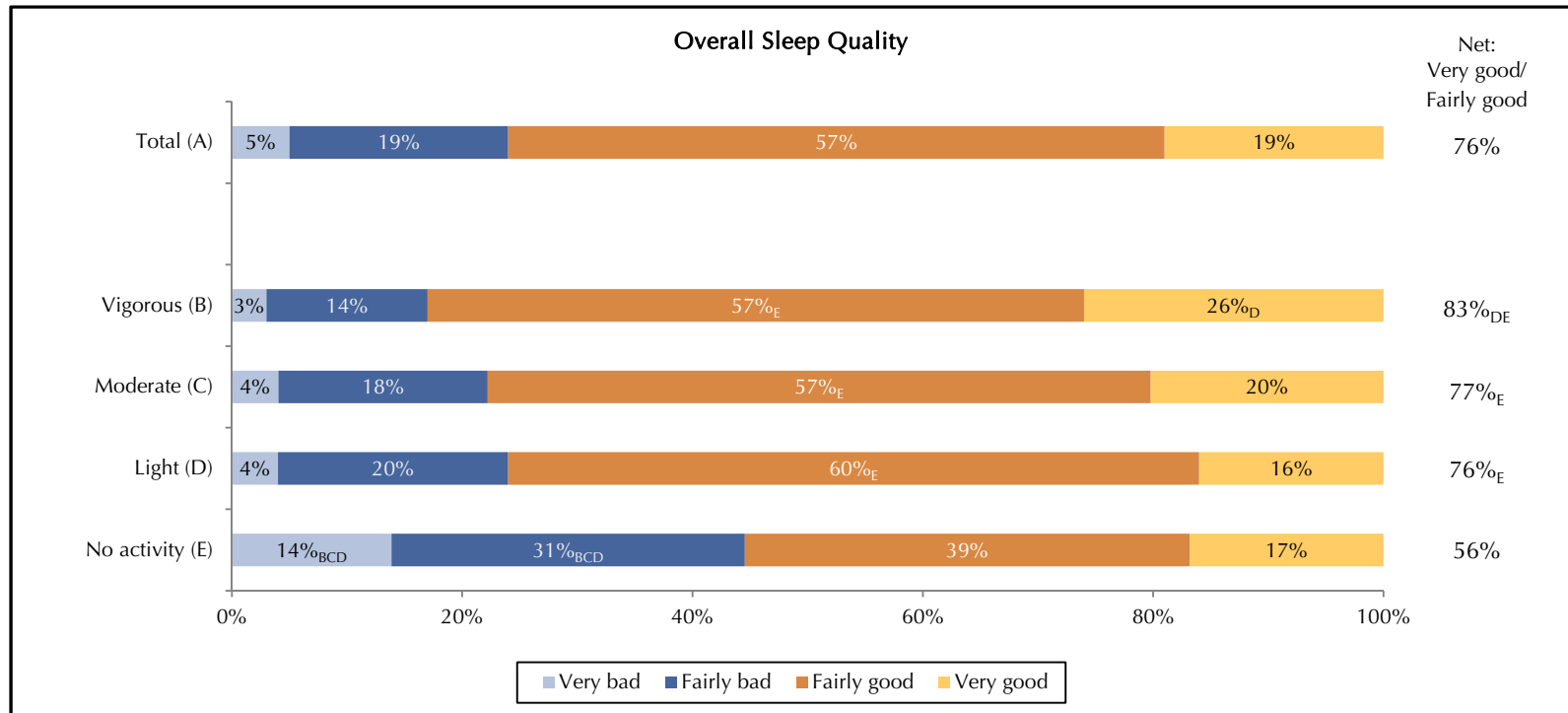
Exercise is good for sleep



## Exercise is good for sleep

Data from the 2013 *Sleep in America*<sup>®</sup> poll overwhelmingly support the proposition that “Exercise is good for sleep”. This section highlights findings showing that although those who exercise and do not exercise report very similar sleep needs and sleep patterns, those who exercise are more likely to say, “I had a good night’s sleep” on both worknights and non-worknights.

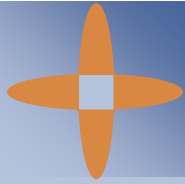
As shown below, the proportion of those who categorize themselves as vigorous exercisers, moderate exercisers and light exercisers, and report very good or fairly good overall sleep quality (83%, 77% and 76% respectively) is significantly higher than those who categorize themselves as no activity or non-exercisers (56%).



Base= Total sample (Total n=1,000; Vigorous n=183; Moderate n=250; Light n=477; No activity n=88)

Letters indicate significant differences at the 95% confidence level.

Q30



## Exercise is good for sleep (continued)

Each segment (vigorous, moderate, light and no activity) reports getting relatively similar average lengths of sleep on workdays and non-workdays.

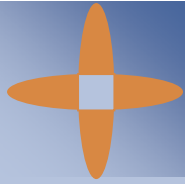
| Hours of Sleep Workdays      |               |                 |                 |               |                    |
|------------------------------|---------------|-----------------|-----------------|---------------|--------------------|
|                              | Total<br>(A)  | Activity Levels |                 |               |                    |
|                              |               | Vigorous<br>(B) | Moderate<br>(C) | Light<br>(D)  | No activity<br>(E) |
| <b>Workdays</b> n =          | (1,000)       | (183)           | (250)           | (477)         | (88)               |
| Less than 6 hours            | 14%           | 15%             | 12%             | 14%           | 14%                |
| 6 hours to less than 7 hours | 26            | 25              | 22              | 27            | 28                 |
| 7 hours to less than 8 hours | 33            | 38              | 35              | 32            | 28                 |
| 8 hours or more              | 25            | 21              | 28              | 26            | 24                 |
| Don't know/Not sure/Refused  | 2             | 1               | 3               | 1             | 6                  |
| <i>Average hours slept</i>   | <i>6h 51m</i> | <i>6h 48m</i>   | <i>6h 57m</i>   | <i>6h 50m</i> | <i>6h 43m</i>      |

Base= Total sample  
 Letters indicate significant differences at the 95% confidence level.  
 Q5

| Hours of Sleep Non-Workdays  |               |                 |                 |               |                    |
|------------------------------|---------------|-----------------|-----------------|---------------|--------------------|
|                              | Total<br>(A)  | Activity Levels |                 |               |                    |
|                              |               | Vigorous<br>(B) | Moderate<br>(C) | Light<br>(D)  | No activity<br>(E) |
| <b>Non-Workdays</b> n =      | (1,000)       | (183)           | (250)           | (477)         | (88)               |
| Less than 6 hours            | 7%            | 7%              | 5%              | 8%            | 9%                 |
| 6 hours to less than 7 hours | 13            | 11              | 12              | 14            | 14                 |
| 7 hours to less than 8 hours | 23            | 23              | 23              | 23            | 23                 |
| 8 hours or more              | 55            | 57              | 57              | 54            | 49                 |
| Don't know/Not sure/Refused  | 2             | 1               | 3               | 1             | 6                  |
| <i>Average hours slept</i>   | <i>7h 37m</i> | <i>7h 40m</i>   | <i>7h 41m</i>   | <i>7h 34m</i> | <i>7h 36m</i>      |

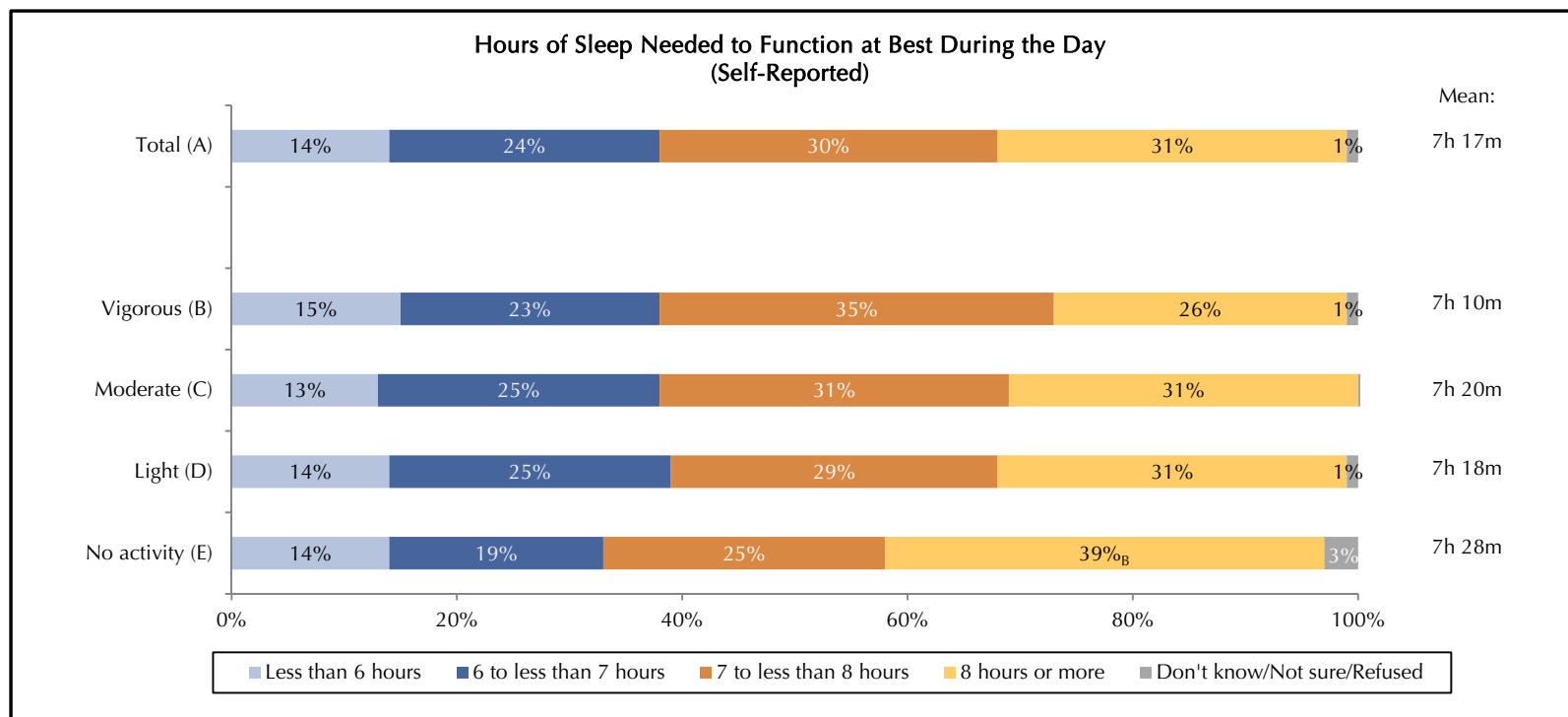
Base= Total sample  
 Letters indicate significant differences at the 95% confidence level.  
 Q6





## Exercise is good for sleep (continued)

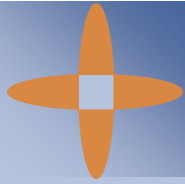
Comparable to similar average lengths of sleep on workdays and non-workdays, each segment reports needing roughly the same amount of sleep to function best during the day (from 7 hours and 10 minutes to 7 hours and 28 minutes).



Base= Total sample (Total n=1,000; Vigorous n=183; Moderate n=250; Light n=477; No activity n=88)

Letters indicate significant differences at the 95% confidence level.

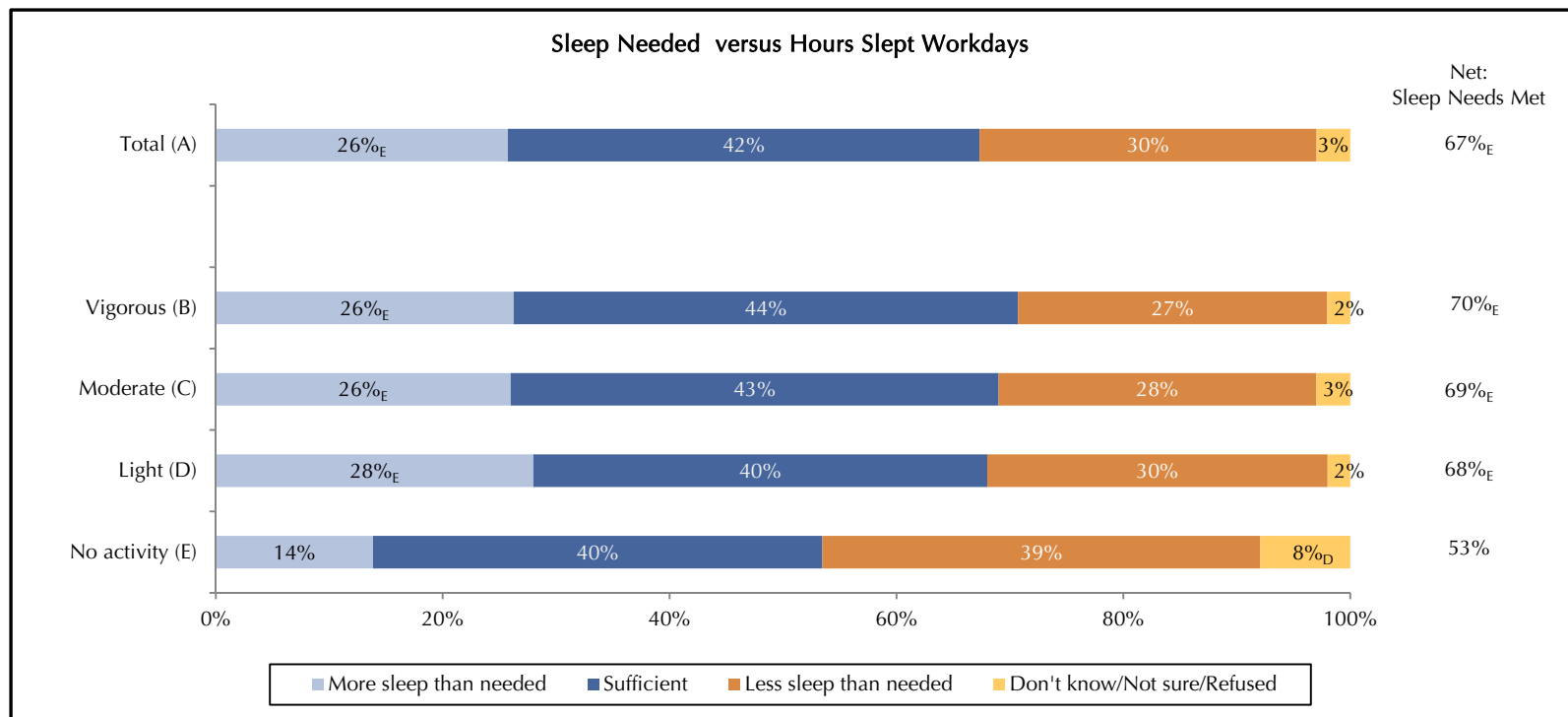
Q14



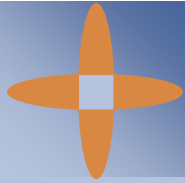
## Exercise is good for sleep (continued)

Those who report themselves to be exercisers are also significantly more likely than non-exercisers to say their sleep needs are being met (either getting more sleep than needed or sufficient sleep) on workdays (vigorous 70%, moderate 69% and light 68% vs. no activity 53%).

- Notably, exercisers are also significantly more likely to get more sleep than needed as compared to non-exercisers on workdays (vigorous 26%, moderate 26% and light 28% vs. no activity 14%).



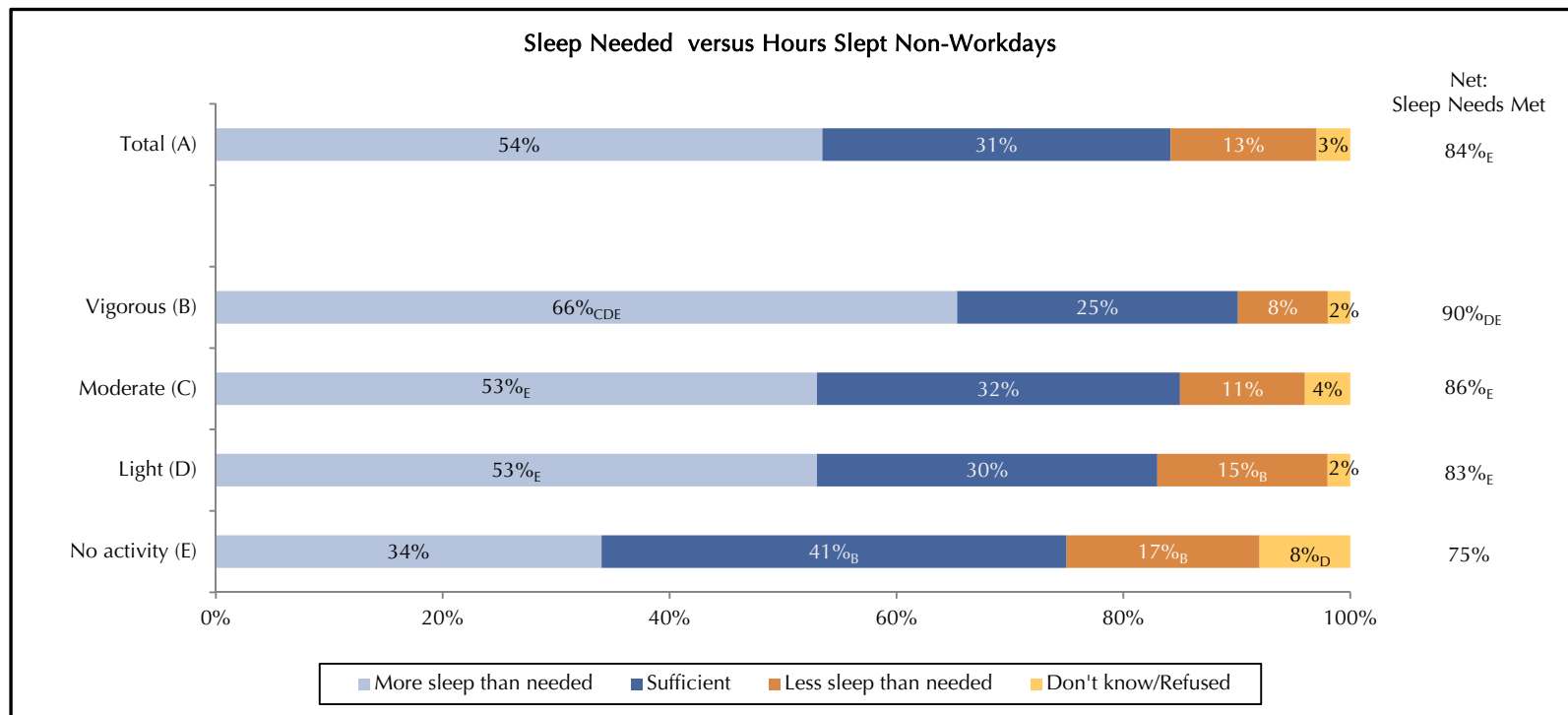
Base= Total sample (Total n=1,000; Vigorous n=183; Moderate n=250; Light n=477; No activity n=88)  
Letters indicate significant differences at the 95% confidence level.  
Q5/Q14



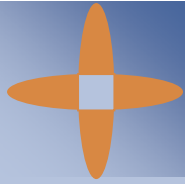
## Exercise is good for sleep (continued)

Similar to the findings for workdays, those who report themselves to be exercisers are significantly more likely than non-exercisers to say their sleep needs are being met (either getting more sleep than needed or sufficient sleep) on non-workdays (vigorous 90%, moderate 86% and light 83% vs. no activity 75%).

- Exercisers are also significantly more likely to get more sleep than needed as compared to non-exercisers on non-workdays (vigorous 66%, moderate 53% and light 53% vs. no activity 34%).



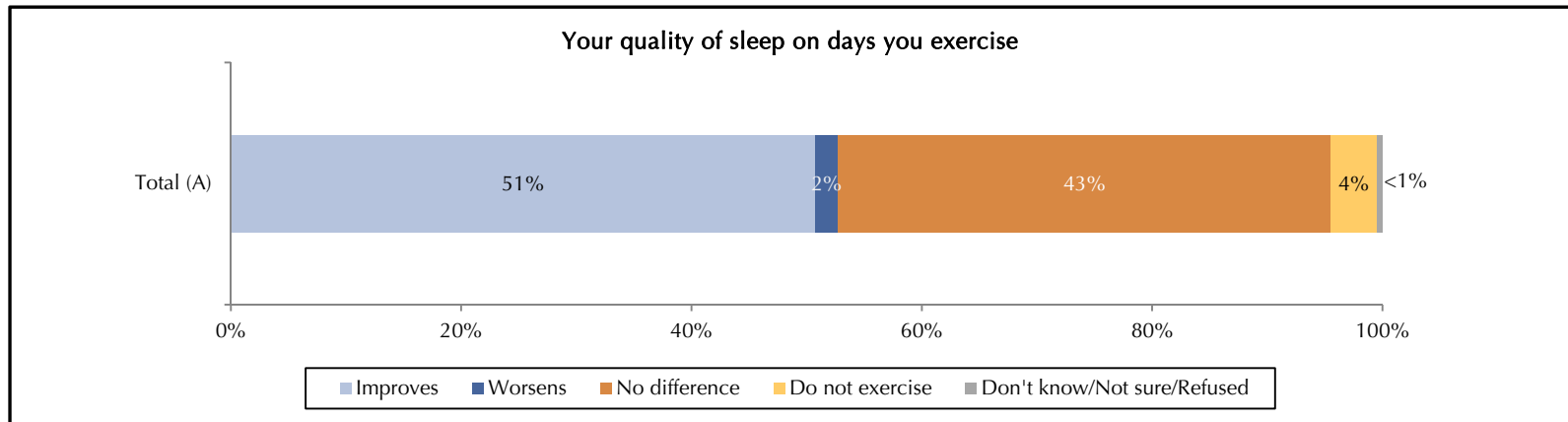
Base= Total sample (Total n=1,000; Vigorous n=183; Moderate n=250; Light n=477; No activity n=88)  
 Letters indicate significant differences at the 95% confidence level.  
 Q6/Q14



## Exercise is good for sleep (continued)

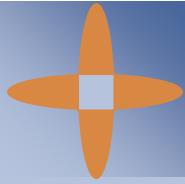
Those who characterize themselves as exercisers are significantly more likely to perceive their quality of sleep to improve on days they exercise compared to non-exercisers (vigorous 62%, moderate 54% and light 49% vs. no activity 28%).

➤ Notably, regardless of exercise level, about one-half (51%) perceive their sleep quality to improve on days they exercise.



| On days you exercise...      |            |                   |                  |                  |                   |
|------------------------------|------------|-------------------|------------------|------------------|-------------------|
|                              | Total (A)  | Activity Levels   |                  |                  |                   |
|                              |            | Vigorous (B)      | Moderate (C)     | Light (D)        | No activity (E)   |
| <b>Your quality of sleep</b> | n= (1,000) | (183)             | (250)            | (477)            | (88)              |
| Improves                     | 51%        | 62% <sub>DE</sub> | 54% <sub>E</sub> | 49% <sub>E</sub> | 28%               |
| Worsens                      | 2          | 2                 | 2                | 2                | 5                 |
| No difference                | 43         | 35                | 43               | 44 <sub>B</sub>  | 50 <sub>B</sub>   |
| Do not exercise              | 4          | 1                 | 1                | 5 <sub>BC</sub>  | 15 <sub>BCD</sub> |
| Don't know/Not sure/Refused  | <1         | -                 | <1               | <1               | 2                 |

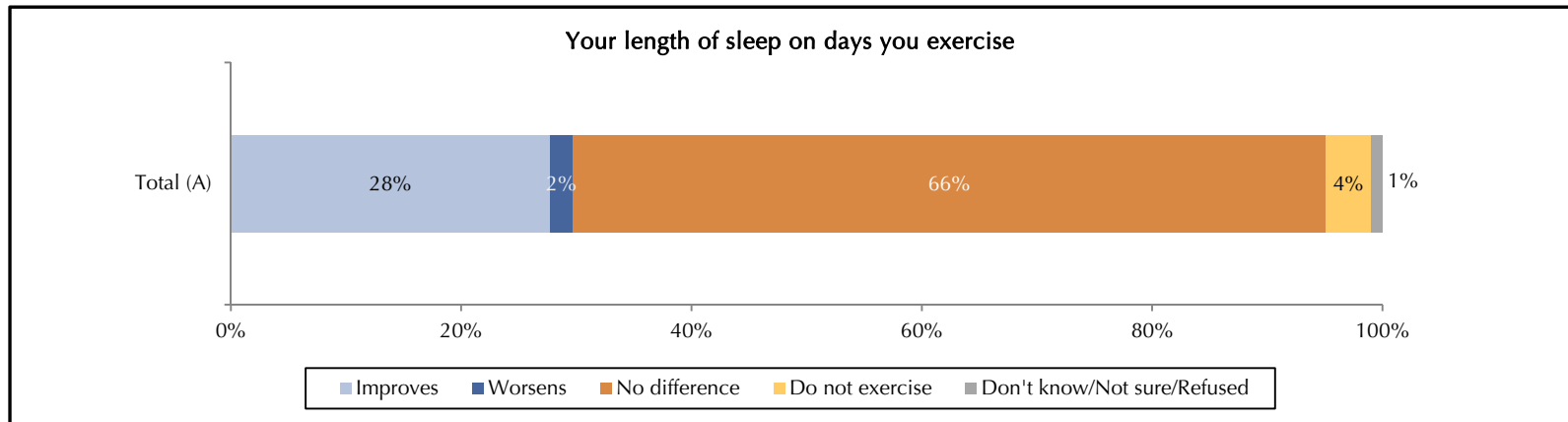
Base= Total sample  
 Letters indicate significant differences at the 95% confidence level.  
 Q45



## Exercise is good for sleep (continued)

Those who characterize themselves as exercisers are also significantly more likely to perceive their sleep length to improve on days they exercise compared to non-exercisers (vigorous 32%, moderate 29% and light 30% vs. no activity 11%).

➤ However, almost two-thirds (66%) overall perceive no difference in their sleep length on days they exercise.

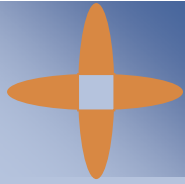


|                             |    | On days you exercise...(continued) |                  |                  |                  |                   |
|-----------------------------|----|------------------------------------|------------------|------------------|------------------|-------------------|
|                             | n= | Total (A)                          | Activity Levels  |                  |                  |                   |
|                             |    |                                    | Vigorous (B)     | Moderate (C)     | Light (D)        | No activity (E)   |
| <b>Your length of sleep</b> |    | (1,000)                            | (183)            | (250)            | (477)            | (88)              |
| Improves                    |    | 28%                                | 32% <sub>E</sub> | 29% <sub>E</sub> | 30% <sub>E</sub> | 11%               |
| Worsens                     |    | 2                                  | 2                | 2                | 1                | 2                 |
| No difference               |    | 66                                 | 64               | 68               | 64               | 67                |
| Do not exercise             |    | 4                                  | 1                | 1                | 4 <sub>BC</sub>  | 15 <sub>BCD</sub> |
| Don't know/Not sure/Refused |    | 1                                  | -                | -                | 1                | 5                 |

Base= Total sample

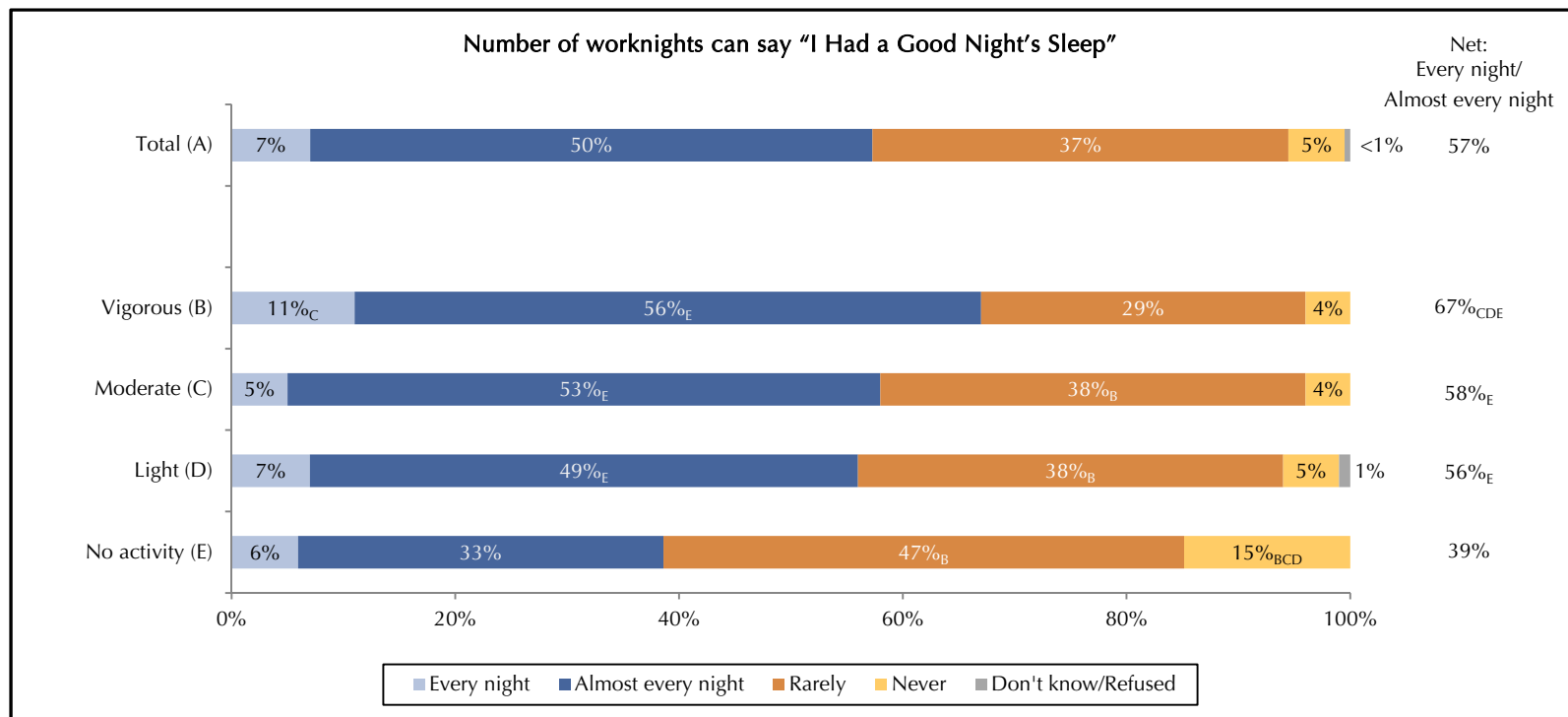
Letters indicate significant differences at the 95% confidence level.

Q46



## Exercise is good for sleep (continued)

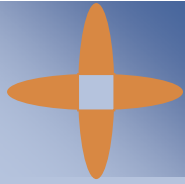
While those who exercise report needing and actually sleeping similar lengths of time as their non-exercising counterparts, their perception of sleep quality, or having a good night's sleep every night or almost every night on worknights, is significantly higher than those who do not exercise (vigorous 67%, moderate 58% and light 56% vs. no activity 39%).



Base= Total sample (Total n=1,000; Vigorous n=183; Moderate n=250; Light n=477; No activity n=88)

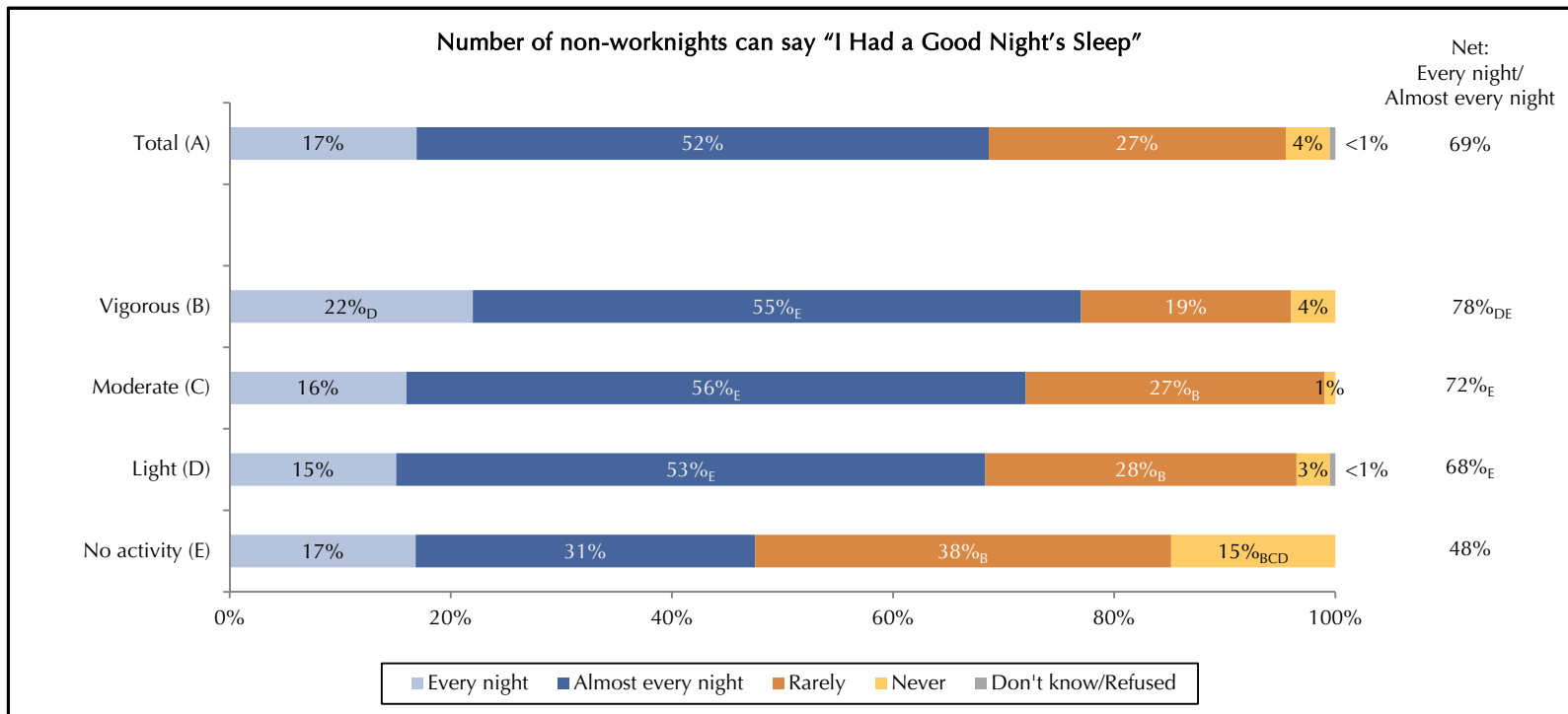
Letters indicate significant differences at the 95% confidence level.

Q11

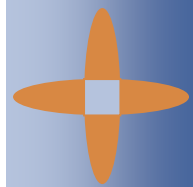


## Exercise is good for sleep (continued)

The same perception of sleep quality, or having a good night's sleep every night or almost every night, is also true on non-worknights. Those who categorize themselves as exercisers report significantly higher proportions for being able to say "I had a good night's sleep" every night or almost every night (vigorous 78%, moderate 72% and light 68% vs. no activity 48%).

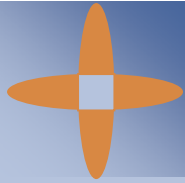


Base= Total sample (Total n=1,000; Vigorous n=183; Moderate n=250; Light n=477; No activity n=88)  
 Letters indicate significant differences at the 95% confidence level.  
 Q12



# Vigorous exercisers report best sleep



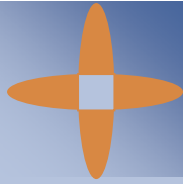


## Vigorous exercisers report best sleep

The data from the 2013 *Sleep in America*<sup>®</sup> poll not only shows that exercise is good for sleep, it also shows that those who classify themselves as vigorous exercisers generally have the best sleep.

Approximately one-fourth (26%) of respondents who classified themselves as vigorous exercisers reported very good sleep quality. This chart can be seen on page 6. Not only does the vigorous exercising subset of respondents report the largest proportion of very good sleep quality, this is significantly higher than those who classify themselves as light exercisers (16%).

Vigorous exercisers also report the largest proportion of satisfaction with the amount of sleep they actually get compared to the amount of sleep they report needing. As seen on page 10, vigorous exercisers (66%) are significantly more likely to report getting more sleep than needed as compared to moderate exercisers (53%), light exercisers (53%) and non-exercisers (34%).



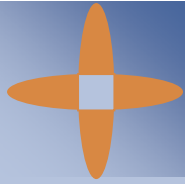
## Vigorous exercisers report best sleep (continued)

In terms of sleep problems, those categorizing themselves as vigorous exercisers are significantly more likely to say that in the past two weeks, they rarely or never had the following sleep problems: woke up during the night (40%, significantly more than moderate exercisers 31% and light exercisers 31%); they woke up feeling unrefreshed (46%, significantly more than light exercisers 38% and non-exercisers 27%); they had difficulty falling asleep (69%, significantly more than non-exercisers 50%); and/or they woke up too early and could not get back to sleep (72%, significantly more than light exercisers 61% and non-exercisers 58%).

- Overall, those who categorize themselves as vigorous exercisers have had fewer sleep problems in the past two weeks than the other subsets of respondents.

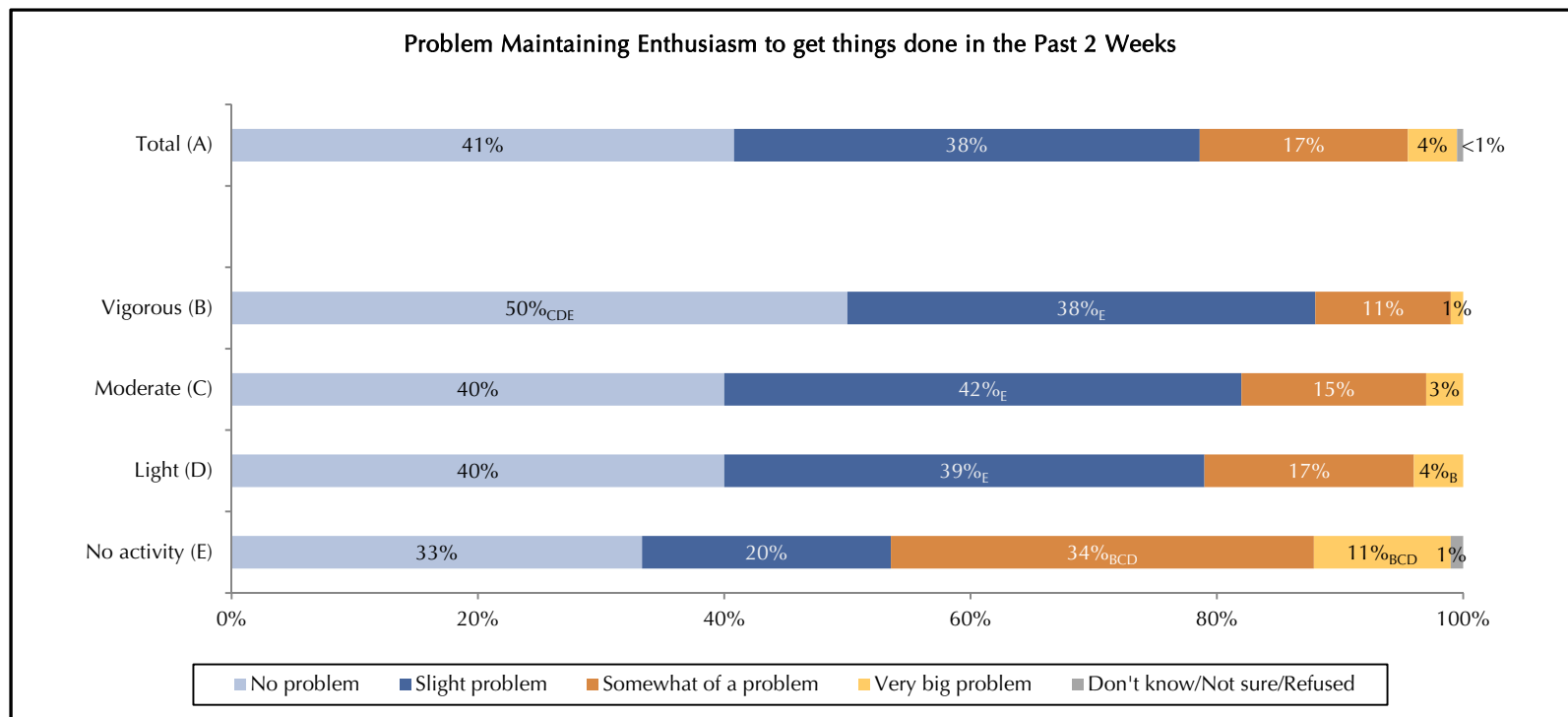
| Frequency of Sleep Problems                       |           |                   |                  |                  |                   |
|---|-----------|-------------------|------------------|------------------|-------------------|
|   | Total (A) | Activity Levels   |                  |                  |                   |
|   |           | Vigorous (B)      | Moderate (C)     | Light (D)        | No activity (E)   |
| <b>Net: Every night/almost every night</b> n=     | (1,000)   | (183)             | (250)            | (477)            | (88)              |
| Woke up during the night                          | 42%       | 33%               | 40%              | 44% <sub>B</sub> | 50% <sub>B</sub>  |
| Woke up feeling un-refreshed                      | 24        | 17                | 20               | 26 <sub>BC</sub> | 43 <sub>BCD</sub> |
| Had difficulty falling asleep                     | 14        | 8                 | 14 <sub>B</sub>  | 16 <sub>B</sub>  | 24 <sub>BC</sub>  |
| Woke up too early and could not get back to sleep | 11        | 9                 | 10               | 13               | 15                |
| <b>Net: At least a few nights/days a week</b> n=  | (1,000)   | (183)             | (250)            | (477)            | (88)              |
| Woke up during the night                          | 67%       | 60%               | 69% <sub>B</sub> | 69% <sub>B</sub> | 65%               |
| Woke up feeling un-refreshed                      | 59        | 52                | 55               | 62 <sub>B</sub>  | 70 <sub>BC</sub>  |
| Had difficulty falling asleep                     | 38        | 31                | 39               | 38               | 48 <sub>B</sub>   |
| Woke up too early and could not get back to sleep | 35        | 27                | 35               | 38 <sub>B</sub>  | 39                |
| <b>Net: Rarely/never</b> n=                       | (1,000)   | (183)             | (250)            | (477)            | (88)              |
| Woke up during the night                          | 33%       | 40% <sub>CD</sub> | 31%              | 31%              | 34%               |
| Woke up feeling un-refreshed                      | 40        | 46 <sub>DE</sub>  | 44 <sub>E</sub>  | 38 <sub>E</sub>  | 27                |
| Had difficulty falling asleep                     | 62        | 69 <sub>E</sub>   | 61               | 61               | 50                |
| Woke up too early and could not get back to sleep | 64        | 72 <sub>DE</sub>  | 65               | 61               | 58                |

Base= Total sample  
 Letters indicate significant differences at the 95% confidence level.  
 Q19



## Vigorous exercisers report best sleep (continued)

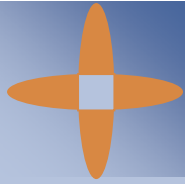
One-half (50%) of vigorous exercisers report that they have had no problem maintaining enthusiasm to get things done in the past two weeks. This is significantly higher than those categorizing themselves as moderate exercisers, light exercisers and non-exercisers.



Base= Total sample (Total n=1,000; Vigorous n=183; Moderate n=250; Light n=477; No activity n=88)

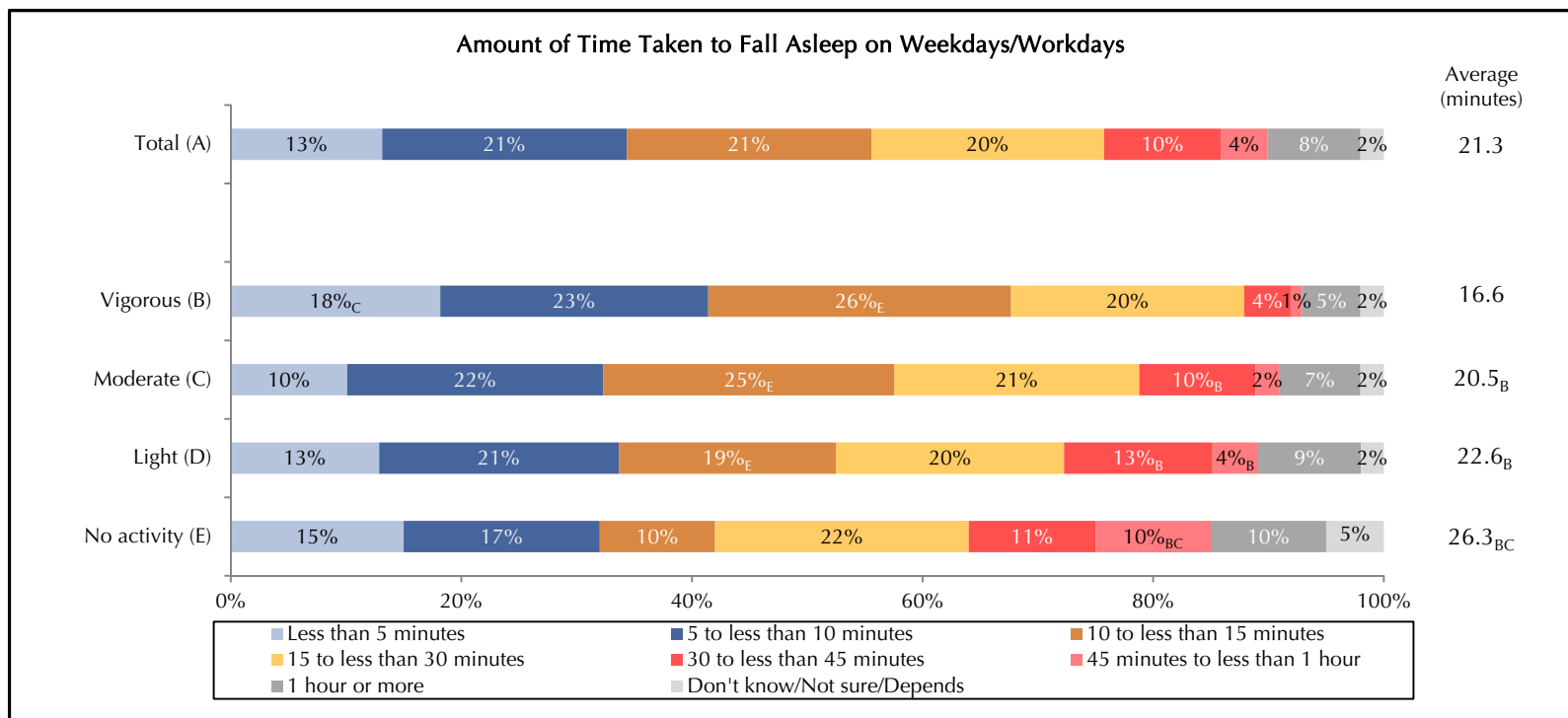
Letters indicate significant differences at the 95% confidence level.

Q33



## Vigorous exercisers report best sleep (continued)

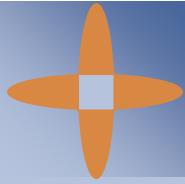
Vigorous exercisers report shorter time taken to fall asleep on weekdays and workdays as well as weekend days and non-workdays. Non-exercisers (26.3 minutes), light exercisers (22.6 minutes) and moderate exercisers (20.5 minutes) stated a significantly longer average time to fall asleep on weekdays and workdays than vigorous exercisers (16.6 minutes).



Base= Total sample (Total n=1,000; Vigorous n=183; Moderate n=250; Light n=477; No activity n=88)

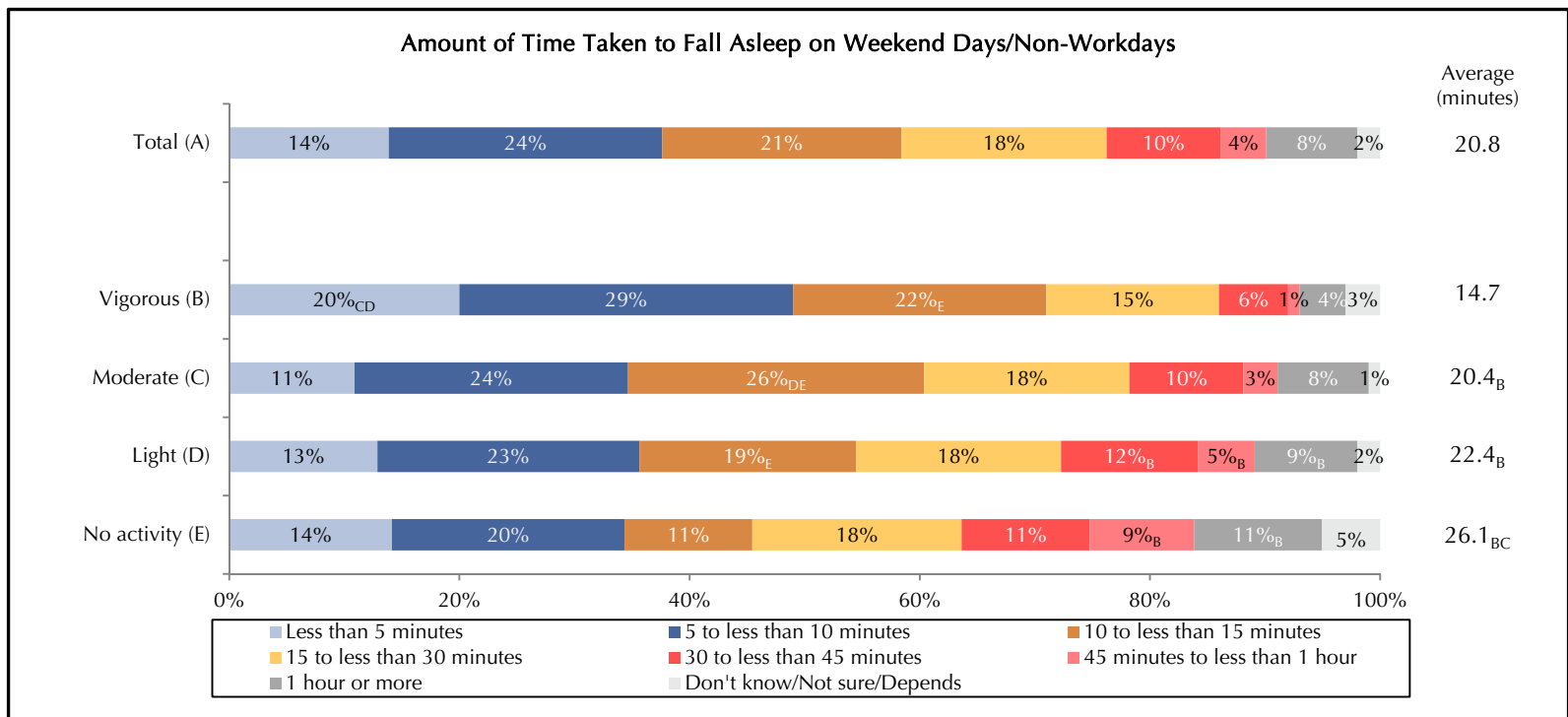
Letters indicate significant differences at the 95% confidence level.

Q17



## Vigorous exercisers report best sleep (continued)

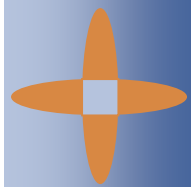
Similarly, non-exercisers (26.1 minutes), light exercisers (22.4 minutes) and moderate exercisers (20.4 minutes) stated a significantly longer average time to fall asleep on weekend days and non-workdays than vigorous exercisers (14.7 minutes).



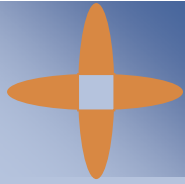
Base= Total sample (Total n=1,000; Vigorous n=183; Moderate n=250; Light n=477; No activity n=88)

Letters indicate significant differences at the 95% confidence level.

Q18



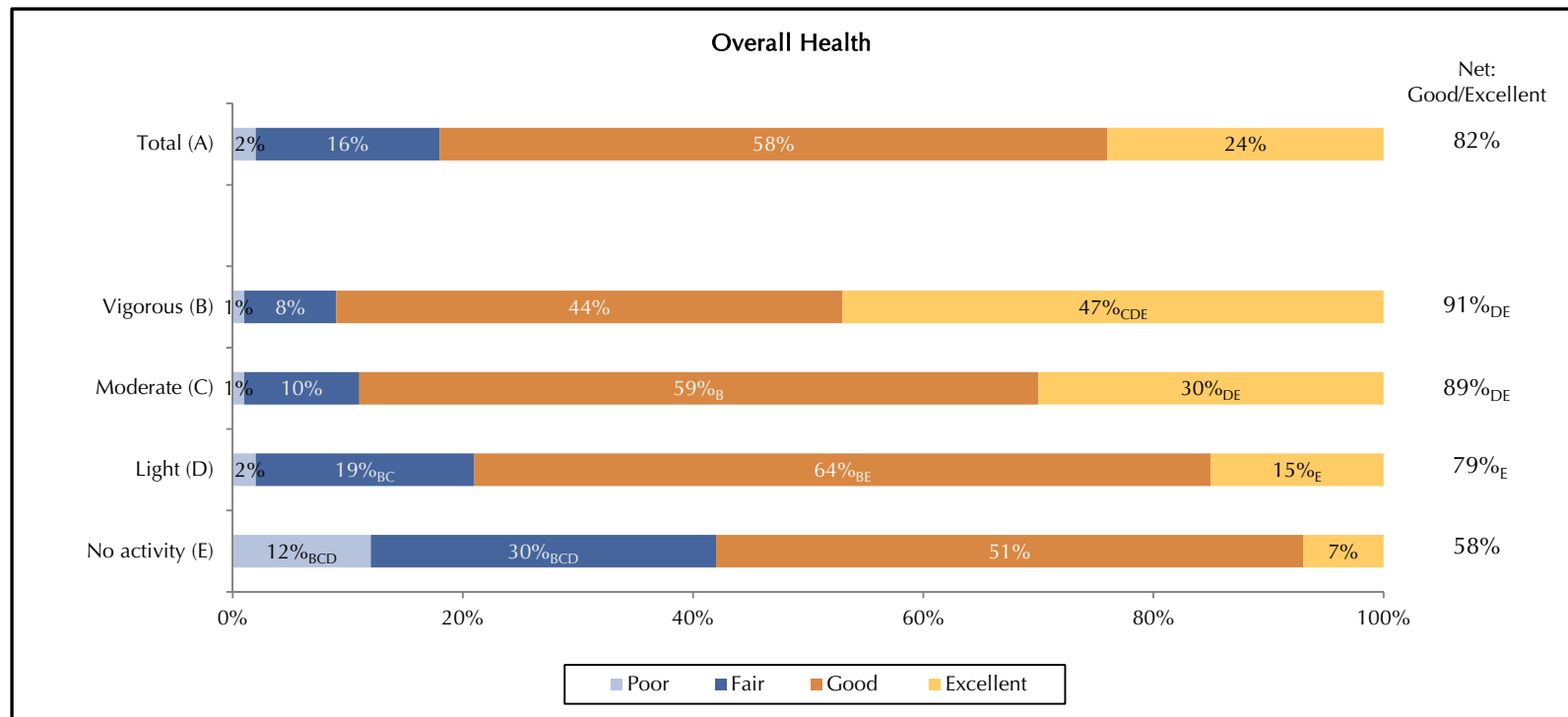
Non-exercisers report worse  
sleep/health



## Non-exercisers report worse sleep/health

As seen in the previous sections, those who classify themselves as exercisers report better sleep. It then follows that non-exercisers report worse sleep and health. According to page 6, the proportion of non-exercisers who report very bad sleep quality (14%) is significantly larger than vigorous exercisers (3%), moderate exercisers (4%) and light exercisers (4%).

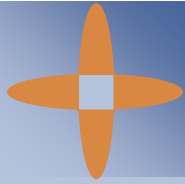
- The proportion of non-exercisers who report poor health (12%) is significantly larger than vigorous exercisers (1%), moderate exercisers (1%) and light exercisers (2%). Notably, the proportion of non-exercisers who report fair health (30%) is also significantly larger than vigorous exercisers (8%), moderate exercisers (10%) and light exercisers (19%).



Base= Total sample (Total n=1,000; Vigorous n=183; Moderate n=250; Light n=477; No activity n=88)

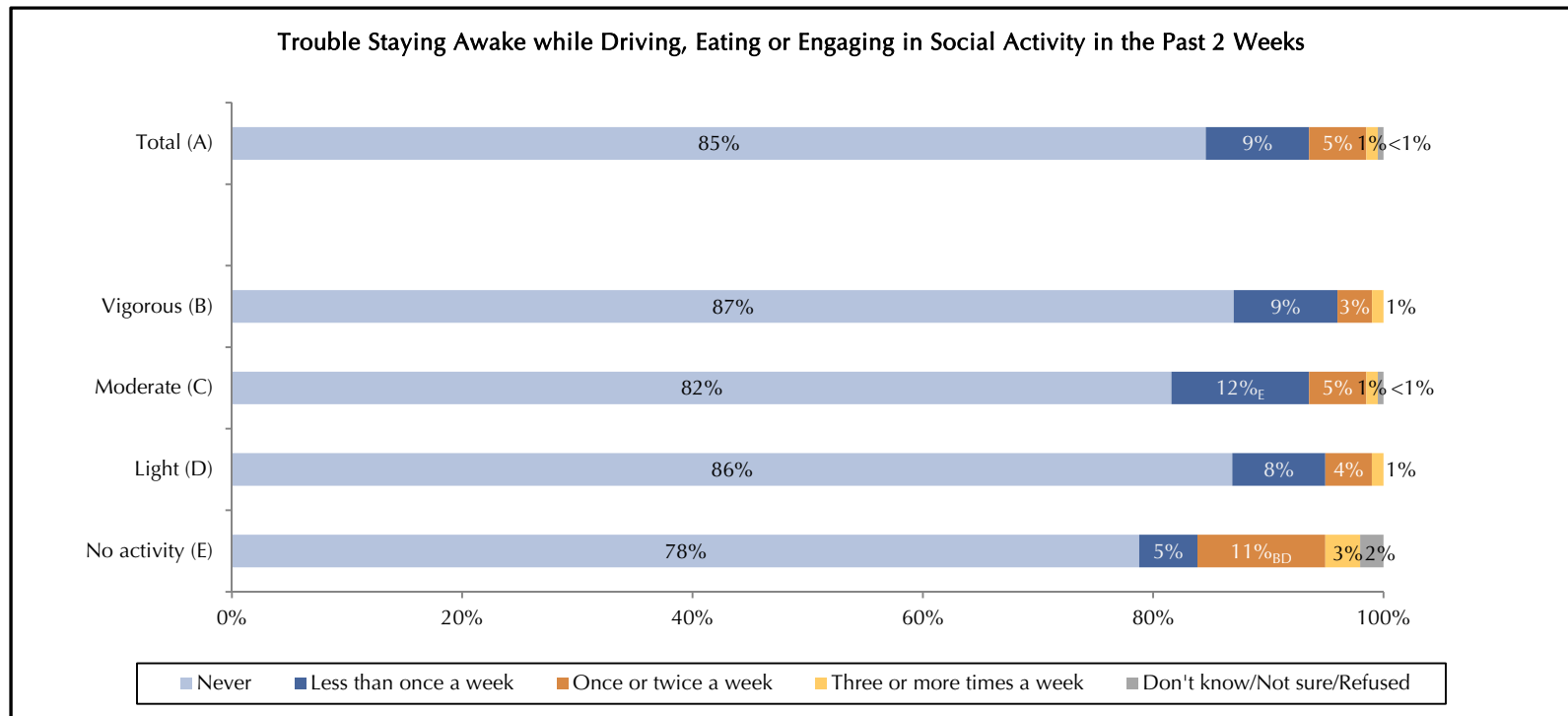
Letters indicate significant differences at the 95% confidence level.

Q24



## Non-exercisers report worse sleep/health (continued)

Interestingly, compared to those who exercise, non-exercisers report the highest proportion of having trouble staying awake while driving, eating or engaging in social activities at least once a week in the past two weeks (14% vs. 4%-6%).

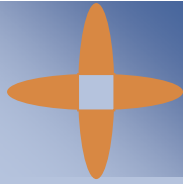


Base= Total sample (Total n=1,000; Vigorous n=183; Moderate n=250; Light n=477; No activity n=88)

Letters indicate significant differences at the 95% confidence level.

Q32





## Non-exercisers report worse sleep/health (continued)

It appears that those who report no activity have habits which help them cope with poor sleep. Non-exercisers take significantly more naps than vigorous or light exercisers on workdays and all other segments on non-workdays. Non-exercisers' naps are also significantly longer than those of their counterparts on workdays.

| Napping  |              |                 |                 |              |                           |
|--|--------------|-----------------|-----------------|--------------|---------------------------|
|  | Total<br>(A) | Activity Levels |                 |              |                           |
|  |              | Vigorous<br>(B) | Moderate<br>(C) | Light<br>(D) | No activity<br>(E)        |
| <b>Workdays</b> n=   | (1,000)      | (183)           | (250)           | (477)        | (88)                      |
| Net: Any naps  | 33%          | 30%             | 34%             | 32%          | 40%                       |
| 1-2 naps   | 21           | 20              | 21              | 21           | 19                        |
| 3-5 naps   | 8            | 8               | 8               | 7            | 12                        |
| 6-10 naps  | 3            | 1               | 4               | 3            | 3                         |
| More than 10 naps  | 1            | 1               | 1               | 1            | 5                         |
| No naps  | 67           | 70              | 66              | 68           | 60                        |
| <i>Average # of naps taken<sup>1</sup></i>                     | <i>3.0</i>   | <i>2.6</i>      | <i>3.0</i>      | <i>2.9</i>   | <i>4.0<sub>BD</sub></i>   |
| <i>Average amount of time napping (in minutes)<sup>1</sup></i> | <i>37.1</i>  | <i>35.0</i>     | <i>36.1</i>     | <i>36.7</i>  | <i>45.2<sub>BCD</sub></i> |
| <b>Non-Workdays</b> n=   | (1,000)      | (183)           | (250)           | (477)        | (88)                      |
| Net: Any naps  | 43%          | 40%             | 41%             | 45%          | 44%                       |
| 1-2 naps   | 36           | 34              | 34              | 39           | 34                        |
| 3-5 naps   | 6            | 5               | 6               | 6            | 6                         |
| 6-10 naps  | <1           | 1               | 1               | -            | 1                         |
| More than 10 naps  | <1           | -               | -               | <1           | 3                         |
| No naps  | 57           | 60              | 59              | 55           | 56                        |
| <i>Average # of naps taken<sup>2</sup></i>                     | <i>2.0</i>   | <i>1.9</i>      | <i>2.0</i>      | <i>1.9</i>   | <i>2.8<sub>BCD</sub></i>  |
| <i>Average amount of time napping (in minutes)<sup>2</sup></i> | <i>44.0</i>  | <i>44.7</i>     | <i>41.3</i>     | <i>44.4</i>  | <i>47.5</i>               |

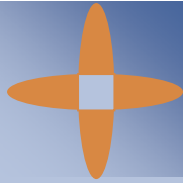
Base= Total sample

<sup>1</sup>Base = Those who take naps workdays (Total n=326; Vigorous n=54; Moderate n=84; Light n=152; No activity n=35)

<sup>2</sup>Base = Those who take naps non-workdays (Total n=430; Vigorous n=73; Moderate n=102; Light n=216; No activity n=39)

Letters indicate significant differences at the 95% confidence level.

Q7, Q8, Q9, Q10



## Non-exercisers report worse sleep/health (continued)

Those who report no activity say they consume an average of 5.0 caffeinated beverages on a workday, significantly more caffeinated beverages than their exercising counterparts (vigorous: 3.1 beverages, moderate: 3.3 beverages, light: 3.6 beverages).

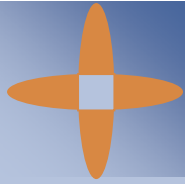
| Number of Caffeinated Beverages Consumed on Average Workday |              |                 |                 |                 |                          |      |
|---|--------------|-----------------|-----------------|-----------------|--------------------------|------|
|   | Total<br>(A) | Activity Levels |                 |                 |                          |      |
|   |              | Vigorous<br>(B) | Moderate<br>(C) | Light<br>(D)    | No activity<br>(E)       |      |
| <b>Caffeinated Beverages per Workday</b>                    | n=           | (1,000)         | (183)           | (250)           | (477)                    | (88) |
| Net: Any beverages  | 80%          | 78%             | 83%             | 81%             | 77%                      |      |
| 1 beverage  | 17           | 17              | 20 <sub>E</sub> | 16              | 11                       |      |
| 2 beverages   | 18           | 17 <sub>E</sub> | 23 <sub>E</sub> | 19 <sub>E</sub> | 8                        |      |
| 3 beverages   | 16           | 14              | 14              | 17              | 18                       |      |
| 4-5 beverages   | 16           | 17              | 15              | 15              | 17                       |      |
| 6-10 beverages  | 8            | 8               | 7               | 8               | 15                       |      |
| More than 10 beverages                                      | 5            | 4               | 4               | 6               | 8                        |      |
| None  | 17           | 20              | 14              | 17              | 15                       |      |
| Don't know/Not sure/Refused                                 | 3            | 3               | 3               | 3               | 8                        |      |
| <i>Average (# of beverages)<sup>1</sup></i>                 | <i>3.5</i>   | <i>3.1</i>      | <i>3.3</i>      | <i>3.6</i>      | <i>5.0<sub>BCD</sub></i> |      |

Base= Total sample

<sup>1</sup>Base= Those answering

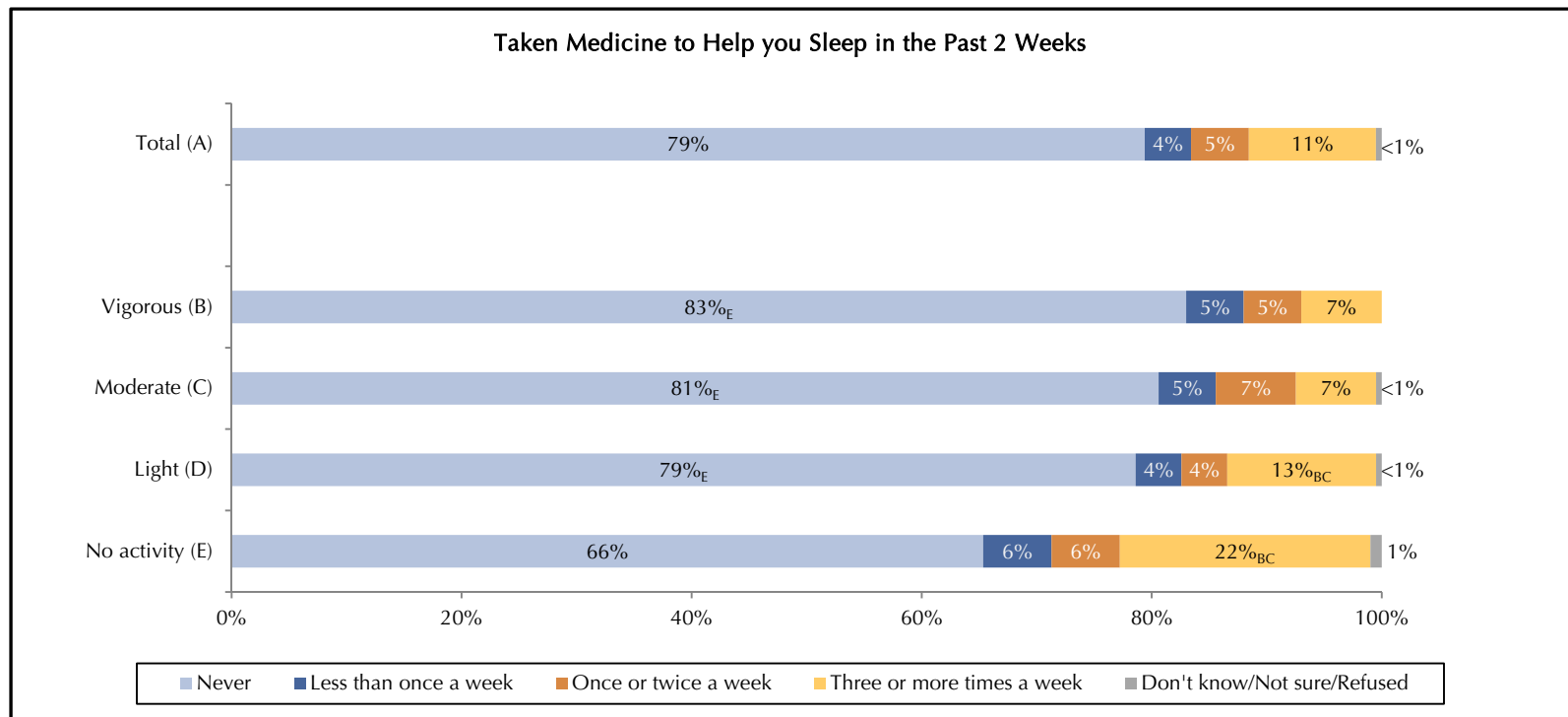
Letters indicate significant differences at the 95% confidence level.

Q29



## Non-exercisers report worse sleep/health (continued)

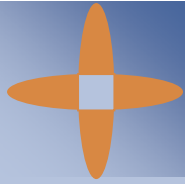
Non-exercisers may also be coping by taking medicine to help them sleep. In the past two weeks, a significantly higher proportion of non-exercisers reported that they took medicine to help them sleep (34% vs. vigorous 17%, moderate 19% and light 21%). Roughly one-third of those who report no activity have ever taken medicine in the past two weeks to help them sleep.



Base= Total sample (Total n=1,000; Vigorous n=183; Moderate n=250; Light n=477; No activity n=88)

Letters indicate significant differences at the 95% confidence level.

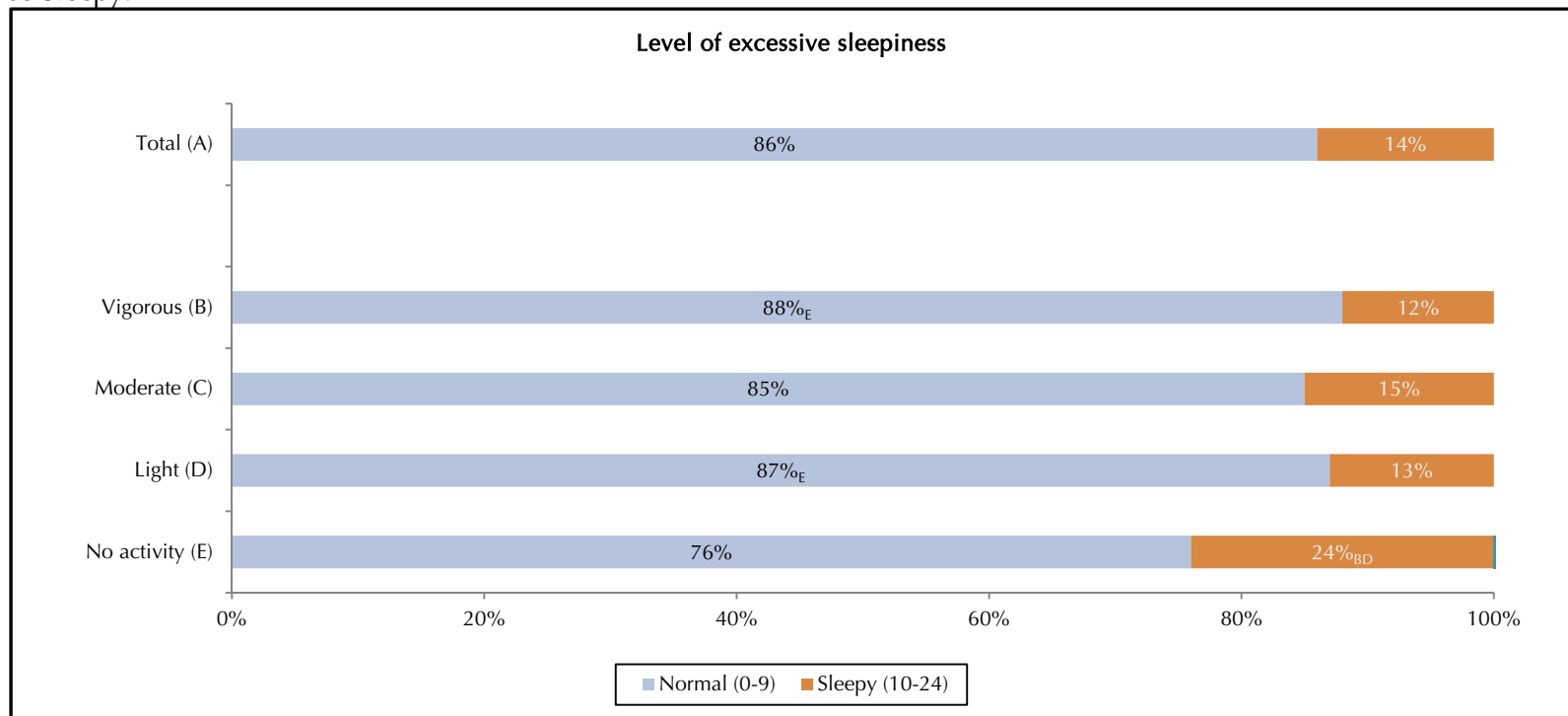
Q31



## Non-exercisers report worse sleep/health (continued)

Respondents were asked to rate their chance of dozing during activities from “no chance” to “high chance”. Attributes included: Sitting and reading; Watching TV; In a car while stopped for a few minutes in traffic; As a passenger in a car for an hour without a break; Sitting and talking to someone; Sitting quietly after a lunch without alcohol; Lying down to rest in the afternoon when circumstances permit. These questions were used to calculate a modified version of the Epworth Sleepiness scale or ESS. The NSF used this index to determine the proportion of individuals who are classified as Sleepy vs. Normal.

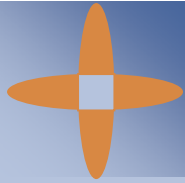
Nearly one-fourth (24%, significantly higher than vigorous 12% or light 13%) of those who report no activity are classified as Sleepy.



Base = Those able to rate all ESS attributes (Total n=942; Vigorous n=176; Moderate n=238; Light n=451; No activity n=75)

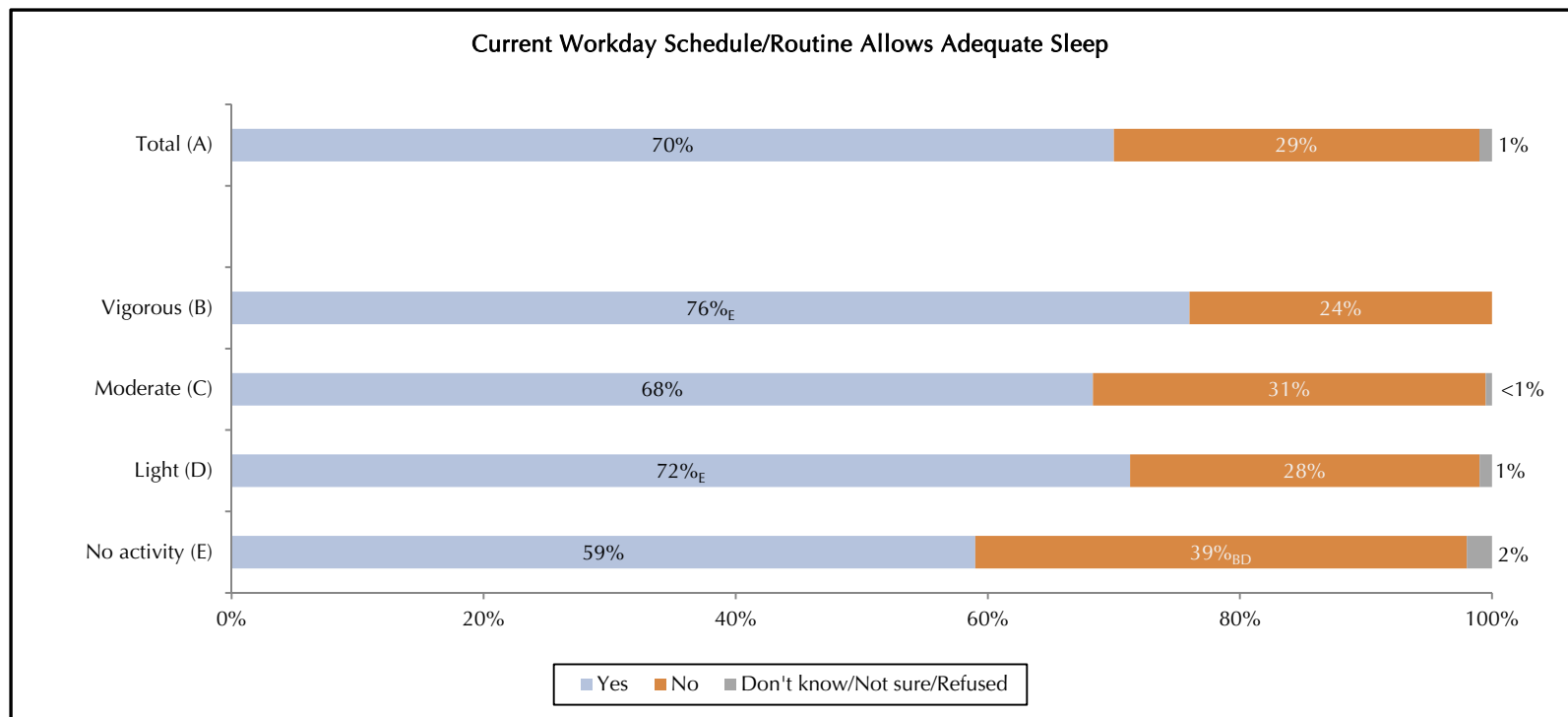
Letters indicate significant differences at the 95% confidence level.

Q13



## Non-exercisers report worse sleep/health (continued)

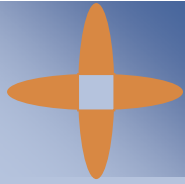
Significantly more non-exercisers (39%) than vigorous exercisers (24%) and light exercisers (28%) stated their current workday or weekday schedule or routine does not allow for adequate sleep.



Base= Total sample (Total n=1,000; Vigorous n=183; Moderate n=250; Light n=477; No activity n=88)

Letters indicate significant differences at the 95% confidence level.

Q15



## Non-exercisers report worse sleep/health (continued)

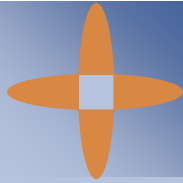
A version of the validated Sheehan Disability Scale (SDS) was developed to determine the functional impairment in three domains: family life, work life and social life. Each domain is converted to a scale, and the three scales (family, work and social life) make up the total Sheehan Disability Scale. It is recommended that clinicians pay close attention to scores of 6 or greater on any of the three scales, because high scores are associated with significant functional impairment.

The National Sleep Foundation also scaled the mood and intimate or sexual relations, similar to family life, work life and social life attributes, to determine if these factors of impairment are due to lack of sleep and should be brought to the attention of clinicians.

The following page shows the proportion of respondents who claim that not getting adequate sleep adversely affects each domain in question. These questions were asked of those who claim their current workday/weekday routine allows them to get adequate sleep, and conversely of those who claim their workday/weekday routine does not allow for them to get adequate sleep.

The subsequent pages show the detailed scales for each domain of mood, family life, work life, social life and sexual relations followed by a version of the total Sheehan Disability Scale as well as the National Sleep Foundation Disability Index.

A significant difference in impairment is seen between exercisers and non-exercisers on many slides referring to the Sheehan Disability Scale.



## Non-exercisers report worse sleep/health (continued)

The tables below show the proportion of each segment that report there is any impact on each of the following domains as a result of not getting enough sleep: mood, family life, work life, social life and/or intimate or sexual relations. As mentioned, these are the factors used to calculate the Sheehan Disability Scale. The first table displays results for those whose schedule does not allow for adequate sleep, and the second table displays results for those whose schedule allows for adequate sleep. The following scales are presented in this order.

| Impact of "Not Getting Enough Sleep" - Those who say they do not get adequate sleep |           |                 |                 |                 |                  |
|---|-----------|-----------------|-----------------|-----------------|------------------|
|   | Total (A) | Activity Levels |                 |                 |                  |
|   |           | Vigorous (B)    | Moderate (C)    | Light (D)       | No activity (E)  |
| <b>Net: Any impact</b> n =  | (289)     | (44)            | (78)            | (132)           | (34*)            |
| Mood  | 82%       | 80%             | 83%             | 82%             | 85%              |
| Family life or home responsibilities  | 69        | 59              | 72              | 66              | 82 <sub>BD</sub> |
| Work  | 61        | 73 <sub>D</sub> | 67 <sub>D</sub> | 53              | 62               |
| Social life or leisure activities   | 64        | 73              | 65              | 63              | 56               |
| Intimate or sexual relations  | 51        | 36              | 53              | 53 <sub>B</sub> | 56               |

Base = Those who do not get adequate sleep

\*Caution: Small Base

Letters indicate significant differences at the 95% confidence level.

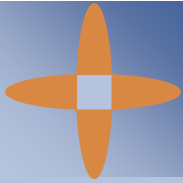
Q16

| Impact of "Not Getting Enough Sleep" - Those who say they get adequate sleep |           |                 |              |           |                 |
|--|-----------|-----------------|--------------|-----------|-----------------|
|  | Total (A) | Activity Levels |              |           |                 |
|  |           | Vigorous (B)    | Moderate (C) | Light (D) | No activity (E) |
| <b>Net: Any impact</b> n =   | (705)     | (139)           | (171)        | (342)     | (52)            |
| Mood   | 64%       | 62%             | 63%          | 66%       | 60%             |
| Family life or home responsibilities   | 46        | 47              | 43           | 48        | 38              |
| Work   | 43        | 41              | 42           | 44        | 42              |
| Social life or leisure activities  | 48        | 53              | 46           | 47        | 46              |
| Intimate or sexual relations   | 36        | 37              | 35           | 36        | 40              |

Base = Those who get adequate sleep

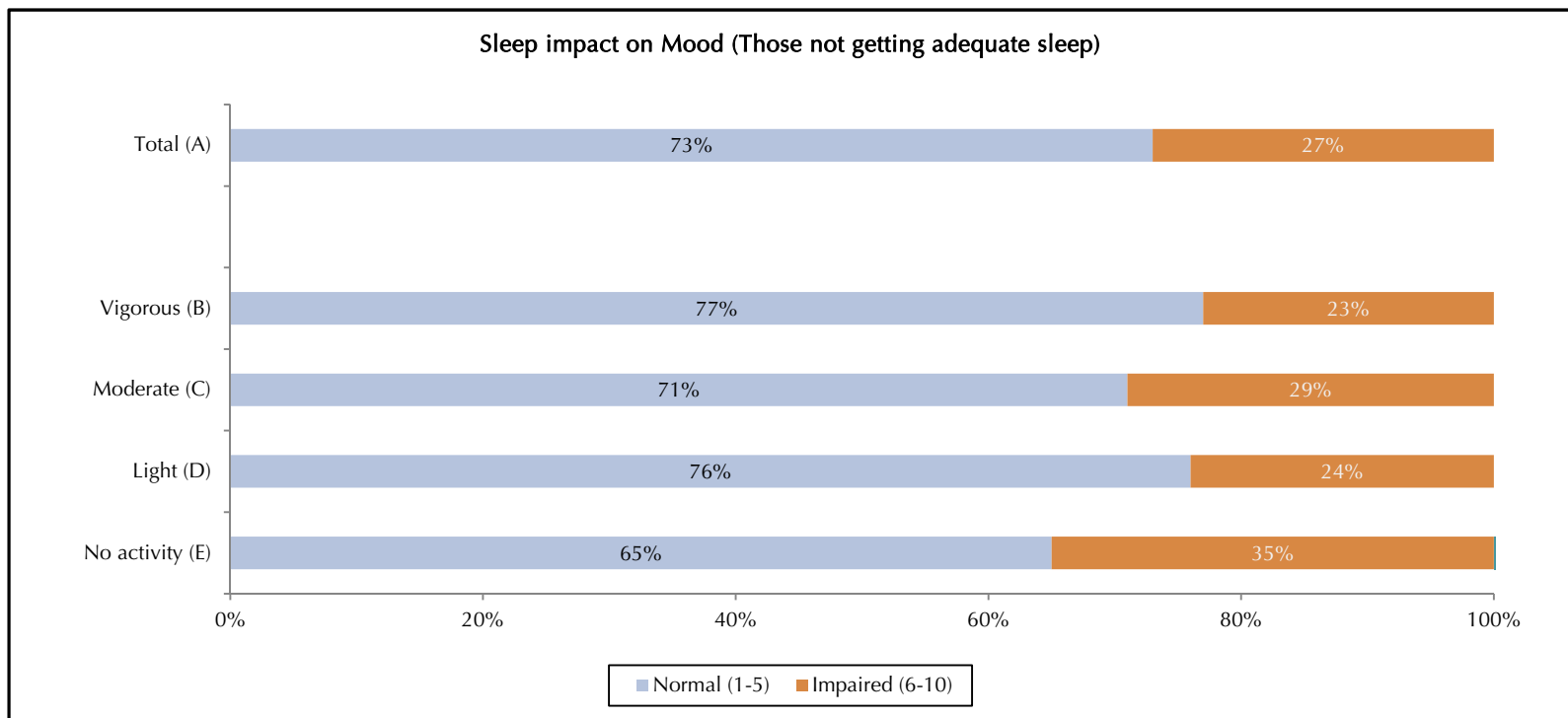
Letters indicate significant differences at the 95% confidence level.

Q16



## Non-exercisers report worse sleep/health (continued)

A large proportion of those non-exercisers who do not get adequate sleep fall into the “impaired” category with respect to mood.



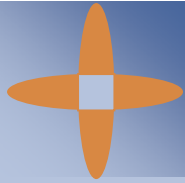
Base= Total sample (Total n=289; Vigorous n=44; Moderate n=78; Light n=132; No activity n=34\*)

\*Caution: Small Base

Letters indicate significant differences at the 95% confidence level.

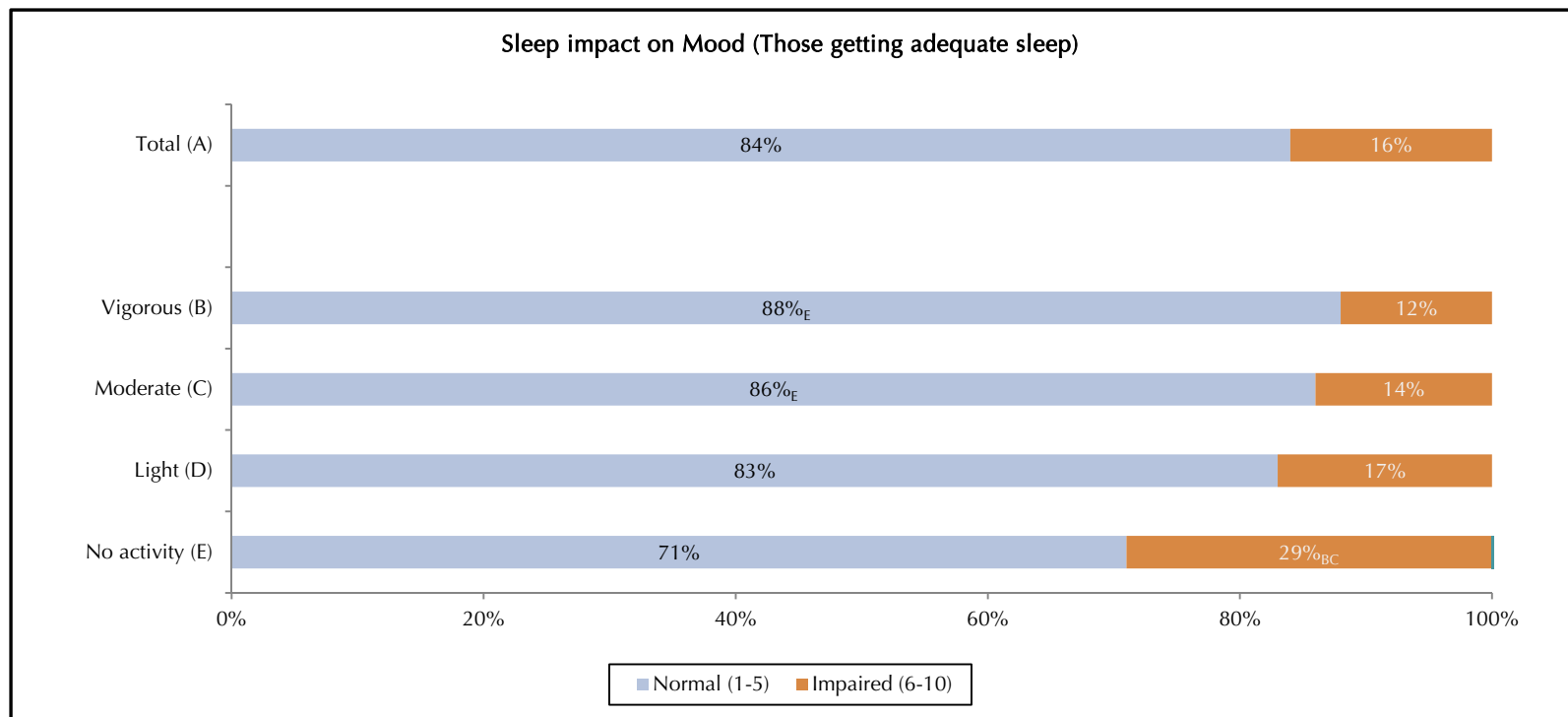
Q16





## Non-exercisers report worse sleep/health (continued)

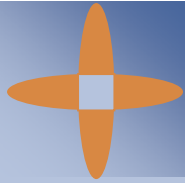
A significantly larger proportion of those non-exercisers who get adequate sleep (29%) are categorized as “impaired” in the impact of sleep on mood as compared to the exercising groups (vigorous exercisers 12%, moderate exercisers 14% and light exercisers 17%).



Base= Total sample (Total n=705; Vigorous n=139; Moderate n=171; Light n=342; No activity n=52)

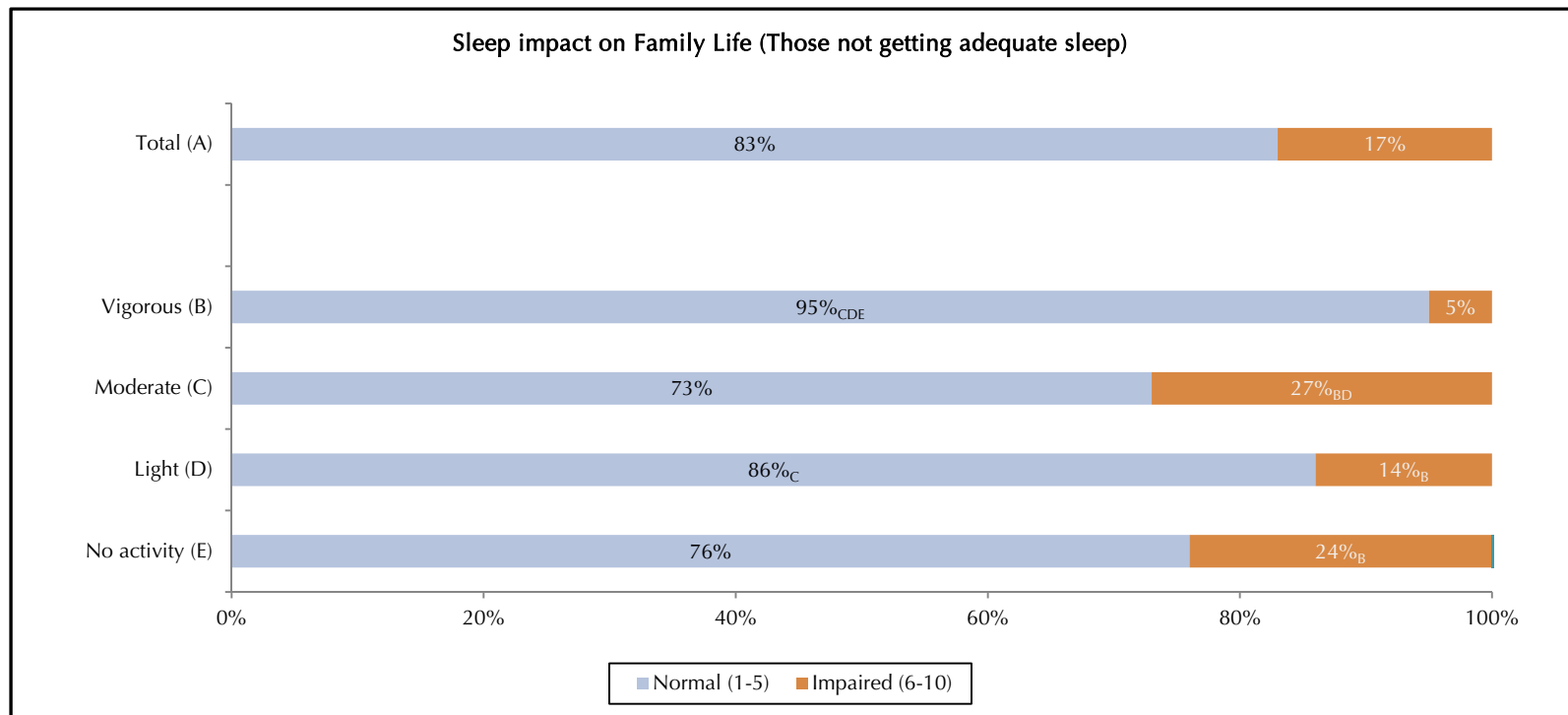
Letters indicate significant differences at the 95% confidence level.

Q16



## Non-exercisers report worse sleep/health (continued)

Interestingly, while nearly one-fourth (24%) of the non-exercisers who do not get adequate sleep are categorized as “impaired” in the impact of sleep on family life, moderate exercisers who do not get adequate sleep have the highest proportion (27%) of those who are “impaired” in the impact of sleep on family life.

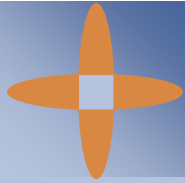


Base= Total sample (Total n=289; Vigorous n=44; Moderate n=78; Light n=132; No activity n=34\*)

\*Caution: Small Base

Letters indicate significant differences at the 95% confidence level.

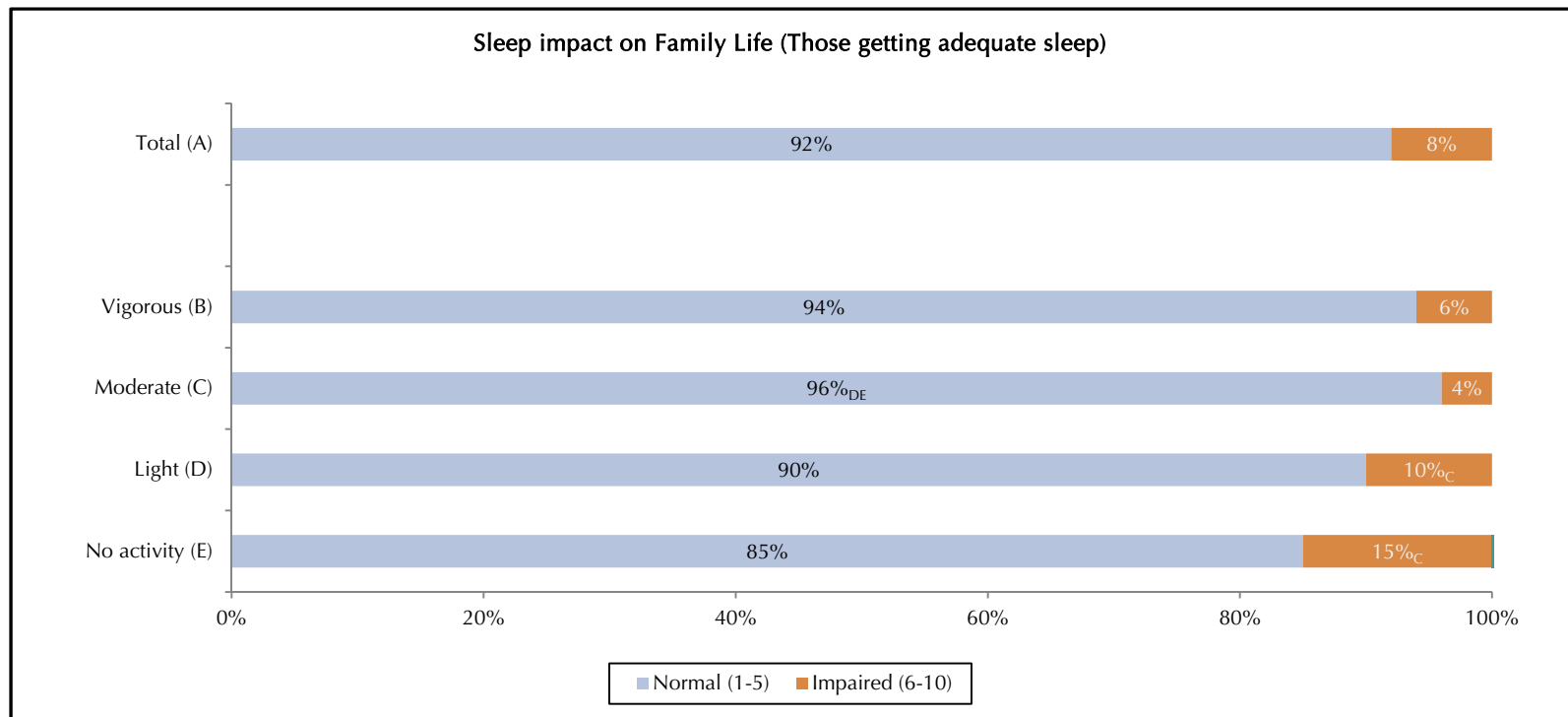
Q16



## Non-exercisers report worse sleep/health (continued)

While the majority of respondents who get adequate sleep were classified as “normal”, the largest proportion of those classified as “impaired” were non-exercisers (15%) in the impact of sleep on family life (vs. vigorous exercisers 6%, moderate exercisers 4% and light exercisers 10%).

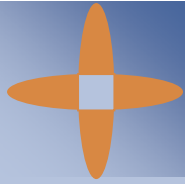
The remaining domains do not show major differences in the exercising versus non-exercising segments. The detailed charts for work life, social life and intimate or sexual relations can be found in the Appendix (page 70).



Base= Total sample (Total n=705; Vigorous n=139; Moderate n=171; Light n=342; No activity n=52)

Letters indicate significant differences at the 95% confidence level.

Q16

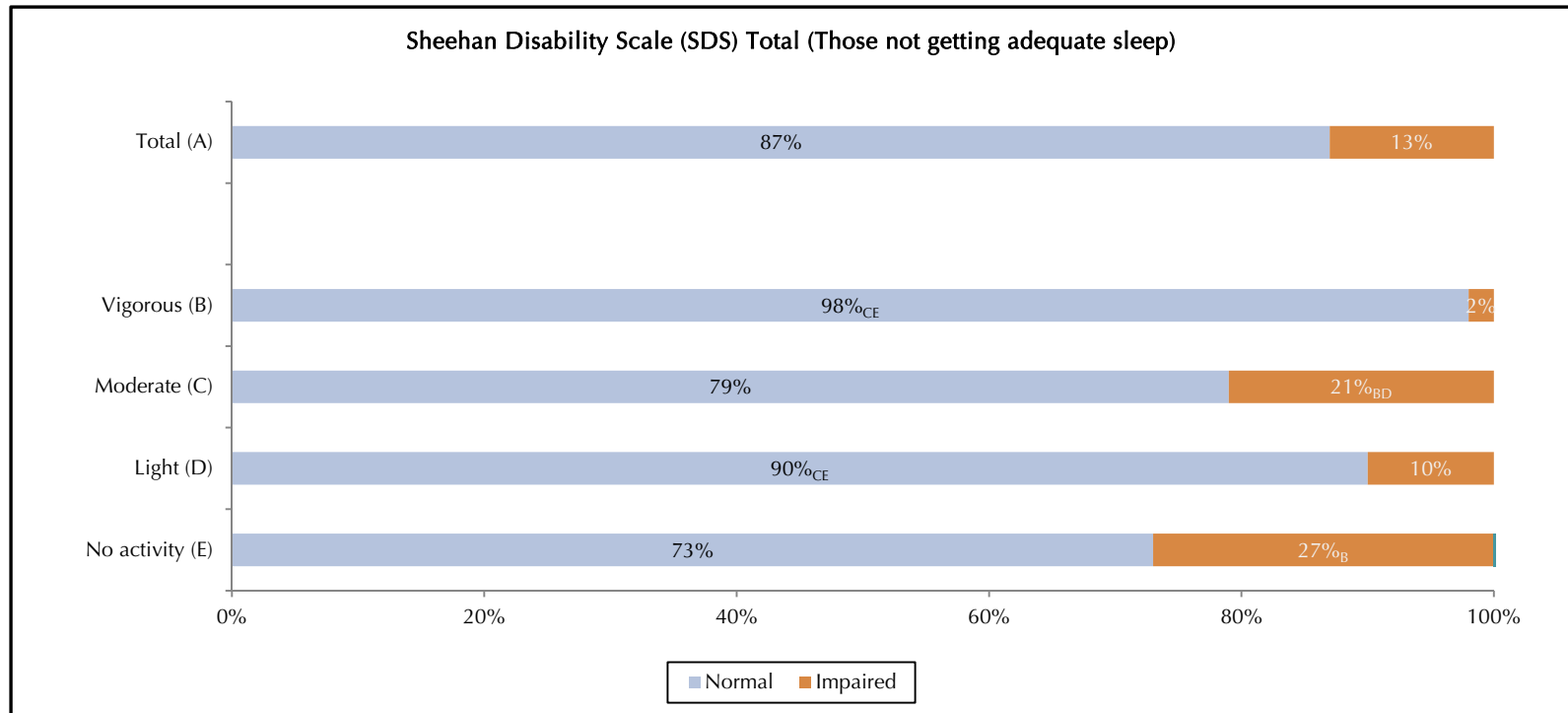


## Non-exercisers report worse sleep/health (continued)

To determine the total Sheehan Disability Scale, the National Sleep Foundation chose to define the level of impairment as any respondent who scored as 6-10 (impaired) on any of the three SDS 10 point scales (work, family or social life). If a respondent did not rate as impaired on any of the 10 point scales, they were scored as normal on the total Sheehan Disability Scale.

Below is the total Sheehan Disability Scale for those not getting adequate sleep, and the next page displays the total Sheehan Disability Scale for those getting adequate sleep.

The highest proportion of those not getting adequate sleep classified as SDS “impaired” were non-exercisers (27%, significantly higher than vigorous exercisers 2%).

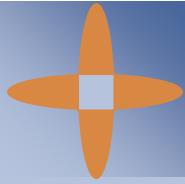


Base= Total sample (Total n=289; Vigorous n=44; Moderate n=78; Light n=132; No activity n=34\*)

\*Caution: Small Base

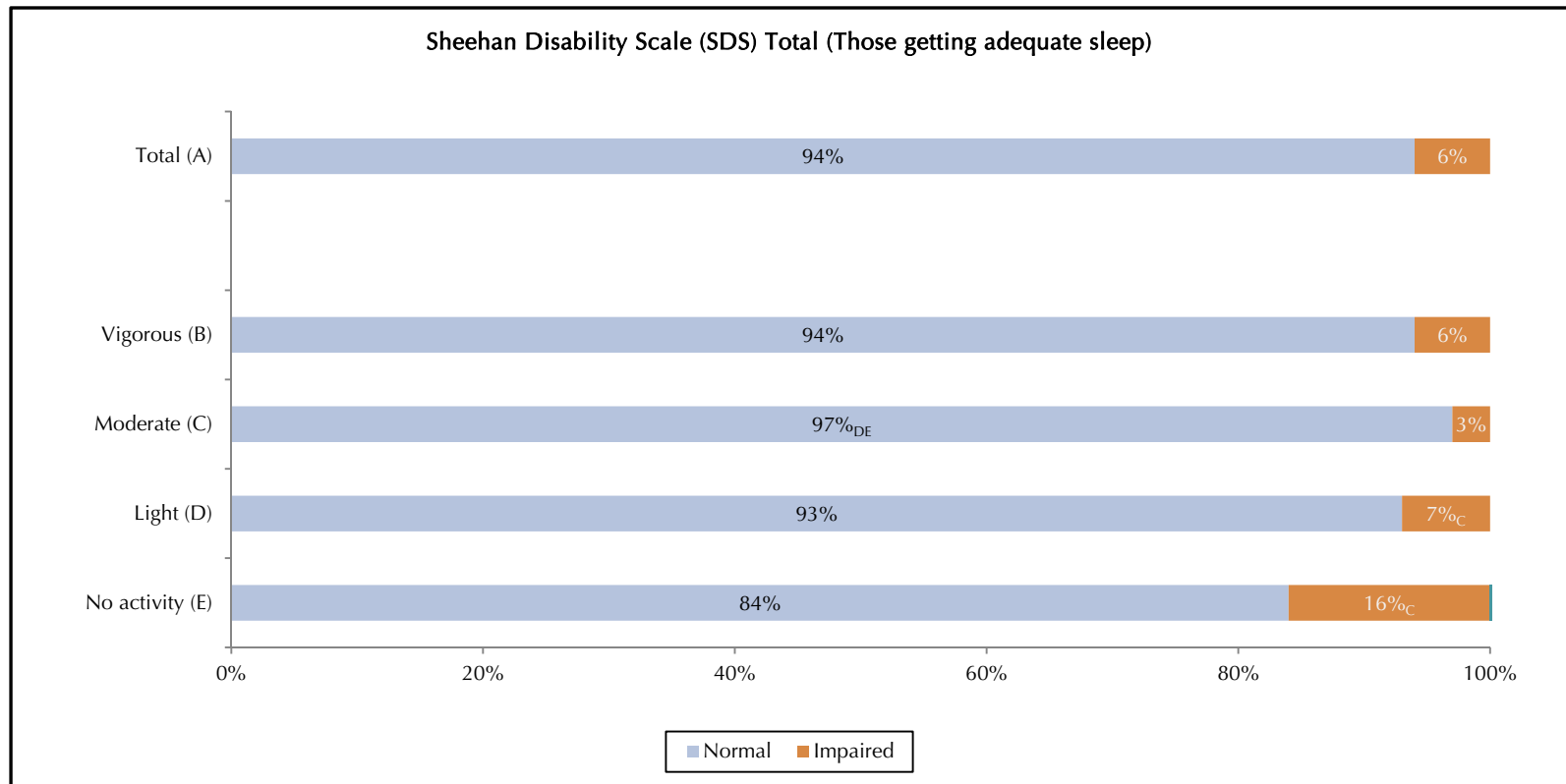
Letters indicate significant differences at the 95% confidence level.

Q16



## Non-exercisers report worse sleep/health (continued)

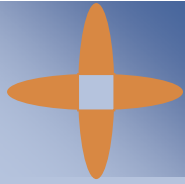
The highest proportion of those getting adequate sleep classified as SDS “impaired” were non-exercisers (16%, significantly higher than moderate exercisers 3%).



Base= Total sample (Total n=705; Vigorous n=139; Moderate n=171; Light n=342; No activity n=52)

Letters indicate significant differences at the 95% confidence level.

Q16

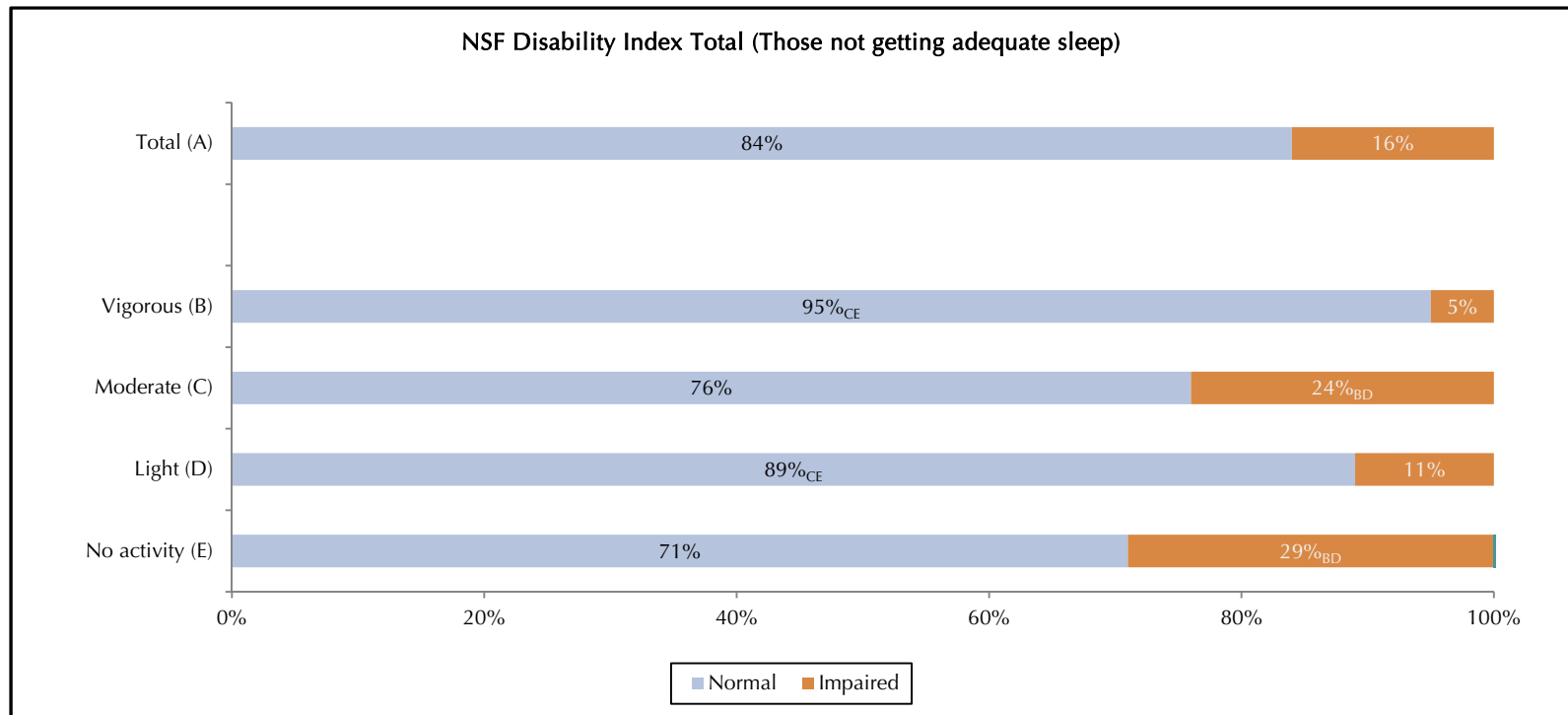


## Non-exercisers report worse sleep/health (continued)

The National Sleep Foundation used all five attributes (mood, family life, work life, social life and sexual relations) to determine a new NSF Disability Index modeled after the previous version of the total Sheehan Disability Scale. Again, in order to be considered “impaired” a respondent had to score a 6-10 (impaired) on any of the five, 10 point scales of attributes mentioned above. If a respondent did not rate as “impaired” on any of the 10 point scales, they were scored as normal on the total NSF Disability Index.

Below is the National Sleep Foundation Disability Index for those not getting adequate sleep, and the next page displays the National Sleep Foundation Disability Index for those getting adequate sleep.

A high proportion of those not getting adequate sleep classified as NSF Disability “impaired” were non-exercisers (29%, significantly higher than vigorous exercisers 5% and light exercisers 11%).

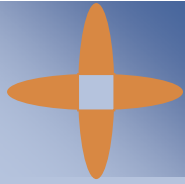


Base= Total sample (Total n=289; Vigorous n=44; Moderate n=78; Light n=132; No activity n=34\*)

\*Caution: Small Base

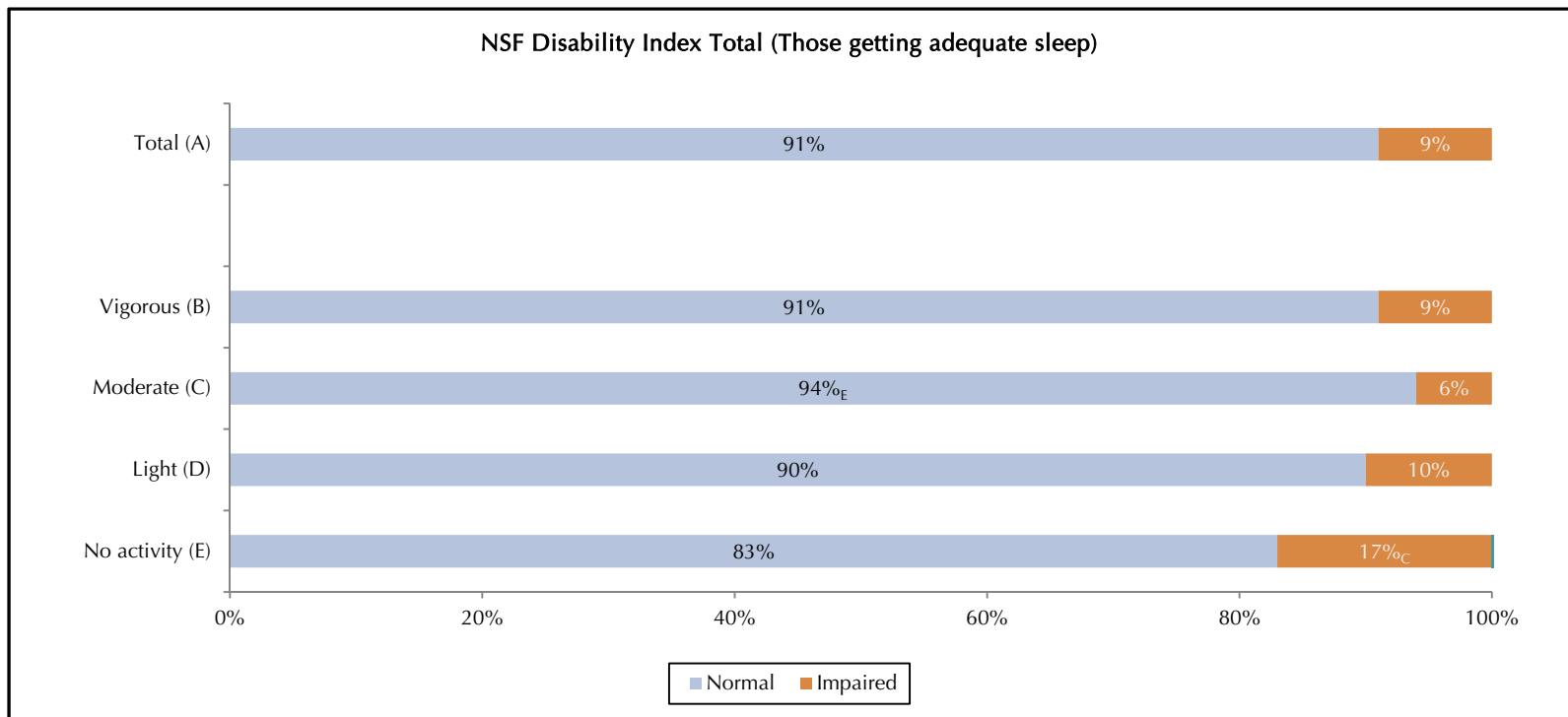
Letters indicate significant differences at the 95% confidence level.

Q16



## Non-exercisers report worse sleep/health (continued)

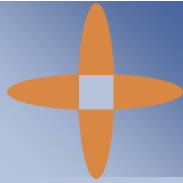
A high proportion of those getting adequate sleep classified as NSF Disability “impaired” were non-exercisers (17%, significantly higher than moderate exercisers 6%).



Base= Total sample (Total n=705; Vigorous n=139; Moderate n=171; Light n=342; No activity n=52)

Letters indicate significant differences at the 95% confidence level.

Q16



## Non-exercisers report worse sleep/health (continued)

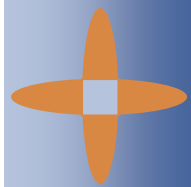
The National Sleep Foundation used a modified version of the STOP-BANG questionnaire to determine if respondents were at a moderate or high risk for sleep apnea. Neck circumference was not assessed as a part of this measure. Questions pertaining to snoring, tiredness, stopping breathing, high blood pressure as well as a calculated BMI, gender and age were used to calculate this sleep apnea indicator score.

More than four in ten (44%) non-exercisers are at a moderate risk for sleep apnea, significantly higher than all segments of exercisers. In fact, 6% of non-exercisers are at a high risk for sleep apnea compared to 0%-1% of exercisers.

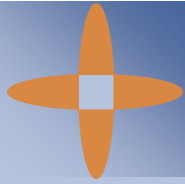
|   |    | Sleep Apnea Indicator |                   |                  |                   |                    |
|---|----|-----------------------|-------------------|------------------|-------------------|--------------------|
|   |    | Total (A)             | Activity Levels   |                  |                   |                    |
|   |    |                       | Vigorous (B)      | Moderate (C)     | Light (D)         | No activity (E)    |
| <b>Snoring</b>  | n= | (810)                 | (160)             | (205)            | (375)             | (68)               |
| Yes   |    | 23%                   | 16%               | 16%              | 26% <sub>BC</sub> | 40% <sub>BCD</sub> |
| <b>Tiredness</b>                                      | n= | (810)                 | (160)             | (205)            | (375)             | (68)               |
| Yes   |    | 51%                   | 40%               | 46%              | 55% <sub>BC</sub> | 72% <sub>BCD</sub> |
| <b>Observed apnea</b>                                 | n= | (810)                 | (160)             | (205)            | (375)             | (68)               |
| Yes   |    | 12%                   | 6%                | 11%              | 10%               | 32% <sub>BCD</sub> |
| <b>Pressure (High BP)</b>                             | n= | (810)                 | (160)             | (205)            | (375)             | (68)               |
| Yes   |    | 18%                   | 8%                | 15% <sub>B</sub> | 21% <sub>B</sub>  | 34% <sub>BCD</sub> |
| <b>BMI (Higher than 35)</b>                           | n= | (810)                 | (160)             | (205)            | (375)             | (68)               |
| Yes   |    | 9%                    | 4%                | 6%               | 9% <sub>B</sub>   | 24% <sub>BCD</sub> |
| <b>Age (Higher than 50)</b>                           | n= | (810)                 | (160)             | (205)            | (375)             | (68)               |
| Yes   |    | 26%                   | 20%               | 27%              | 29% <sub>B</sub>  | 19%                |
| <b>Gender (Male)</b>                                  | n= | (810)                 | (160)             | (205)            | (375)             | (68)               |
| Yes   |    | 49%                   | 62% <sub>CD</sub> | 49%              | 43%               | 49%                |
| <b>Moderate risk of sleep apnea (Score 3-5)</b>       | n= | (810)                 | (160)             | (205)            | (375)             | (68)               |
| Yes   |    | 26%                   | 19%               | 22%              | 26% <sub>B</sub>  | 44% <sub>BCD</sub> |
| <b>High risk of sleep apnea (Score Higher than 5)</b> | n= | (810)                 | (160)             | (205)            | (375)             | (68)               |
| Yes   |    | 1%                    | -%                | <1%              | 1%                | 6%                 |

Base= Total sample; Letters indicate significant differences at the 95% confidence level.  
Q20, Q21, Q22, Q23, S1, S3





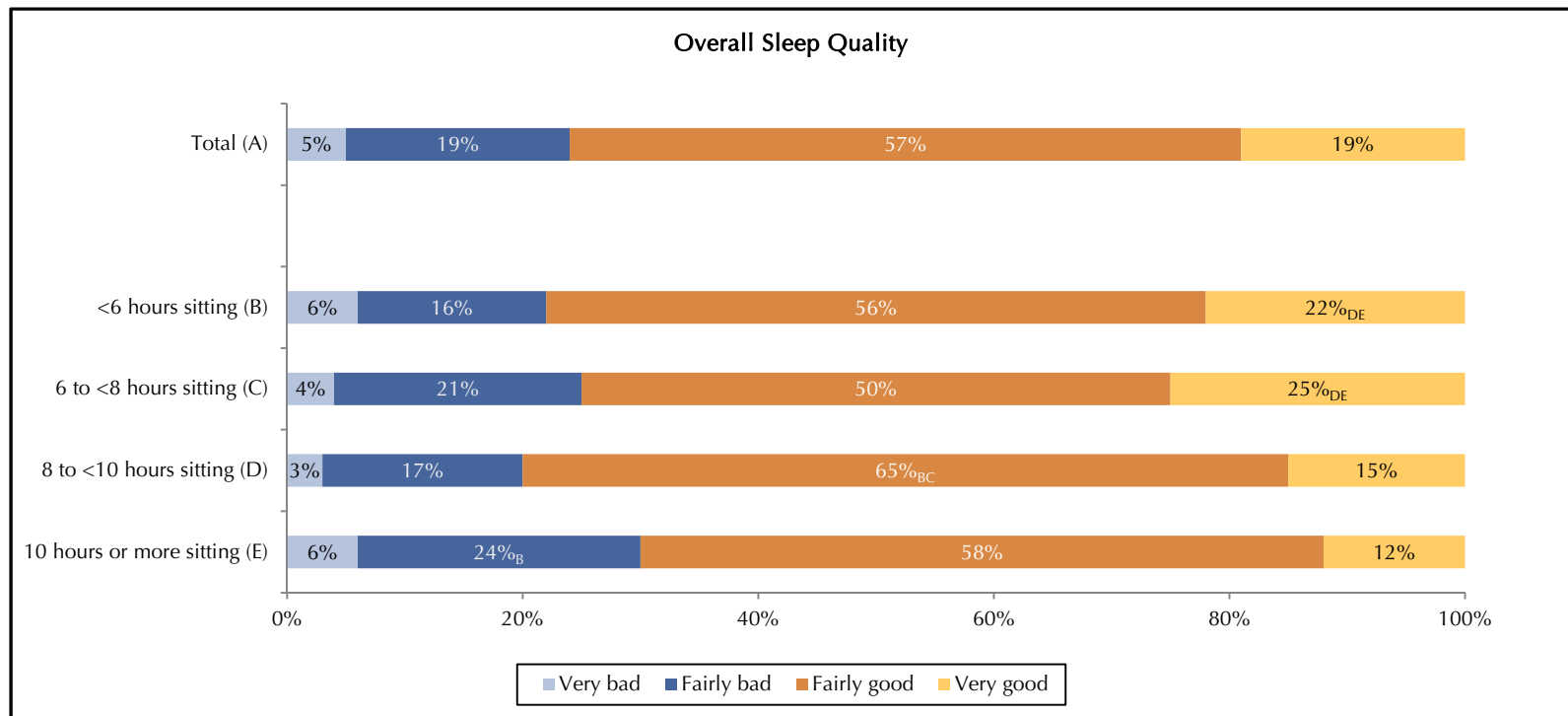
Less time sitting associated with better sleep and health



## Less time sitting associated with better sleep and health

Segmenting the 2013 data by hours spent sitting in the past seven days demonstrated an interesting finding in the relation between sitting and sleep quality. Those who sit less per day report better sleep quality, as well as better health quality.

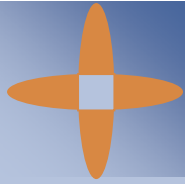
Those who say they spent less than 6 hours sitting per day (22%) and those who say they spent 6 to less than 8 hours sitting per day (25%) in the past seven days, report very good sleep quality. This is significantly higher than those who spent 8 to less than 10 hours sitting (15%) or those who spent 10 hours or more sitting (12%) per day in the past seven days.



Base= Total sample (Total n=1,000; <6 hours n=447; 6 to <8 hours n=159; 8 to <10 hours n=155; 10 hours or more n=199)

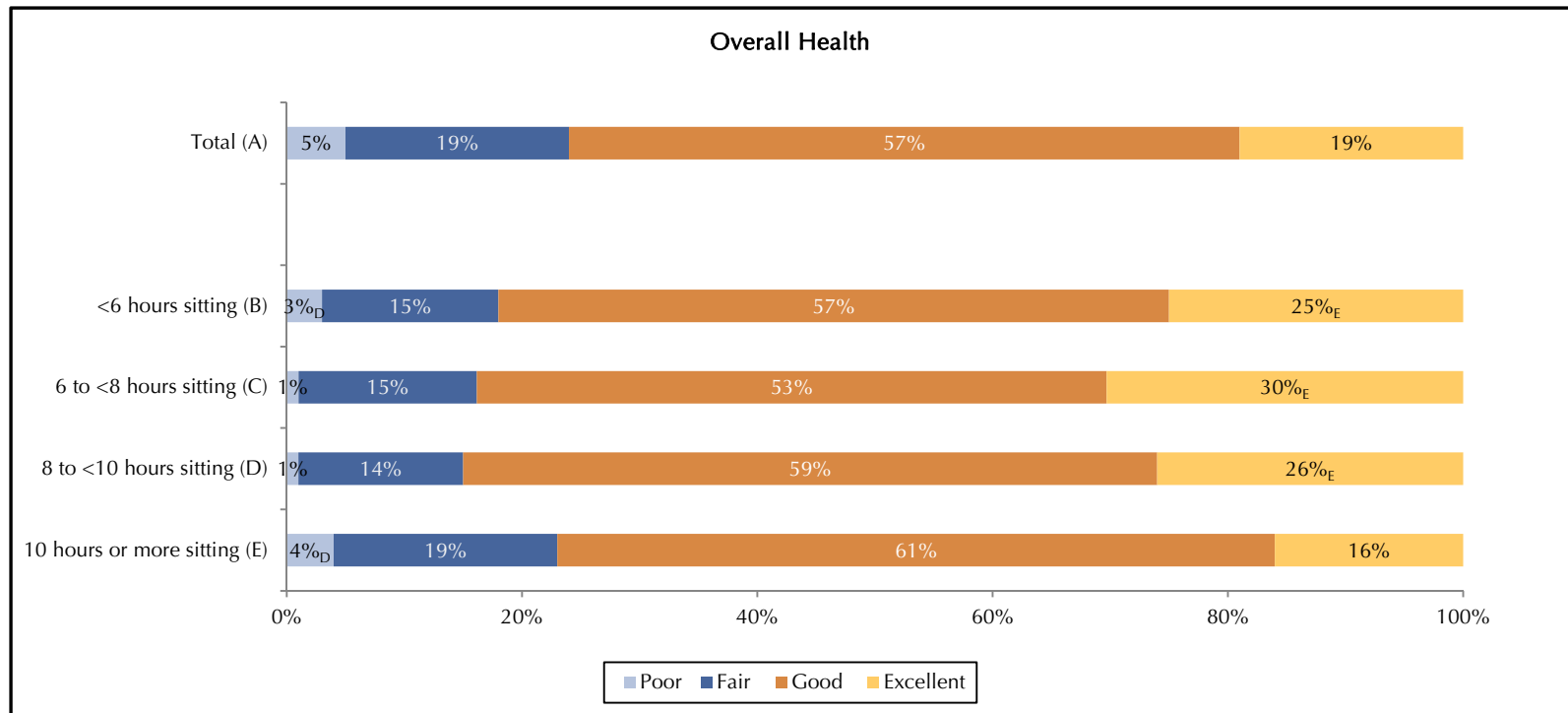
Letters indicate significant differences at the 95% confidence level.

Q30



## Less time sitting associated with better sleep and health (continued)

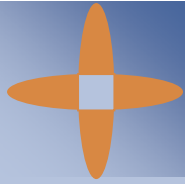
Those who say they spent less than 6 hours sitting per day (25%), those who say they spent 6 to less than 8 hours sitting per day (30%) and those who spent 8 to less than 10 hours sitting (26%), in the past seven days, report they are in excellent health. This is significantly higher than among those who spent 10 hours or more sitting (16%) per day in the past seven days.



Base= Total sample (Total n=1,000; <6 hours n=447; 6 to <8 hours n=159; 8 to <10 hours n=155; 10 hours or more n=199)

Letters indicate significant differences at the 95% confidence level.

Q24



## Less time sitting associated with better sleep and health (continued)

Not surprisingly, non-exercisers report a significantly longer average amount of time sitting (8 hours 5 minutes) per day compared to vigorous exercisers, moderate exercisers and light exercisers (6 hours 22 minutes, 5 hours 32 minutes and 6 hours 27 minutes respectively).

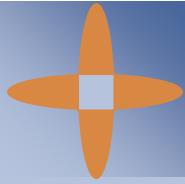
| Time spent sitting                            |               |                           |                    |                           |                            |
|---|---------------|---------------------------|--------------------|---------------------------|----------------------------|
|   | Total (A)     | Activity Levels           |                    |                           |                            |
|   |               | Vigorous (B)              | Moderate (C)       | Light (D)                 | No activity (E)            |
| <b><u>Time per day SITTING</u></b> n=         | (1,000)       | (183)                     | (250)              | (477)                     | (88)                       |
| Less than 6 hours                             | 45%           | 43%                       | 53% <sub>BDE</sub> | 43% <sub>E</sub>          | 32%                        |
| 6 to less than 8 hours                        | 16            | 15                        | 16                 | 17                        | 11                         |
| 8 hours or more                               | 35            | 41 <sub>C</sub>           | 27                 | 36 <sub>C</sub>           | 48 <sub>CD</sub>           |
| <i>Average amount of time (hours)</i>         | <i>6h 20m</i> | <i>6h 22m<sub>C</sub></i> | <i>5h 32m</i>      | <i>6h 27m<sub>C</sub></i> | <i>8h 5m<sub>BCD</sub></i> |
| <b><u>What time of day<sup>1</sup></u></b> n= | (1,000)       | (183)                     | (250)              | (477)                     | (88)                       |
| More than 8 hours before bed                  | 36%           | 39%                       | 34%                | 36%                       | 39%                        |
| 4 to 8 hours before bed                       | 44            | 42                        | 45                 | 45                        | 44                         |
| 4 or more hours before bed                    | 67            | 67                        | 64                 | 68                        | 69                         |
| Less than 4 hours before bed                  | 44            | 43                        | 48 <sub>E</sub>    | 45                        | 34                         |
| Don't know/Not sure/Refused                   | 3             | 4                         | 2                  | 3                         | 6                          |

Base= Total sample

<sup>1</sup>Multiple responses accepted; B= Those doing \_\_\_\_ activity

Letters indicate significant differences at the 95% confidence level.

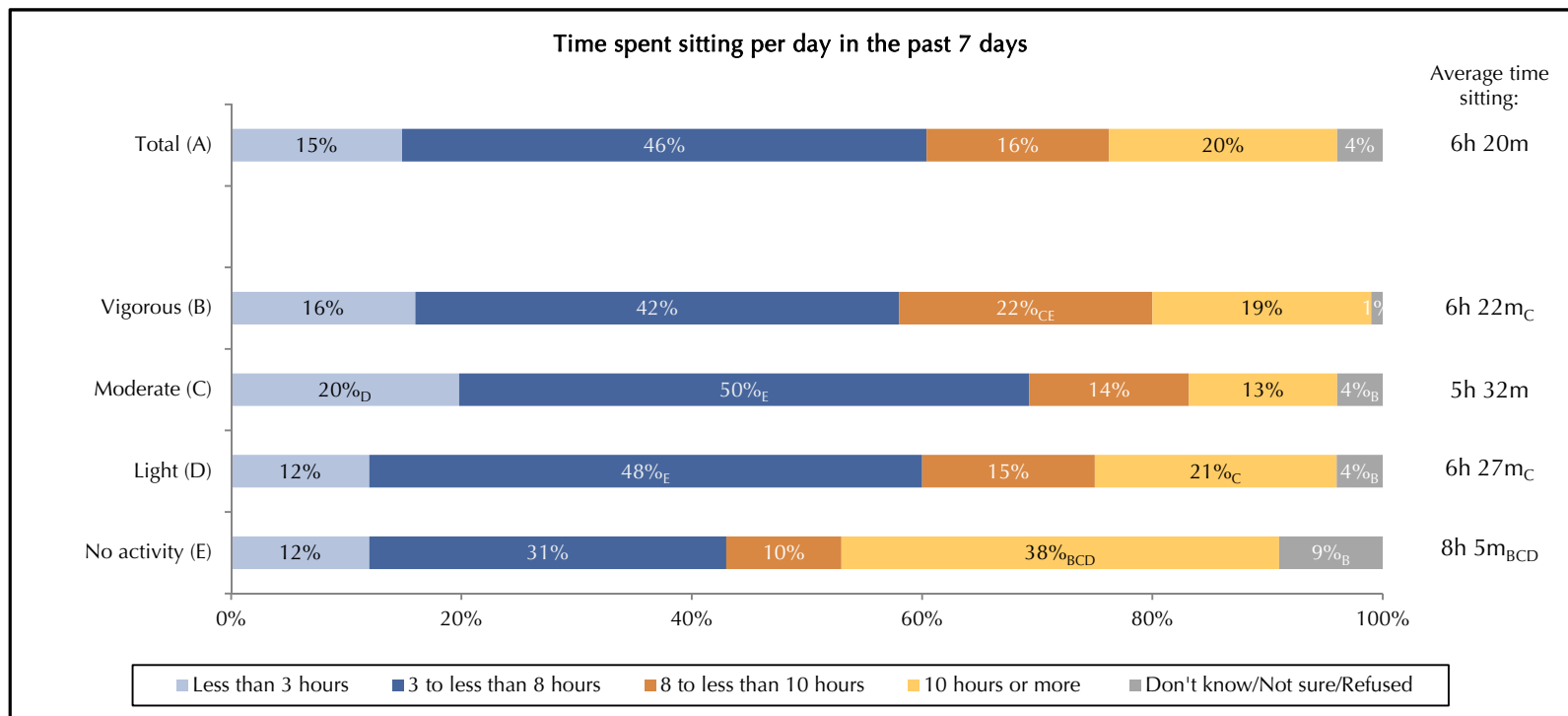
Q42, Q44



## Less time sitting associated with better sleep and health (continued)

Significantly more non-exercisers report sitting for more than 10 hours (38%) per day compared to vigorous exercisers (19%), moderate exercisers (13%) and light exercisers (21%).

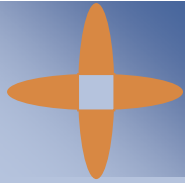
The following page displays activities done while sitting in the past seven days along with the average lengths of time the activity was performed. More data on sitting can be found in the Appendix (page 76).



Base= Total sample (Total n=1,000; Vigorous n=183; Moderate n=250; Light n=477; No activity n=88)

Letters indicate significant differences at the 95% confidence level.

Q42



## Less time sitting associated with better sleep and health (continued)

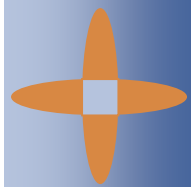
| Time spent sitting                            |           |                 |                     |                 |                      |                      |
|---|-----------|-----------------|---------------------|-----------------|----------------------|----------------------|
|   | Total (A) | Activity Levels |                     |                 |                      |                      |
|   |           | Vigorous (B)    | Moderate (C)        | Light (D)       | No activity (E)      |                      |
| <b>Average Time SITTING while...*</b>         | n=        | (1,000)         | (183)               | (250)           | (477)                | (88)                 |
| Watching television                           |           | 2h 11m          | 1h 52m              | 1h 47m          | 2h 23m <sub>BC</sub> | 3h 0m <sub>BCD</sub> |
| Using a computer                              |           | 3h 55m          | 4h 13m <sub>C</sub> | 3h 31m          | 4h 3m <sub>C</sub>   | 3h 50m               |
| Reading                                       |           | 1h 2m           | 59m                 | 53m             | 1h 7m                | 1h 7m                |
| Socializing with family and friends           |           | 1h 31m          | 1h 24m              | 1h 19m          | 1h 38m <sub>C</sub>  | 1h 42m               |
| Traveling in a vehicle or public transit      |           | 1h 19m          | 1h 10m              | 1h 19m          | 1h 18m               | 1h 40m <sub>BD</sub> |
| Doing hobbies                                 |           | 43m             | 53m                 | 37m             | 43m                  | 37m                  |
| <b>Less than 20 minutes SITTING while...*</b> | n=        | (1,000)         | (183)               | (250)           | (477)                | (88)                 |
| Watching television                           |           | 8%              | 10%                 | 8%              | 8%                   | 8%                   |
| Using a computer                              |           | 10              | 9                   | 10              | 9                    | 16                   |
| Reading                                       |           | 28              | 25                  | 28              | 29                   | 36                   |
| Socializing with family and friends           |           | 13              | 13                  | 14              | 13                   | 14                   |
| Traveling in a vehicle or public transit      |           | 12              | 10                  | 12              | 13                   | 11                   |
| Doing hobbies                                 |           | 52              | 49                  | 51              | 52                   | 60                   |
| <b>20 minutes or more SITTING while...*</b>   | n=        | (1,000)         | (183)               | (250)           | (477)                | (88)                 |
| Watching television                           |           | 89%             | 90%                 | 89%             | 89%                  | 86%                  |
| Using a computer                              |           | 88              | 90 <sub>E</sub>     | 88 <sub>E</sub> | 89 <sub>E</sub>      | 78                   |
| Reading                                       |           | 68              | 73 <sub>E</sub>     | 69 <sub>E</sub> | 68                   | 57                   |
| Socializing with family and friends           |           | 82              | 84                  | 81              | 82                   | 82                   |
| Traveling in a vehicle or public transit      |           | 84              | 89 <sub>E</sub>     | 83              | 84                   | 78                   |
| Doing hobbies                                 |           | 40              | 43                  | 39              | 40                   | 33                   |

Base= Total sample

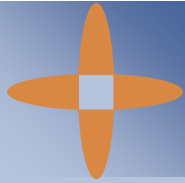
\*Top mentions

Letters indicate significant differences at the 95% confidence level.

Q43



Exercise is good,  
regardless of time of day

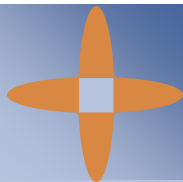


## Exercise is good, regardless of time of day

While some believe exercising near bedtime can adversely affect sleep and sleep quality, no major differences were found between the data for individuals who say they have done vigorous and/or moderate activity within four hours of bedtime compared to their counterparts (those who did vigorous or moderate activity more than four hours before bedtime). According to the 2013 *Sleep in America*<sup>®</sup> poll, the conclusion can be drawn that exercise, or physical activity in general, is generally good for sleep, regardless of the time of day the activity is performed.

The following two pages show the data for the key questions examined by the segments of those who did vigorous and/or moderate activity within four hours of bedtime and those who did vigorous and/or moderate activity more than four hours before bedtime.

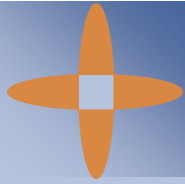




## Exercise is good, regardless of time of day (continued)

| Vigorous/Moderate Activity within 4 hours of Bedtime |  |   |
|--|--|---|
|  | Vigorous/Moderate Activity within 4 hours of Bedtime (B) | Vigorous/Moderate Activity more than 4 hours before Bedtime (C) |
| <b>Modified Epworth Sleepiness Scale</b> n=          | (218)  | (518)   |
| Sleepy   | 16%  | 14%   |
| Normal   | 84   | 86  |
| <b>Overall Sleep Quality</b> n=                      | (231)  | (542)   |
| Very good  | 17%  | 22%   |
| Fairly good  | 59   | 58  |
| Fairly bad   | 19   | 17  |
| Very bad   | 6  | 4   |
| <b>Overall Health Quality</b> n=                     | (231)  | (542)   |
| Excellent  | 26%  | 27%   |
| Good   | 57   | 57  |
| Fair   | 14   | 15  |
| Poor   | 3 <sub>c</sub>   | 1   |
| <b>Quality of Sleep on Exercise Days</b> n=          | (231)  | (542)   |
| Improves   | 55%  | 54%   |
| Worsens  | 3  | 2   |
| No difference  | 39   | 42  |
| Don't know/Refused/No exercise                       | 3  | 2   |
| <b>Length of Sleep on Exercise Days</b> n=           | (231)  | (542)   |
| Improves   | 33%  | 29%   |
| Worsens  | 2  | 2   |
| No difference  | 63   | 67  |
| Don't know/Refused/No exercise                       | 2  | 2   |

Base= Total sample  
 Letters indicate significant differences at the 95% confidence level.  
 Q13,Q30,Q24,Q45,Q46

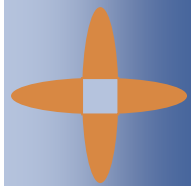


## Exercise is good, regardless of time of day (continued)

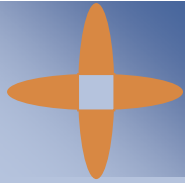
An interesting finding in this comparison is that those who are doing vigorous and/or moderate activity more than four hours before bedtime (73%) are more likely to say their workday or weekday routine allows for adequate sleep as compared to their counterparts (65%).

| Vigorous/Moderate Activity within 4 hours of Bedtime                  |  |   |
|---|--|---|
|   | Vigorous/Moderate Activity within 4 hours of Bedtime (B) | Vigorous/Moderate Activity more than 4 hours before Bedtime (C) |
| <b><u>Workday/Weekday Routine allows for Adequate Sleep</u></b> n=    | (231)  | (542)   |
| Yes   | 65%  | 73% <sub>B</sub>  |
| No  | 33   | 27  |
| Don't know/Refused  | 1  | -   |
| <b><u>More likely to exercise on weekend days or work days</u></b> n= | (231)  | (542)   |
| Much more likely on weekend days                                      | 20%  | 20%   |
| A little more likely on weekend days                                  | 11   | 10  |
| No difference   | 35   | 33  |
| A little more likely on weekdays                                      | 11   | 9   |
| Much more likely on weekdays  | 18   | 26% <sub>B</sub>  |
| Do not exercise   | 3  | 3   |
| Don't know/Not sure/Refused   | <1   | <1  |

Base= Total sample  
 Letters indicate significant differences at the 95% confidence level.  
 Q15, Q48



# Other sleep habits

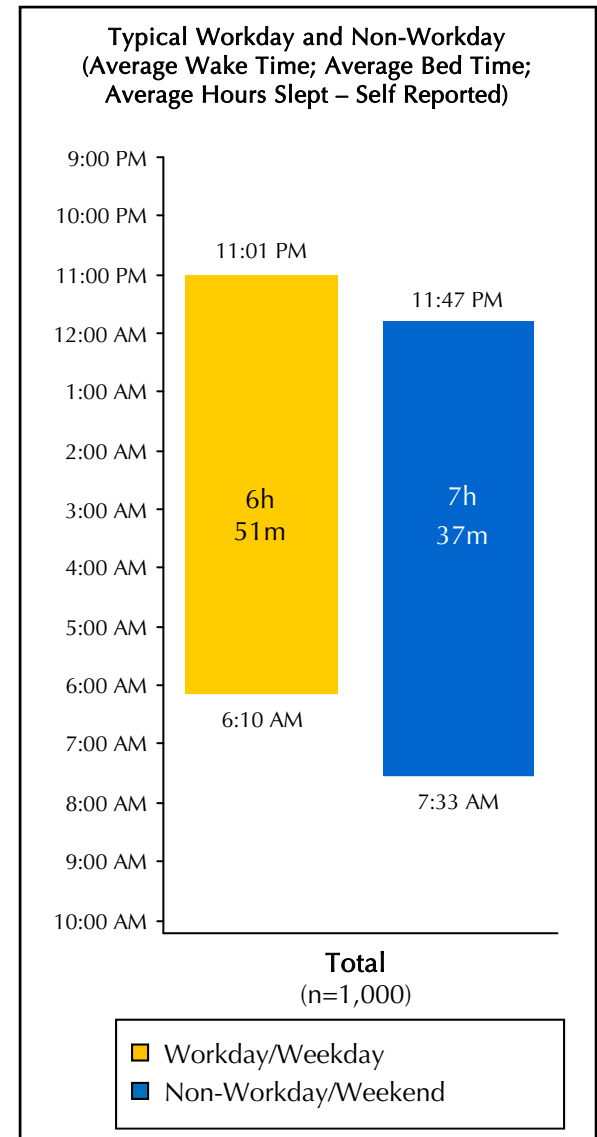


## Other sleep habits

Respondents were asked when they typically go to bed, wake up and how long they sleep on both a typical school day, workday or weekday and non-school day, non-workdays or weekends.

Overall, respondents' bed times (11:01 PM vs. 11:47 PM), wake times (6:10 AM vs. 7:33 AM) and length of time slept (6 hours 51 minutes vs. 7 hours 37 minutes) on weekends were roughly one hour later or longer on average than on weekdays.

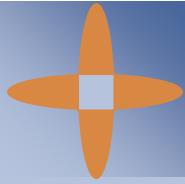
- Those who classify themselves as performing moderate activity and those who classify themselves as performing light activity report a significantly later wake time (7:38 AM each) on weekends than those who consider themselves to do no activity (6:45 AM).
  - Interestingly, light exercisers also report a significantly later wake-time (6:14 AM) than non-exercisers on weekdays (5:51 AM).
- Those who classify themselves as light exercisers have a significantly later bed time on weekdays (11:09 PM) than those who consider themselves moderate exercisers (10:46 PM).



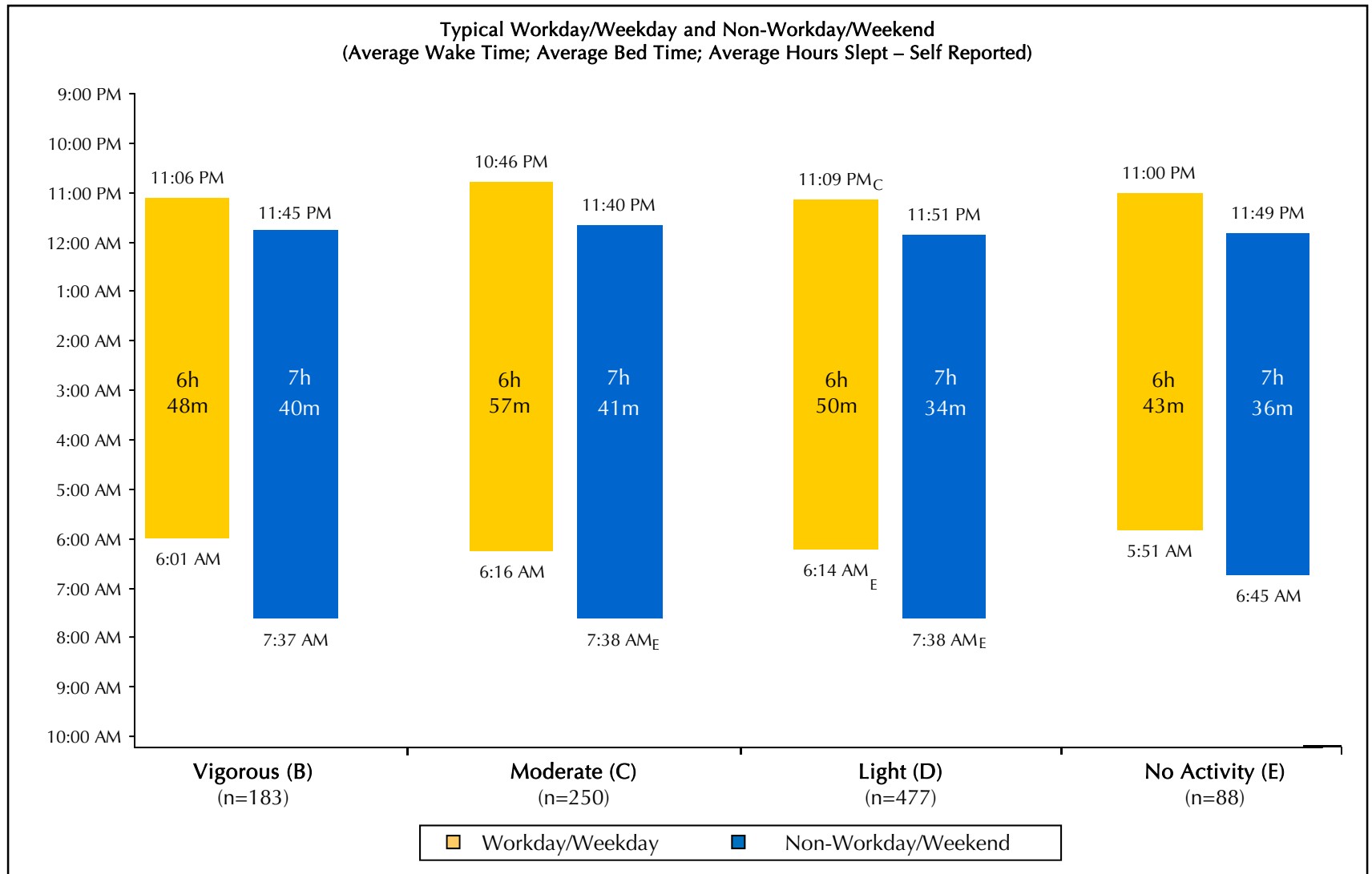
Base = Total sample

DK/Ref = <1% - 2%

Note: See note on next page on how times are derived.  
Q1, Q2, Q3, Q4, Q5, Q6



## Other sleep habits (continued)



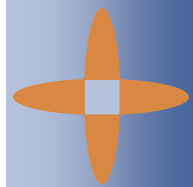
Base = Total sample

DK/Ref = 0% – 6%

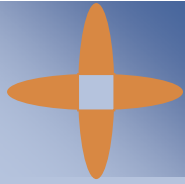
Note: Wake/Bed times are averages derived by using ranges of times (i.e. between 7:00 AM – 7:14 AM), while hours slept is collected by asking respondents for hours and minutes they usually sleep in one night.

Letters indicate significant differences at the 95% confidence level.

Q1, Q2, Q3, Q4, Q5, Q6

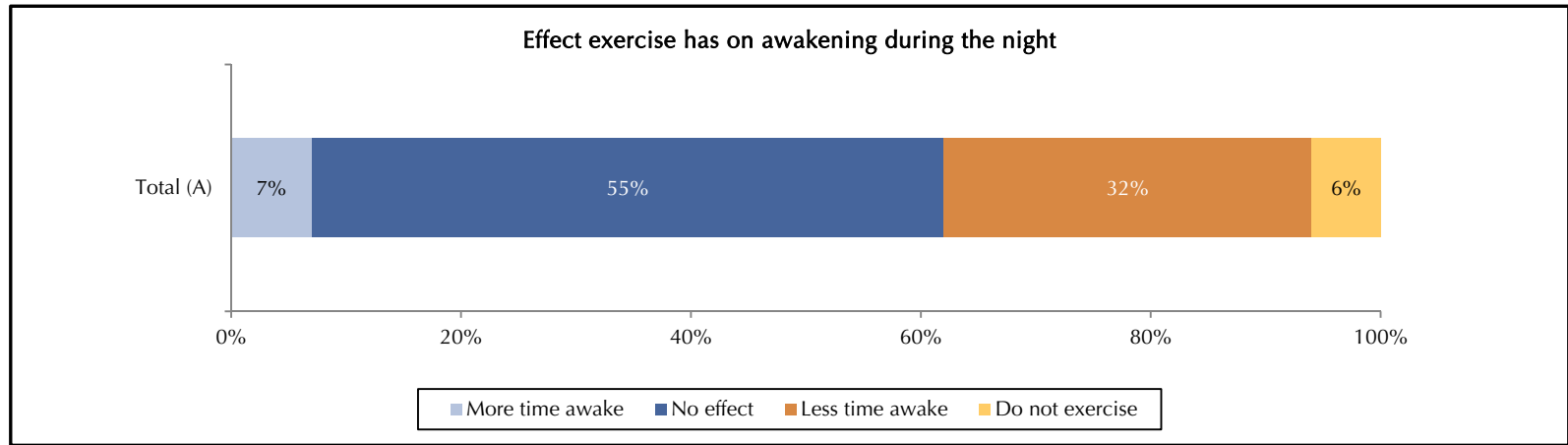


# Sleep and exercise ratings



# Sleep and exercise ratings

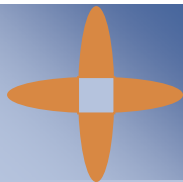
Overall, more than one-half of respondents (55%) mentioned they feel that exercise has no effect on awakening during the night.



Don't know/Not sure/Refused: 1%

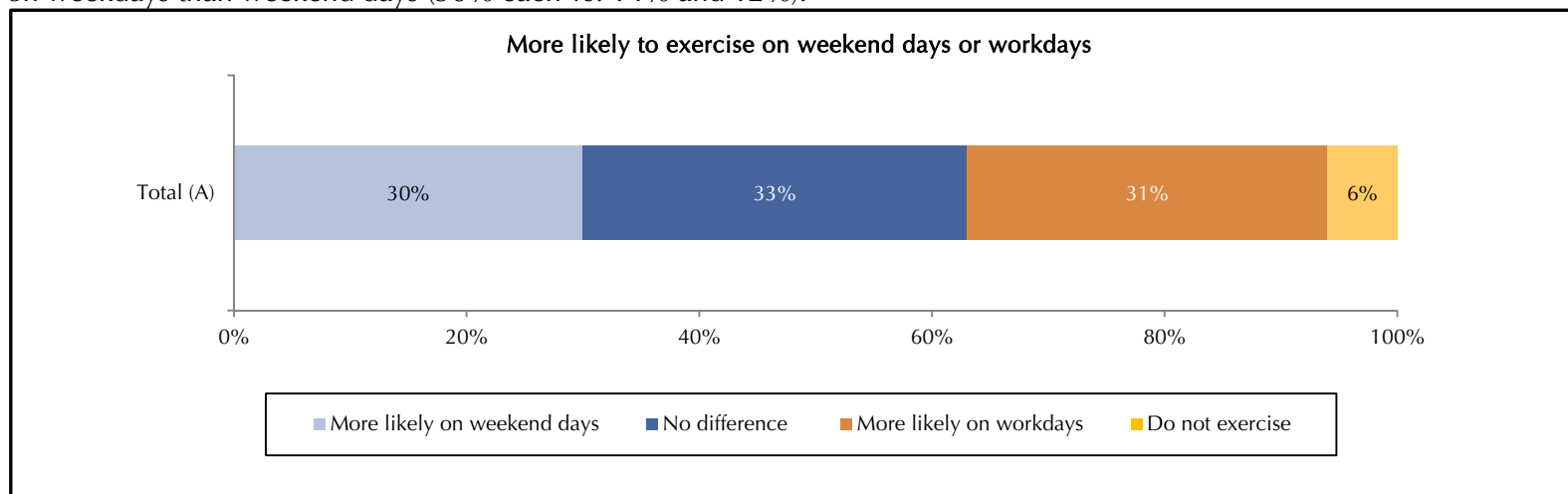
| Effect of Exercise on Sleep                                 |           |                 |                  |                 |                   |
|---|-----------|-----------------|------------------|-----------------|-------------------|
|   | Total (A) | Activity Levels |                  |                 |                   |
|   |           | Vigorous (B)    | Moderate (C)     | Light (D)       | No activity (E)   |
| <b>Effect exercise has on awakening during the night</b> n= | (1,000)   | (183)           | (250)            | (477)           | (88)              |
| Much more time awake  | 2%        | 2%              | 2%               | 1%              | 3%                |
| A little more time awake                                    | 5         | 4               | 6 <sub>E</sub>   | 5 <sub>E</sub>  | 1                 |
| No effect   | 55        | 57              | 54               | 56              | 48                |
| A little less time awake                                    | 20        | 22              | 26 <sub>DE</sub> | 17              | 14                |
| Much less time awake  | 12        | 11              | 11               | 13              | 8                 |
| Do not exercise   | 6         | 2               | 1                | 6 <sub>BC</sub> | 23 <sub>BCD</sub> |
| Don't know/Not sure/Refused                                 | 1         | 1               | -                | 2               | 3                 |

Base= Total sample  
 Letters indicate significant differences at the 95% confidence level.  
 Q47



## Sleep and exercise ratings (continued)

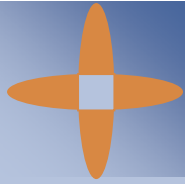
One-third (33%) mentioned there is no difference between workdays and weekend days as to when they are more likely to exercise. Interestingly, vigorous and moderate exercisers are significantly more likely than light and non-exercisers to exercise on weekdays than weekend days (30% each vs. 14% and 12%).



| Effect of Exercise on Sleep (continued)                       |           |                  |                  |                 |                   |
|---|-----------|------------------|------------------|-----------------|-------------------|
|   | Total (A) | Activity Levels  |                  |                 |                   |
|   |           | Vigorous (B)     | Moderate (C)     | Light (D)       | No activity (E)   |
| <b>More likely to exercise on weekend days or workdays</b> n= | (1,000)   | (183)            | (250)            | (477)           | (88)              |
| Much more likely on weekend days                              | 19        | 14               | 17               | 23 <sub>B</sub> | 17                |
| A little more likely on weekend days                          | 11        | 9                | 11               | 12              | 11                |
| No difference   | 33        | 36 <sub>E</sub>  | 33               | 33 <sub>E</sub> | 23                |
| A little more likely on weekdays                              | 10        | 9                | 6                | 11 <sub>C</sub> | 9                 |
| Much more likely on weekdays                                  | 21        | 30 <sub>DE</sub> | 30 <sub>DE</sub> | 14              | 12                |
| Do not exercise   | 6         | 2                | 2                | 6 <sub>BC</sub> | 26 <sub>BCD</sub> |
| Don't know/Not sure/Refused                                   | 1         | 1                | 1                | <1              | 1                 |

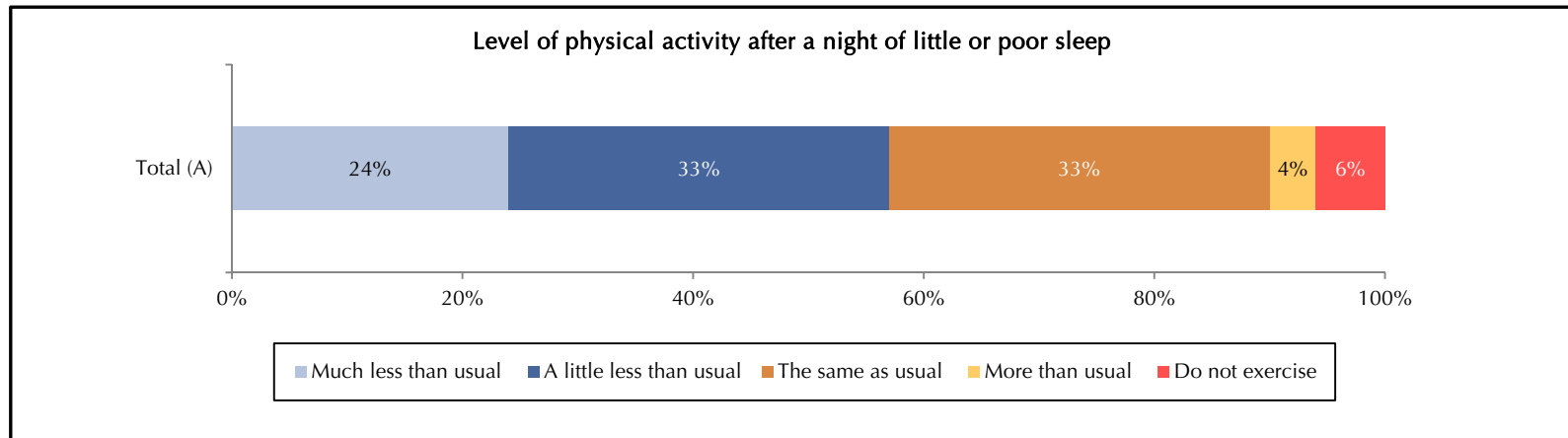
Base= Total sample  
 Letters indicate significant differences at the 95% confidence level.  
 Q48





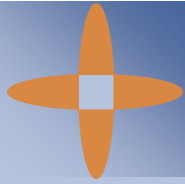
## Sleep and exercise ratings (continued)

After a night of little or poor sleep, more than one-half of respondents overall said their level of physical activity is a little less than usual (33%) or much less than usual (24%).



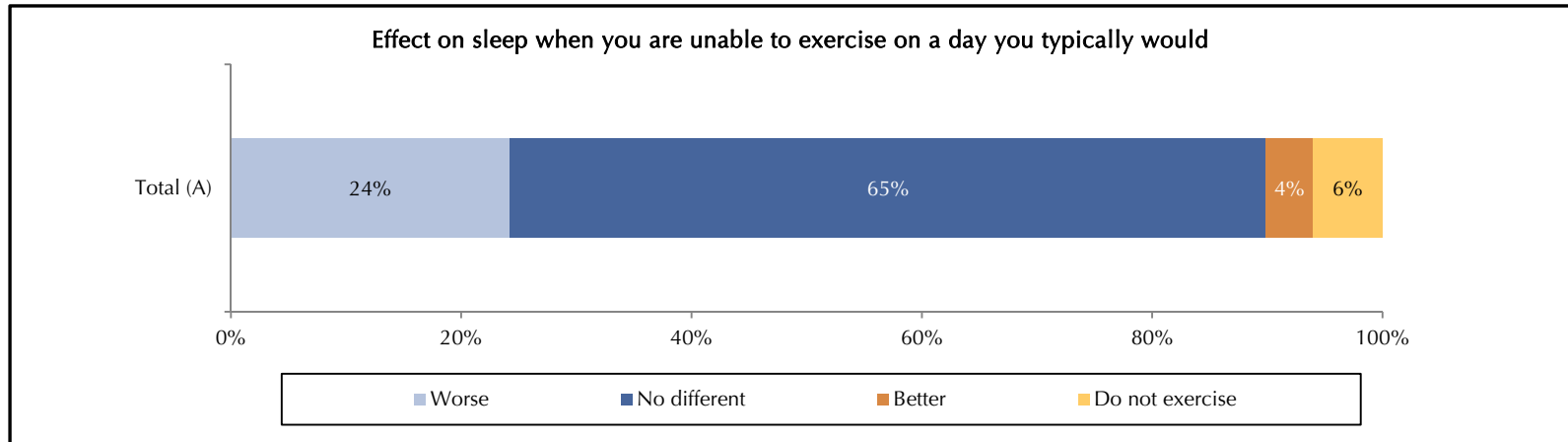
| Effect of Exercise on Sleep (continued)                                    |           |                  |                 |                 |                   |
|--|-----------|------------------|-----------------|-----------------|-------------------|
|  | Total (A) | Activity Levels  |                 |                 |                   |
|  |           | Vigorous (B)     | Moderate (C)    | Light (D)       | No activity (E)   |
| <b>Level of physical activity after a night of little or poor sleep</b> n= | (1,000)   | (183)            | (250)           | (477)           | (88)              |
| Much less than usual   | 24%       | 20%              | 24%             | 26%             | 25%               |
| A little less than usual   | 33        | 34 <sub>E</sub>  | 36 <sub>E</sub> | 34 <sub>E</sub> | 19                |
| The same as usual  | 33        | 43 <sub>DE</sub> | 36 <sub>E</sub> | 29              | 24                |
| More than usual  | 4         | 2                | 3               | 4               | 6                 |
| Do not exercise  | 6         | 2                | 1               | 6 <sub>BC</sub> | 22 <sub>BCD</sub> |
| Don't know/Not sure/Refused  | 1         | 1                | <1              | <1              | 5                 |

Base= Total sample  
 Letters indicate significant differences at the 95% confidence level.  
 Q49



## Sleep and exercise ratings (continued)

More than six in ten (65%) respondents said their sleep is no different when they are unable to exercise on a day they typically would exercise, while nearly one-fourth (24%) say their sleep is worse.



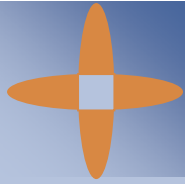
Don't know/Not sure/Refused: 1%

| Effect of Exercise on Sleep (continued)  |           |                  |                   |                 |                   |
|--|-----------|------------------|-------------------|-----------------|-------------------|
|  | Total (A) | Activity Levels  |                   |                 |                   |
|  |           | Vigorous (B)     | Moderate (C)      | Light (D)       | No activity (E)   |
| <b>Effect on sleep when you are unable to exercise on a day you typically would</b> n= | (1,000)   | (183)            | (250)             | (477)           | (88)              |
| Much worse   | 2         | 3                | 3                 | 1               | 5                 |
| Somewhat worse   | 22        | 30 <sub>CE</sub> | 19 <sub>E</sub>   | 23 <sub>E</sub> | 9                 |
| No different   | 65        | 62               | 72 <sub>BDE</sub> | 64              | 60                |
| Somewhat better  | 3         | 2                | 4                 | 3               | -                 |
| Much better  | 1         | 1                | <1                | 2               | 2                 |
| Do not exercise  | 6         | 2                | 1                 | 6 <sub>BC</sub> | 22 <sub>BCD</sub> |
| Don't know/Not sure/Refused  | 1         | 1                | <1                | 1               | 2                 |

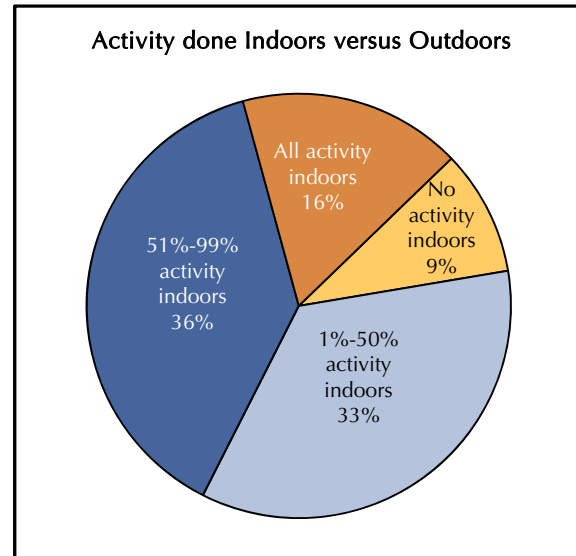
Base= Total sample

Letters indicate significant differences at the 95% confidence level.

Q50



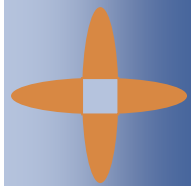
## Activity level and behavior (continued)



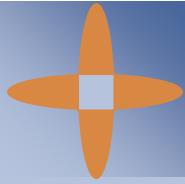
Notably, more than one in seven (16%) of all respondents say they do all of their activity indoors.

| Percentage of Activity done Indoors versus Outdoors |           |                   |                 |                  |                   |
|---|-----------|-------------------|-----------------|------------------|-------------------|
|   | Total (A) | Activity Levels   |                 |                  |                   |
|   |           | Vigorous (B)      | Moderate (C)    | Light (D)        | No activity (E)   |
| <b>Percentage of Activity done Indoors</b> n=       | (1,000)   | (183)             | (250)           | (477)            | (88)              |
| None (0%)   | 9%        | 14% <sub>CE</sub> | 4%              | 10% <sub>C</sub> | 6%                |
| 1%-25%  | 12        | 15                | 11              | 14               | -                 |
| 26%-50%   | 21        | 23 <sub>E</sub>   | 26 <sub>E</sub> | 21 <sub>E</sub>  | 6                 |
| 51%-75%   | 14        | 12                | 16 <sub>E</sub> | 15 <sub>E</sub>  | 7                 |
| 76%-99%   | 22        | 19                | 24              | 22               | 18                |
| All (100%)  | 16        | 16                | 15              | 13               | 34 <sub>BCD</sub> |
| Do not exercise                                     | 5         | -                 | 1               | 4 <sub>C</sub>   | 27 <sub>CD</sub>  |
| Don't know/Not sure/Refused                         | 1         | -                 | 2               | 1                | 2                 |

Base= Total sample  
 Letters indicate significant differences at the 95% confidence level.  
 Q35

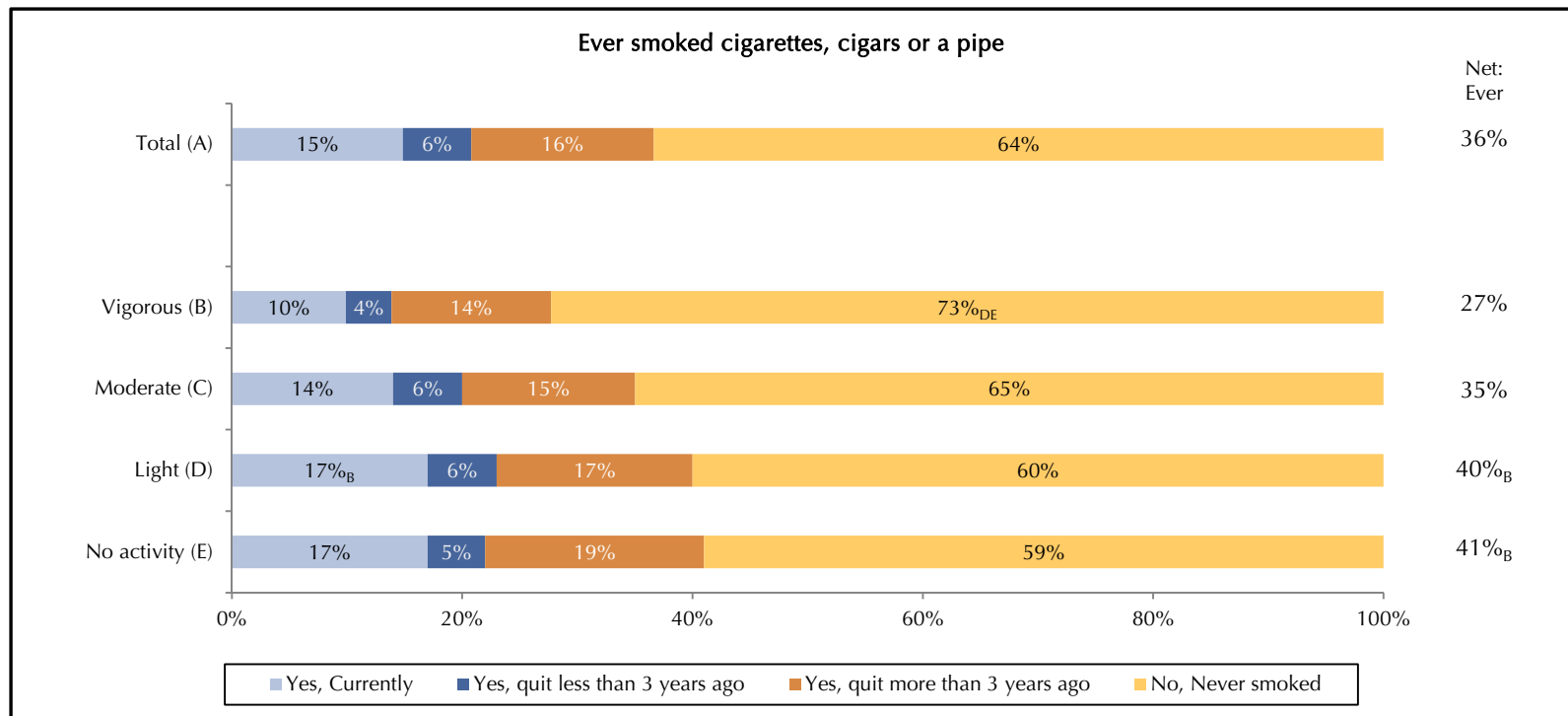


# Personal habits and behaviors



## Smoking

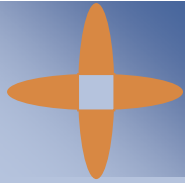
Almost three-fourths (73%) of vigorous exercisers say they have never smoked cigarettes, cigars or a pipe which is significantly higher than light exercisers or non-exercisers (60% and 59% respectively).



Base= Total sample (Total n=1,000; Vigorous n=183; Moderate n=250; Light n=477; No activity n=88)

Letters indicate significant differences at the 95% confidence level.

Q25



## Alcoholic Beverages

Interestingly, six in ten (60%) non-exercisers say they do not drink alcoholic beverages. This is significantly higher than vigorous, moderate and light exercisers.

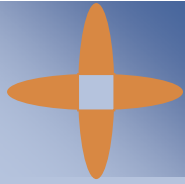
| Alcoholic Beverages   |              |                        |                   |                  |                         |
|---|--------------|------------------------|-------------------|------------------|-------------------------|
|   | Total<br>(A) | Activity Levels        |                   |                  |                         |
|   |              | Vigorous<br>(B)        | Moderate<br>(C)   | Light<br>(D)     | No activity<br>(E)      |
| <b>Drink Alcoholic Beverages</b> n=                           | (1,000)      | (183)                  | (250)             | (477)            | (88)                    |
| Yes   | 60%          | 67% <sub>DE</sub>      | 70% <sub>DE</sub> | 57% <sub>E</sub> | 40%                     |
| No  | 40           | 33                     | 30                | 43 <sub>BC</sub> | 60 <sub>BCD</sub>       |
| <b>Days had a beverage in the last 2 weeks<sup>1</sup></b> n= | (602)        | (122)                  | (174)             | (270)            | (35)                    |
| Zero days   | 14%          | 11%                    | 14%               | 15%              | 17%                     |
| 1 to 3 days   | 50           | 44                     | 49                | 53               | 49                      |
| 4 to 6 days   | 18           | 25 <sub>D</sub>        | 17                | 16               | 17                      |
| 7 to 10 days  | 10           | 14                     | 9                 | 9                | 9                       |
| More than 10 days   | 8            | 6                      | 11                | 7                | 9                       |
| <i>Average number of days</i>                                 | <i>3.6</i>   | <i>4.0</i>             | <i>3.8</i>        | <i>3.4</i>       | <i>3.5</i>              |
| <b>Number of beverages normally consumed<sup>1</sup></b> n=   | (602)        | (122)                  | (174)             | (270)            | (35)                    |
| 1 to 2 drinks   | 75%          | 70%                    | 80% <sub>BE</sub> | 77%              | 60%                     |
| 3 to 5 drinks   | 20           | 25                     | 18                | 19               | 26                      |
| 6 to 9 drinks   | 3            | 2                      | 2                 | 4                | 3                       |
| 10 drinks or more   | 1            | 2                      | -                 | 1                | 9                       |
| <i>Average number of drinks</i>                               | <i>2.3</i>   | <i>2.5<sub>C</sub></i> | <i>2.1</i>        | <i>2.3</i>       | <i>3.2<sub>CD</sub></i> |

Base= Total sample

<sup>1</sup>Base= Those who drink alcoholic beverages

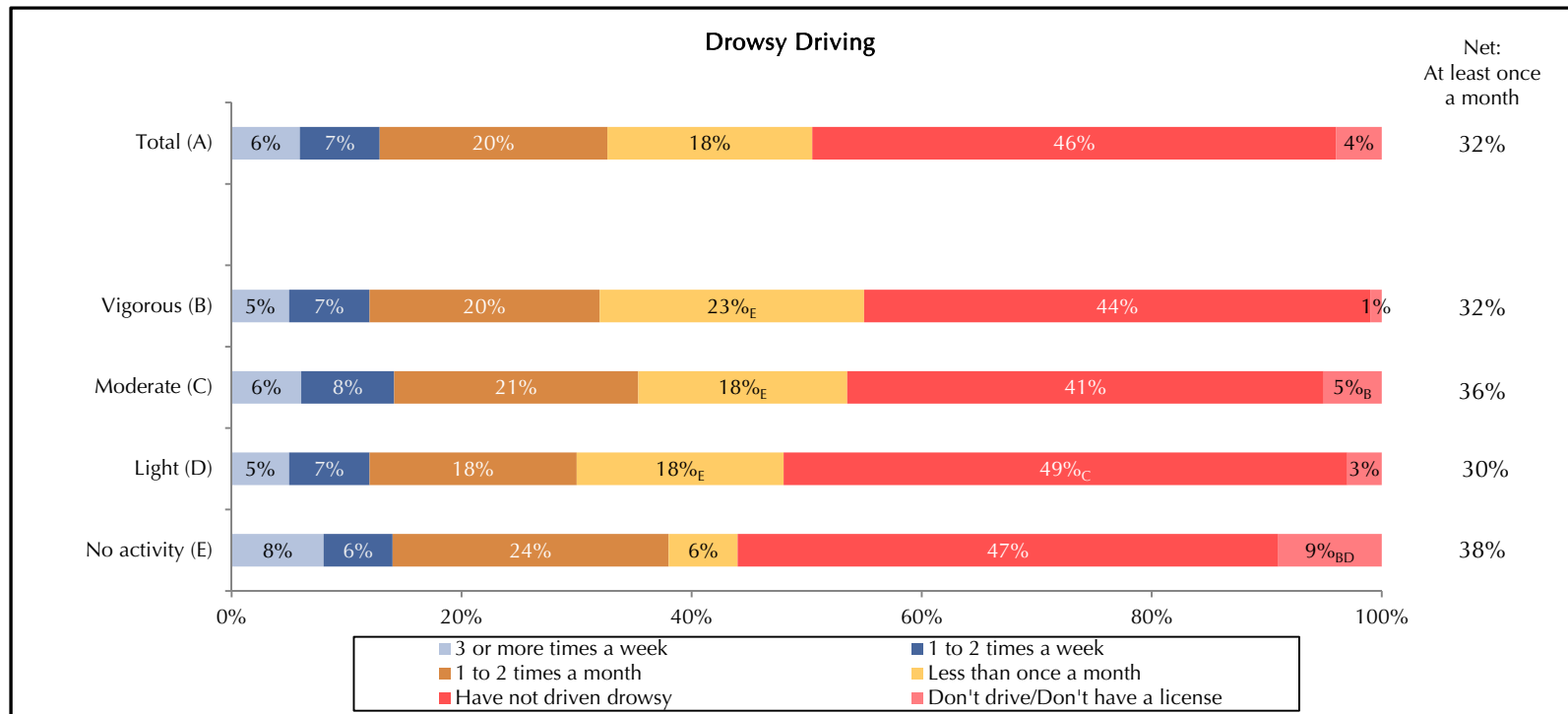
Letters indicate significant differences at the 95% confidence level.

Q26, Q27, Q28



# Drowsy Driving

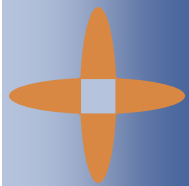
Nearly one-third (32%) of all respondents say they drive drowsy at least once a month.



Base= Total sample (Total n=1,000; Vigorous n=183; Moderate n=250; Light n=477; No activity n=88)

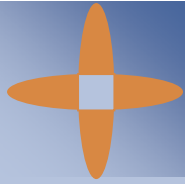
Letters indicate significant differences at the 95% confidence level.

Q51



# Appendix





## Methodology

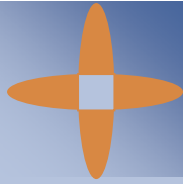
The National Sleep Foundation has conducted the *Sleep in America*<sup>®</sup> poll annually since 1991. The poll is representative of the U.S. population with a primary focus of this year's poll being to evaluate the relationship between physical activity, exercise and sleep.

A total of 1,000 surveys were conducted among a sample of Americans in order to collect the information to fulfill the objectives previously cited. Specifically, 500 surveys were completed via the Web using an E-Rewards online panel of Americans who met the qualifications set for the study. An additional 500 completes were gathered via CATI telephone interviewing from listed, random digit dial and cell phone telephone sample. The telephone interviewing was completed by WB&A's in-house professional interviewing staff.

In order to qualify for this study, respondents had to be between the ages of 23 and 60. The number of completes needed for both age groups and regions was determined using the most current U.S. Census data from 2010.

| Completed Surveys |              |              |              |
|-------------------|--------------|--------------|--------------|
| 23-29             | 177          | Northeast    | 178          |
| 30-39             | 266          | Midwest      | 217          |
| 40-49             | 272          | West         | 232          |
| 50-60             | 285          | South        | 373          |
| <b>TOTAL</b>      | <b>1,000</b> | <b>TOTAL</b> | <b>1,000</b> |

In survey research, the entire population is not typically interviewed, but rather a sample of that population is polled. Therefore, the data are subject to sampling error. The maximum sampling error of the data for the total sample (1,000 interviews) is  $\pm 3.1$  percentage points at the 95% confidence level. The sampling error will vary depending on the sample size and the percentages being examined in the sample. For more detail on the sampling error, please see the Appendix (page 66).



## Methodology (continued)

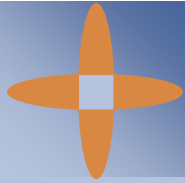
The survey methodology is subject to some limitations: First, not everyone is connected via the Internet and all respondents are not equally computer literate. Second, while no bias may be apparent, there may be some bias with regards to being part of an online panel or completing an online survey. Furthermore, the age of respondents interviewed on the telephone tends to skew towards an older population.

- + Upon completion, interviews were edited, coded and keypunched, and the data were then computer cross-tabulated. All of the study percentages have been rounded to the nearest whole percentage. Percentages may not add up to 100% due to rounding.
- + All surveys were conducted with the respondents themselves.
- + Significant differences at the 95% confidence level are shown between the segmented groups through the use of letters. For example, if a significant difference was found between Vigorous exercisers and Moderate exercisers, there would be a “B” with the percentage if the Vigorous exercisers were found to be significantly more likely to have given that survey answer. Likewise, there would be a “C” with the percentage if Moderate exercisers were found to be significantly more likely to have given that survey answer.

The National Sleep Foundation does not solicit or accept corporate support for its annual *Sleep in America*<sup>®</sup> polls; its polls are developed by an independent task force of sleep scientists and government representatives who provide guidance and expertise in developing the poll questionnaire as well as providing the analysis of the data. All poll task force members have provided disclosures of relevant financial relationships that may be related to the subject matter. Information about the National Sleep Foundation, the current and former polls and a database of sleep professionals and sleep centers can be found online at [www.sleepfoundation.org](http://www.sleepfoundation.org).

The National Sleep Foundation recommends that researchers and writers citing the *Sleep in America*<sup>®</sup> poll use the National Library of Medicine Recommended Formats for Bibliographic Citation as follows:

National Sleep Foundation. 2013 Sleep in America Poll: Exercise and Sleep.  
Washington (DC): The Foundation; 2013 Mar. Available from: <http://www.sleepfoundation.org/2013poll>

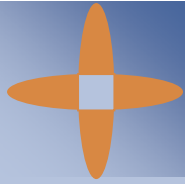


## Standard Error

Because in research the entire population is typically not interviewed, but rather a sample of that population is surveyed, the data are subject to sampling error. A sample size of 1,000 will yield data with a maximum fluctuation of  $\pm 3.1$  percentage points at the 95% confidence level. However, the actual standard error may be smaller, depending on the data being examined. Standard errors are shown below for various study percentages and by occupation, at the 95% confidence level:

| If the study percentage is around:                | 40%<br>or<br>50% | 30%<br>or<br>60% | 20%<br>or<br>70% | 10%<br>or<br>80% | 1%<br>or<br>90% | 1%<br>or<br>99% |
|---|------------------|------------------|------------------|------------------|-----------------|-----------------|
| Then, the standard error in percentage points is: |                  |                  |                  |                  |                 |                 |
| Total Sample (n=1,000)                            | $\pm 3.1$        | $\pm 3.0$        | $\pm 2.8$        | $\pm 2.5$        | $\pm 1.9$       | $\pm 0.6$       |
| Quartile 1 (n=298)                                | $\pm 5.7$        | $\pm 5.6$        | $\pm 5.2$        | $\pm 4.5$        | $\pm 3.4$       | $\pm 1.1$       |
| Quartile 2 (n=253)                                | $\pm 6.2$        | $\pm 6.0$        | $\pm 5.6$        | $\pm 4.9$        | $\pm 3.7$       | $\pm 1.2$       |
| Quartile 3 (n=233)                                | $\pm 6.4$        | $\pm 6.3$        | $\pm 5.9$        | $\pm 5.1$        | $\pm 3.9$       | $\pm 1.3$       |
| Quartile 4 (n=216)                                | $\pm 6.7$        | $\pm 6.5$        | $\pm 6.1$        | $\pm 5.3$        | $\pm 4.0$       | $\pm 1.3$       |

*For example, if a question yielded a percentage of 20% among the Total Sample, then we can be sure 95 out of 100 times that the true percentage would lie between 17.5% and 22.5% (20%  $\pm 2.5$  percentage points).*

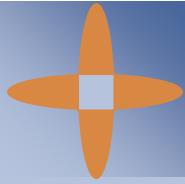


## Characteristics of Respondents

The following pages detail the characteristics and demographic information of the respondents surveyed.

| Characteristics of Respondents |              |                    |                 |                         |                         |
|--------------------------------|--------------|--------------------|-----------------|-------------------------|-------------------------|
|                                | Total<br>(A) | Activity Levels    |                 |                         |                         |
|                                |              | Vigorous<br>(B)    | Moderate<br>(C) | Light<br>(D)            | No activity<br>(E)      |
| <b>Age</b> n=                  | (1,000)      | (183)              | (250)           | (477)                   | (88)                    |
| 23 to 29                       | 18%          | 24% <sub>DE</sub>  | 20%             | 15%                     | 12%                     |
| 30 to 39                       | 27           | 30                 | 26              | 26                      | 26                      |
| 40 to 49                       | 27           | 25                 | 26              | 28                      | 32                      |
| 50 to 60                       | 28           | 22                 | 28              | 31 <sub>B</sub>         | 30                      |
| <i>Mean</i>                    | <i>42.0</i>  | <i>39.9</i>        | <i>41.3</i>     | <i>42.8<sub>B</sub></i> | <i>43.2<sub>B</sub></i> |
| <i>Median</i>                  | <i>42.0</i>  | <i>38.0</i>        | <i>41.0</i>     | <i>43.0</i>             | <i>43.0</i>             |
| <b>Gender</b> n=               | (1,000)      | (183)              | (250)           | (477)                   | (88)                    |
| Male                           | 48%          | 64% <sub>CDE</sub> | 48%             | 42%                     | 48%                     |
| Female                         | 52           | 36                 | 52 <sub>B</sub> | 58 <sub>B</sub>         | 52 <sub>B</sub>         |
| <b>Region</b> n=               | (1,000)      | (183)              | (250)           | (477)                   | (88)                    |
| Northeast                      | 18%          | 15%                | 18%             | 18%                     | 23%                     |
| Midwest                        | 22           | 17                 | 20              | 24 <sub>B</sub>         | 25                      |
| South                          | 37           | 41                 | 34              | 38                      | 33                      |
| West                           | 23           | 27 <sub>D</sub>    | 28 <sub>D</sub> | 20                      | 19                      |

Base= Total sample  
 Letters indicate significant differences at the 95% confidence level.  
 Q1, Q3, Q4

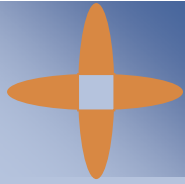


## Characteristics of Respondents (continued)

| Characteristics of Respondents (continued) |              |                   |                  |                   |                    |
|--|--------------|-------------------|------------------|-------------------|--------------------|
|  | Total<br>(A) | Activity Levels   |                  |                   |                    |
|  |              | Vigorous<br>(B)   | Moderate<br>(C)  | Light<br>(D)      | No activity<br>(E) |
| <b>Marital Status</b> n=                   | (1,000)      | (183)             | (250)            | (477)             | (88)               |
| Married or partnered                       | 64%          | 66%               | 66%              | 65%               | 56%                |
| Single                                     | 22           | 20                | 22               | 21                | 27                 |
| Living with someone                        | 5            | 8 <sub>C</sub>    | 3                | 5                 | 6                  |
| Divorced                                   | 5            | 3                 | 6                | 5                 | 6                  |
| Widowed                                    | 2            | 1                 | 1                | 1                 | 5                  |
| Separated                                  | 1            | 2                 | 2                | 1                 | -                  |
| Refused                                    | 1            | 1                 | <1               | 1                 | 1                  |
| <b>Employment Status</b> n=                | (1,000)      | (183)             | (250)            | (477)             | (88)               |
| Employed full or part-time                 | 77%          | 84% <sub>DE</sub> | 80% <sub>E</sub> | 77% <sub>E</sub>  | 57%                |
| Homemaker                                  | 8            | 4                 | 7                | 10 <sub>B</sub>   | 10                 |
| Not working or retired                     | 9            | 7                 | 9                | 8                 | 17 <sub>BD</sub>   |
| Something else                             | 6            | 5                 | 4                | 6                 | 15 <sub>BCD</sub>  |
| Don't know/Refused                         | <1           | -                 | -                | <1                | 1                  |
| <b>Highest Level of Education</b> n=       | (1,000)      | (183)             | (250)            | (477)             | (88)               |
| High school diploma or less                | 14%          | 7%                | 10%              | 18% <sub>BC</sub> | 28% <sub>BCD</sub> |
| Some college/Associate's Degree            | 29           | 17                | 29 <sub>B</sub>  | 35 <sub>B</sub>   | 25                 |
| Four year degree or more                   | 56           | 75 <sub>CDE</sub> | 61 <sub>DE</sub> | 47                | 45                 |

Base= Total sample

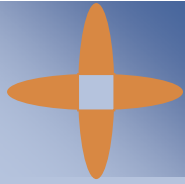
Letters indicate significant differences at the 95% confidence level.  
Q53, S2, Q54



## Characteristics of Respondents (continued)

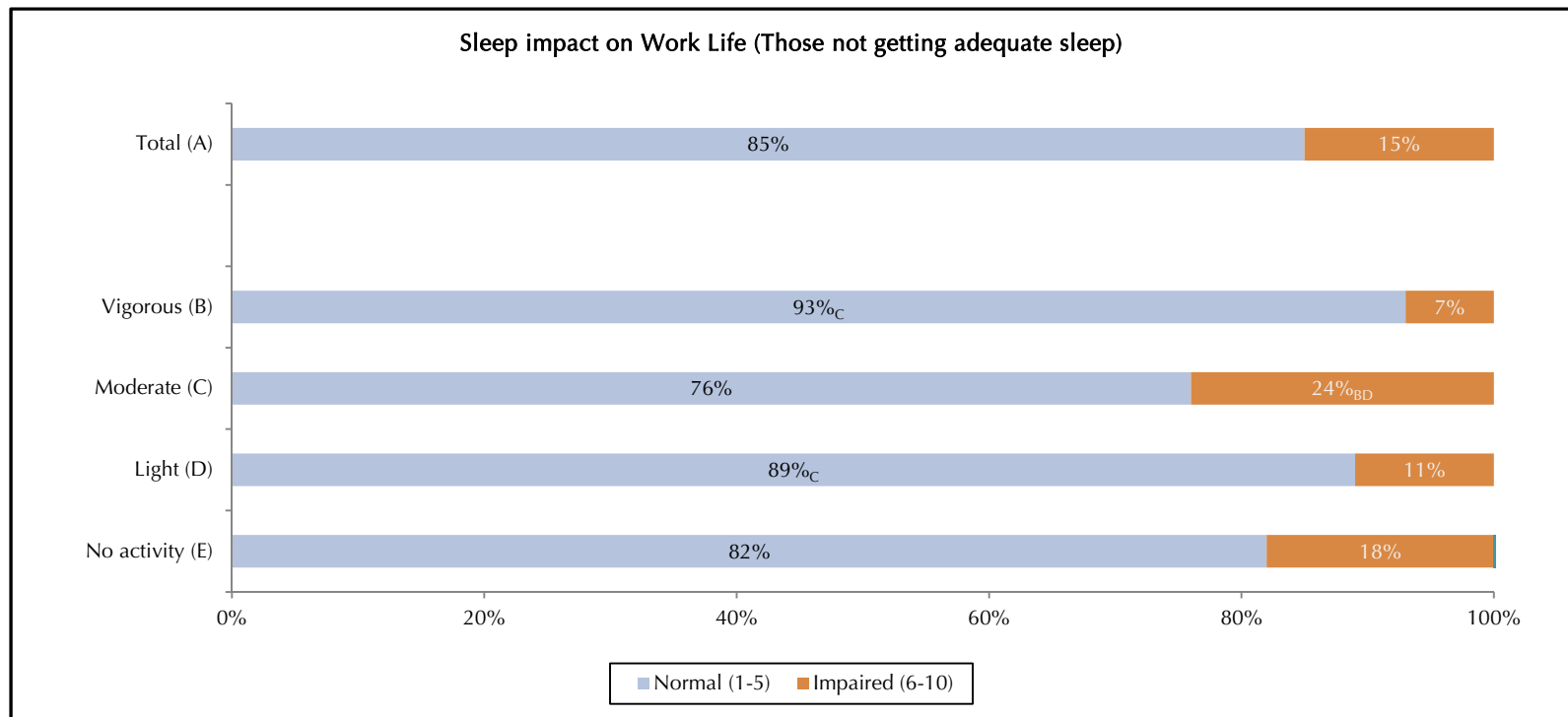
| Characteristics of Respondents (continued) |                 |                               |                  |                   |                    |
|--|-----------------|-------------------------------|------------------|-------------------|--------------------|
|  | Total<br>(A)    | Activity Levels               |                  |                   |                    |
|  |                 | Vigorous<br>(B)               | Moderate<br>(C)  | Light<br>(D)      | No activity<br>(E) |
| <b>Household Income</b> n=                 | (1,000)         | (183)                         | (250)            | (477)             | (88)               |
| Less than \$25,000                         | 10%             | 6%                            | 7%               | 12% <sub>BC</sub> | 18% <sub>BC</sub>  |
| \$25,000 to less than \$50,000             | 17              | 12                            | 20 <sub>B</sub>  | 17                | 18                 |
| \$50,000 to less than \$75,000             | 19              | 15                            | 22 <sub>E</sub>  | 20                | 12                 |
| \$75,000 to less than \$100,000            | 16              | 13                            | 16               | 18                | 15                 |
| \$100,000 or more                          | 27              | 45 <sub>CDE</sub>             | 26               | 23                | 20                 |
| Don't know/Refused                         | 11              | 8                             | 10               | 11                | 16                 |
| <i>Mean</i>                                | <i>\$75,154</i> | <i>\$88,423<sub>CDE</sub></i> | <i>\$74,513</i>  | <i>\$71,809</i>   | <i>\$66,284</i>    |
| <b>Hispanic/Latino</b> n=                  | (1,000)         | (183)                         | (250)            | (477)             | (88)               |
| Yes  | 6%              | 7%                            | 6%               | 6%                | 5%                 |
| No   | 93              | 91                            | 94               | 94                | 92                 |
| Don't know/Refused                         | 1               | 2                             | <1               | <1                | 3                  |
| <b>Ethnicity*</b> n=                       | (1,000)         | (183)                         | (250)            | (477)             | (88)               |
| White/Caucasian                            | 82%             | 86% <sub>D</sub>              | 85% <sub>D</sub> | 79%               | 78%                |
| Black/African-American                     | 9               | 5                             | 8                | 11 <sub>B</sub>   | 12                 |
| Asian                                      | 6               | 5                             | 6                | 6 <sub>E</sub>    | 2                  |
| Hispanic/Latino                            | 3               | 3                             | 3                | 3                 | 2                  |
| American Indian                            | 2               | 2                             | 2                | 2                 | 1                  |
| Don't know/Refused                         | 2               | 3                             | 1                | 2                 | 2                  |

Base= Total sample  
 Multiple Responses Accepted; \*Top mentions  
 Letters indicate significant differences at the 95% confidence level.  
 Q55, Q56, Q57



## Additional Data- Modified Sheehan Disability Scales

Similar to the results for the family life scale, while almost two in ten (18%) of the non-exercisers who do not get adequate sleep are categorized as “impaired” in the impact of sleep on work life, the moderate exercisers who do not get adequate sleep have the highest proportion (24%) of those who are “impaired” in the relationship of sleep impact on work life.

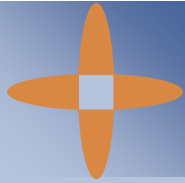


Base= Total sample (Total n=289; Vigorous n=44; Moderate n=78; Light n=132; No activity n=34\*)

\*Caution: Small Base

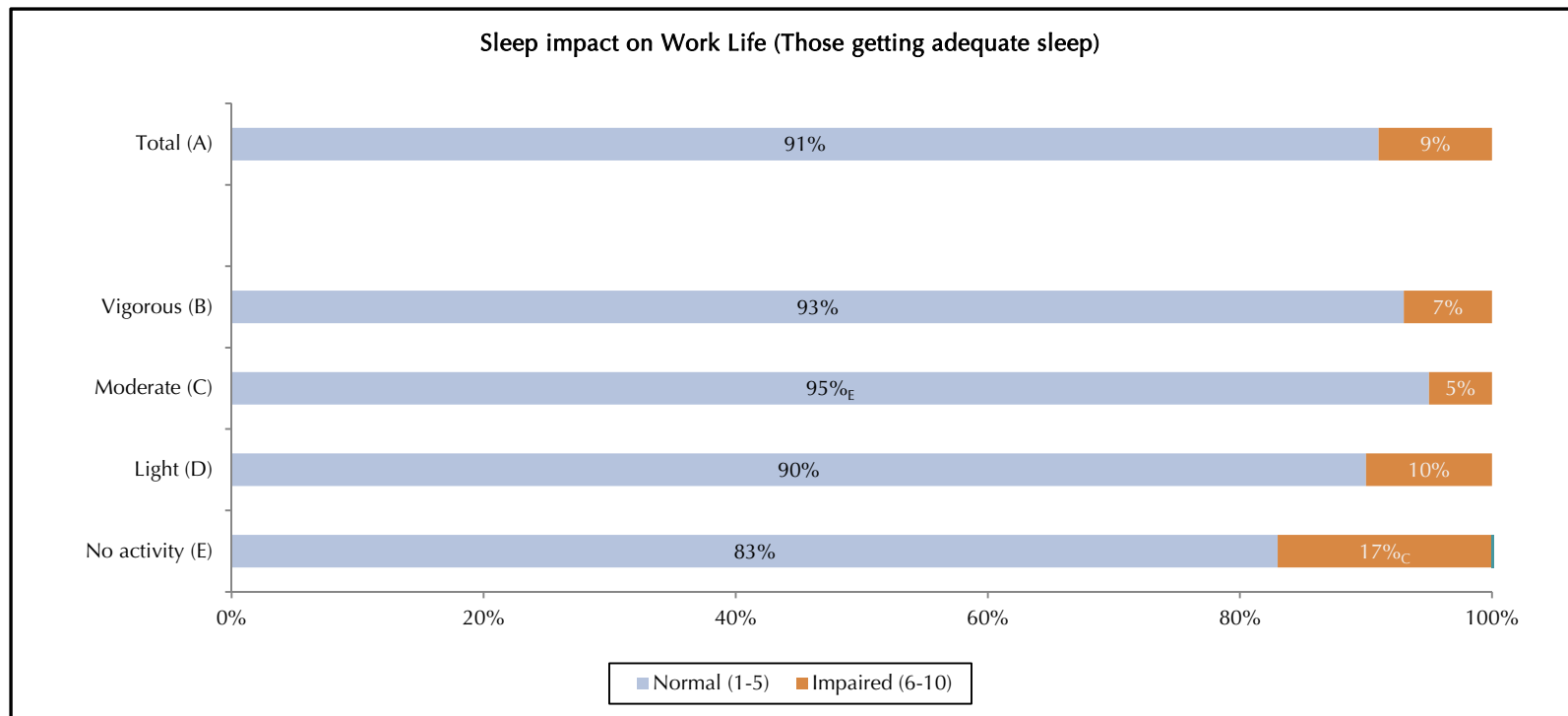
Letters indicate significant differences at the 95% confidence level.

Q16



## Additional Data- Modified Sheehan Disability Scales (continued)

While most respondents who get adequate sleep are classified as “normal” in regards to sleep impact on work life, the largest proportion (17%) of those classified as “impaired” were non-exercisers. This is significantly more than moderate exercisers (5%).

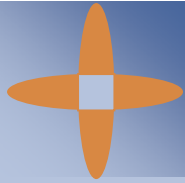


Base= Total sample (Total n=705; Vigorous n=139; Moderate n=171; Light n=342; No activity n=52)

Letters indicate significant differences at the 95% confidence level.

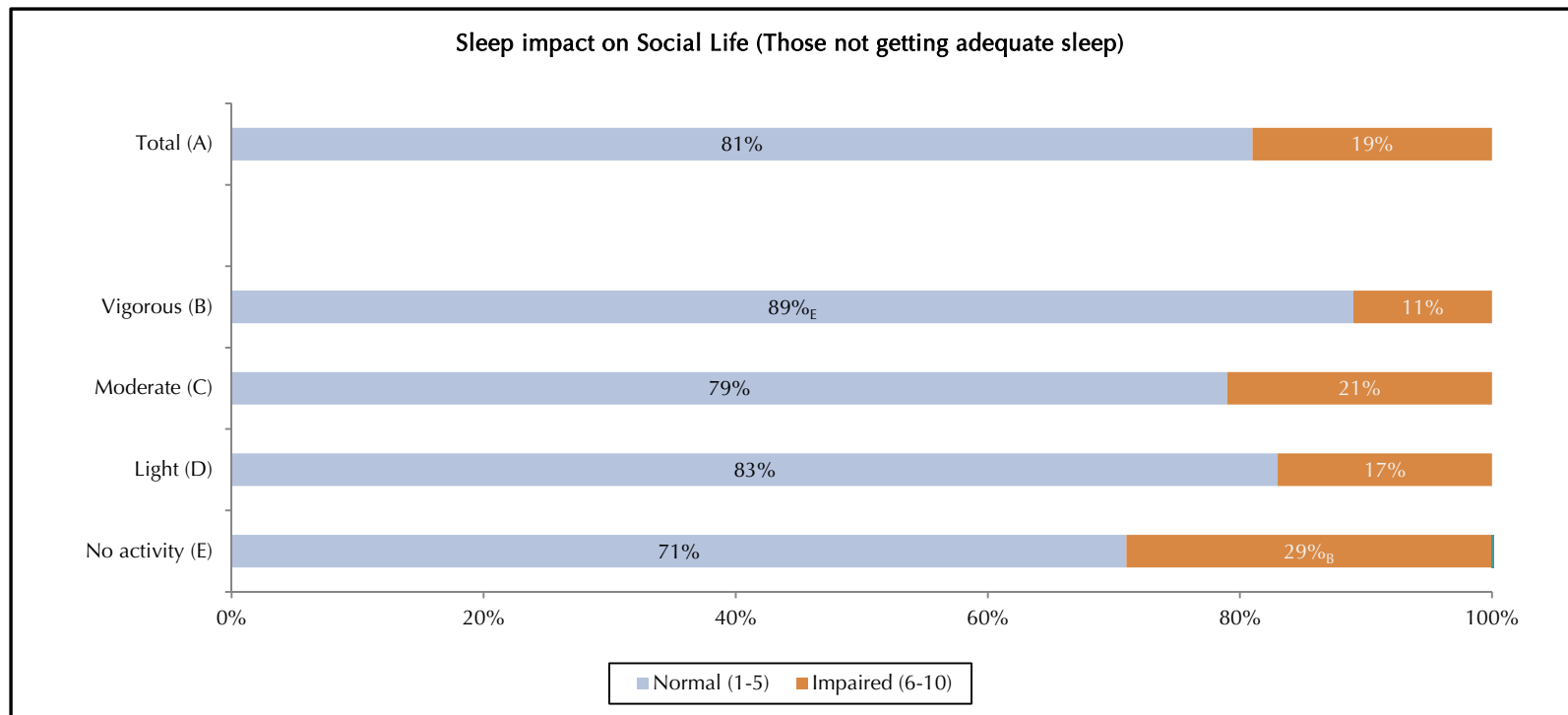
Q16





## Additional Data- Modified Sheehan Disability Scales (continued)

Nearly three in ten (29%) of the non-exercisers who do not get adequate sleep are categorized as “impaired” in the impact of sleep on social life.

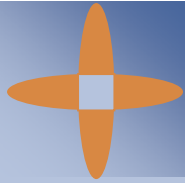


Base= Total sample (Total n=289; Vigorous n=44; Moderate n=78; Light n=132; No activity n=34\*)

\*Caution: Small Base

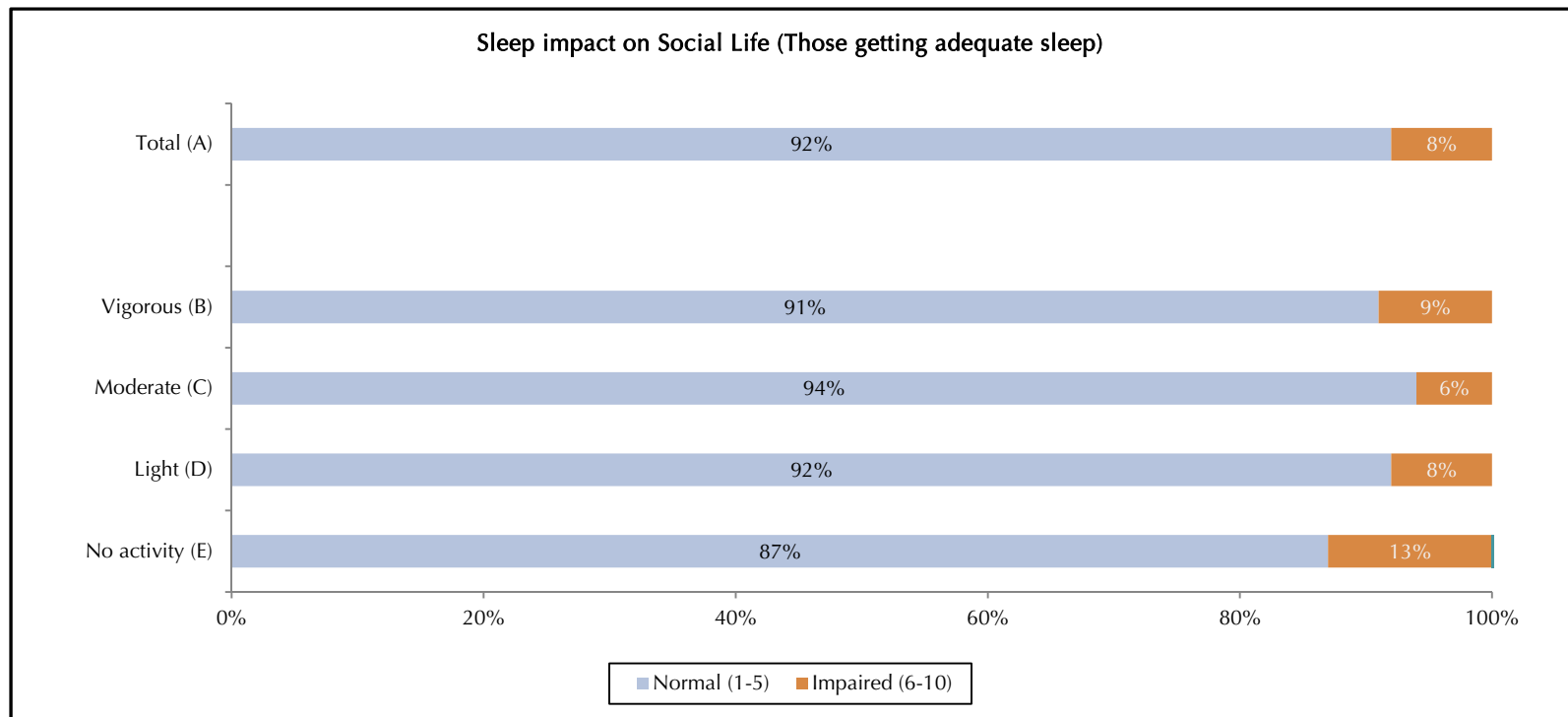
Letters indicate significant differences at the 95% confidence level.

Q16



## Additional Data- Modified Sheehan Disability Scales (continued)

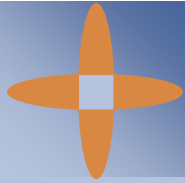
In regards to sleep impact on social life, the majority of respondents who get adequate sleep are classified as “normal”. The largest proportion (13%) of those classified as “impaired” were non-exercisers.



Base= Total sample (Total n=705; Vigorous n=139; Moderate n=171; Light n=342; No activity n=52)

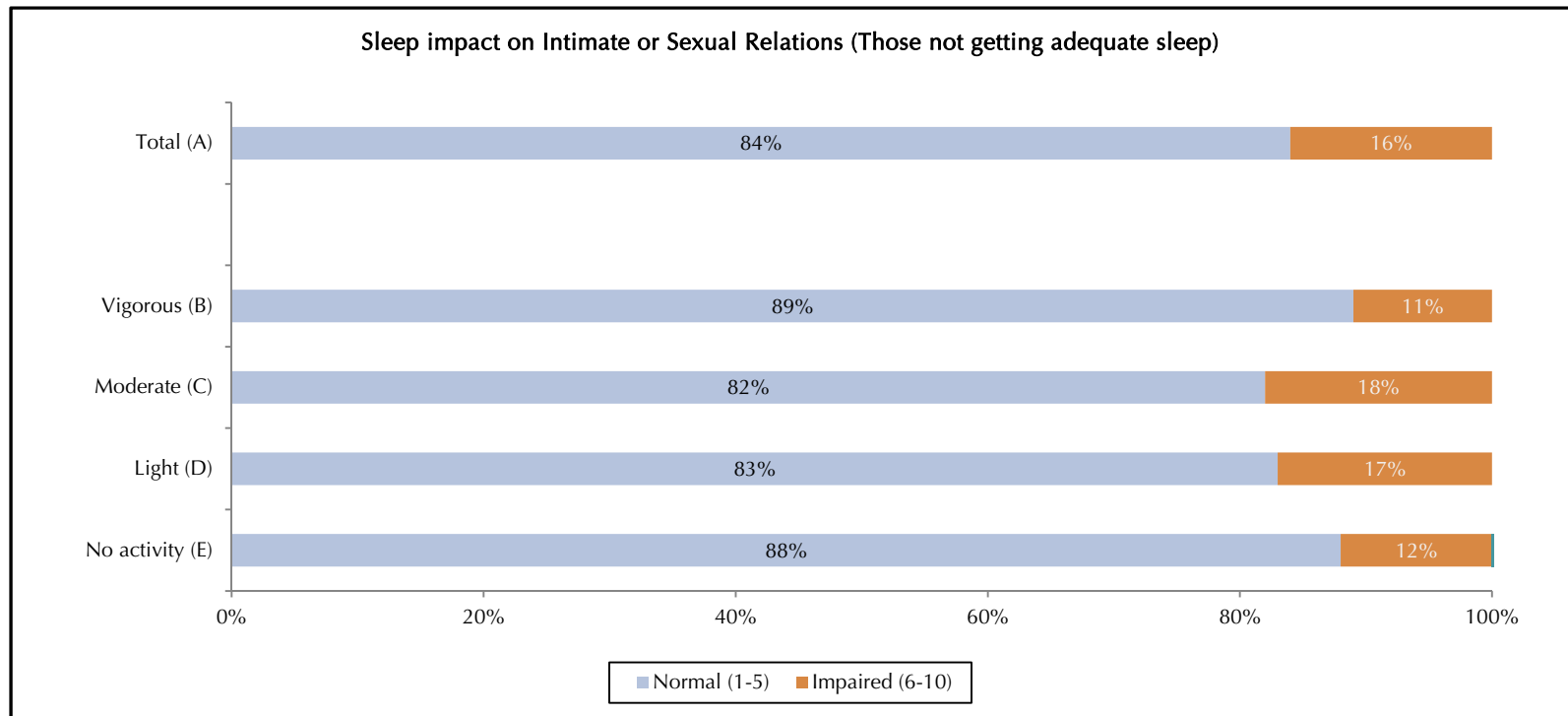
Letters indicate significant differences at the 95% confidence level.

Q16



## Additional Data- Modified Sheehan Disability Scales (continued)

Interestingly, more moderate exercisers and light exercisers who do not get adequate sleep were classified as “impaired” than vigorous exercisers and non-exercisers, regarding sleep impact on intimate or sexual relations.

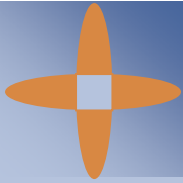


Base= Total sample (Total n=289; Vigorous n=44; Moderate n=78; Light n=132; No activity n=34\*)

\*Caution: Small Base

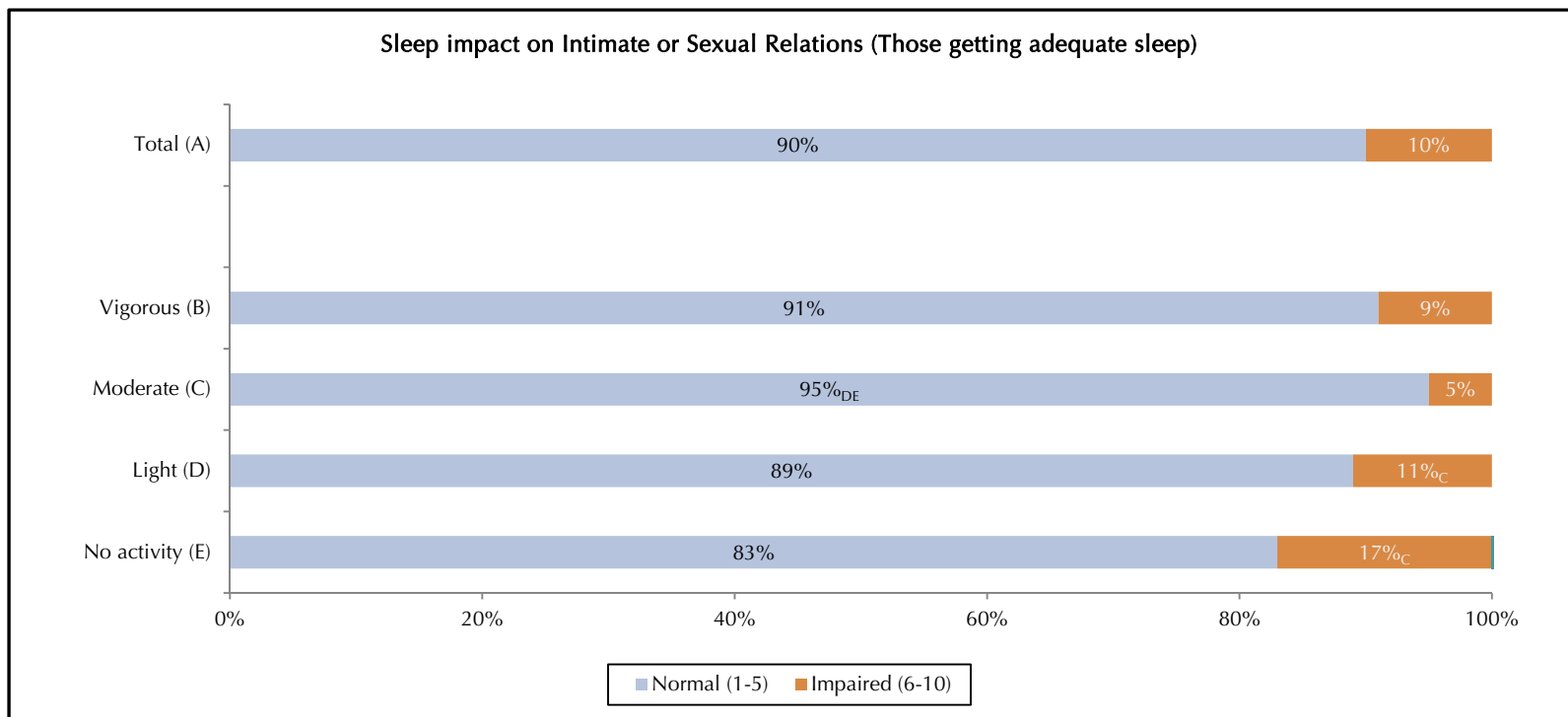
Letters indicate significant differences at the 95% confidence level.

Q16



## Additional Data- Modified Sheehan Disability Scales (continued)

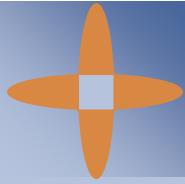
While most respondents who get adequate sleep are classified as “normal” in regards to sleep impact on intimate or sexual relations, the largest proportion (17%) of those classified as “impaired” were non-exercisers. This is significantly more than moderate exercisers (5%).



Base= Total sample (Total n=705; Vigorous n=139; Moderate n=171; Light n=342; No activity n=52)

Letters indicate significant differences at the 95% confidence level.

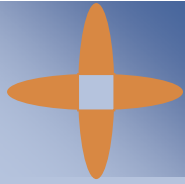
Q16



## Additional Data- Time spent sitting

| Time spent sitting                    |               |                      |                           |                           |
|---------------------------------------|---------------|----------------------|---------------------------|---------------------------|
|                                       | Total (A)     | Health Quality (Q24) |                           |                           |
|                                       |               | Excellent (F)        | Good (G)                  | Fair/Poor (K)             |
| <b>Time per day SITTING</b>           | n= (1,000)    | (238)                | (579)                     | (183)                     |
| Less than 2 hours                     | 6%            | 8%                   | 6%                        | 4%                        |
| 2 hours or more                       | 90            | 89                   | 90                        | 91                        |
| <i>Average amount of time (hours)</i> | <i>6h 20m</i> | <i>5h 55m</i>        | <i>6h 25m</i>             | <i>6h 40<sub>F</sub></i>  |
| <b>What time of day<sup>1</sup></b>   | n= (1,000)    | (238)                | (579)                     | (183)                     |
| More than 8 hours before bed          | 36%           | 39%                  | 36%                       | 34%                       |
| 4 to 8 hours before bed               | 44            | 47                   | 43                        | 44                        |
| 4 or more hours before bed            | 67            | 71                   | 65                        | 66                        |
| Less than 4 hours before bed          | 44            | 40                   | 47                        | 43                        |
| Don't know/Not sure/Refused           | 3             | 2                    | 3                         | 3                         |
| Sleep Quality (Q30)                   |               |                      |                           |                           |
|                                       | Total (A)     | Very Good (L)        | Fairly Good (M)           | Bad (Q)                   |
|                                       |               |                      |                           |                           |
| <b>Time per day SITTING</b>           | n= (1,000)    | (190)                | (569)                     | (241)                     |
| Less than 2 hours                     | 6%            | 6%                   | 7%                        | 5%                        |
| 2 hours or more                       | 90            | 92                   | 89                        | 90                        |
| <i>Average amount of time (hours)</i> | <i>6h 20m</i> | <i>5h 41m</i>        | <i>6h 20m<sub>L</sub></i> | <i>6h 51m<sub>L</sub></i> |
| <b>What time of day<sup>1</sup></b>   | n= (1,000)    | (190)                | (569)                     | (241)                     |
| More than 8 hours before bed          | 36%           | 34%                  | 36%                       | 39%                       |
| 4 to 8 hours before bed               | 44            | 43                   | 44                        | 46                        |
| 4 or more hours before bed            | 67            | 66                   | 66                        | 69                        |
| Less than 4 hours before bed          | 44            | 43                   | 47                        | 41                        |
| Don't know/Not sure/Refused           | 3             | 2                    | 4                         | 2                         |

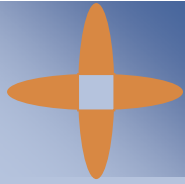
Base= Total sample; <sup>1</sup>Multiple responses accepted; B= Those doing \_\_\_\_ activity  
 Letters indicate significant differences at the 95% confidence level.  
 Q42, Q44



## Additional Data- Time spent sitting (continued)

| Time spent sitting (continued)        |               |                      |                           |                           |
|---------------------------------------|---------------|----------------------|---------------------------|---------------------------|
|                                       | Total<br>(A)  | Health Quality (Q24) |                           |                           |
|                                       |               | Excellent<br>(F)     | Good<br>(G)               | Fair/Poor<br>(K)          |
| <b>Time per day SITTING</b> n=        | (1,000)       | (238)                | (579)                     | (183)                     |
| Less than 3 hours                     | 15%           | 18%                  | 15%                       | 12%                       |
| 3 to less than 8 hours                | 46            | 49                   | 44                        | 46                        |
| 8 to less than 10 hours               | 16            | 17                   | 16                        | 12                        |
| 10 hours or more                      | 20            | 13                   | 21 <sub>F</sub>           | 25 <sub>F</sub>           |
| Less than 6 hours                     | 45            | 47                   | 44                        | 44                        |
| 6 to less than 8 hours                | 16            | 20                   | 15                        | 14                        |
| 8 hours or more                       | 35            | 31                   | 37                        | 37                        |
| <i>Average amount of time (hours)</i> | <i>6h 20m</i> | <i>5h 55m</i>        | <i>6h 25m</i>             | <i>6h 40<sub>F</sub></i>  |
|                                       | Total<br>(A)  | Sleep Quality (Q30)  |                           |                           |
|                                       |               | Very Good<br>(L)     | Fairly Good<br>(M)        | Bad<br>(Q)                |
| <b>Time per day SITTING</b> n=        | (1,000)       | (190)                | (569)                     | (241)                     |
| Less than 3 hours                     | 15%           | 16%                  | 15%                       | 15%                       |
| 3 to less than 8 hours                | 46            | 57 <sub>MQ</sub>     | 43                        | 43                        |
| 8 to less than 10 hours               | 16            | 12                   | 18 <sub>L</sub>           | 13                        |
| 10 hours or more                      | 20            | 13                   | 20 <sub>L</sub>           | 24 <sub>L</sub>           |
| Less than 6 hours                     | 45            | 52 <sub>Q</sub>      | 44                        | 41                        |
| 6 to less than 8 hours                | 16            | 21 <sub>M</sub>      | 14                        | 17                        |
| 8 hours or more                       | 35            | 25                   | 38 <sub>L</sub>           | 37 <sub>L</sub>           |
| <i>Average amount of time (hours)</i> | <i>6h 20m</i> | <i>5h 41m</i>        | <i>6h 20m<sub>L</sub></i> | <i>6h 51m<sub>L</sub></i> |

Base= Total sample  
 Letters indicate significant differences at the 95% confidence level.  
 Q42



## Additional Data- Time spent sitting (continued)

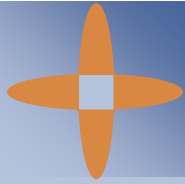
| Time spent sitting (continued)                |              |                      |                 |                     |                      |
|---|--------------|----------------------|-----------------|---------------------|----------------------|
|   | Total<br>(A) | Health Quality (Q24) |                 |                     |                      |
|   |              | Excellent<br>(F)     | Good<br>(G)     | Fair/Poor<br>(K)    |                      |
| <b>Average Time SITTING while...*</b>         | n=           | (1,000)              | (238)           | (579)               | (183)                |
| Watching television                           |              | 2h 11m               | 1h 43m          | 2h 10m <sub>F</sub> | 2h 52m <sub>FG</sub> |
| Using a computer                              |              | 3h 55m               | 3h 47m          | 4h 5m <sub>K</sub>  | 3h 31m               |
| Reading                                       |              | 1h 2m                | 52m             | 1h 4m <sub>F</sub>  | 1h 10m               |
| Socializing with family and friends           |              | 1h 31m               | 1h 28m          | 1h 28m              | 1h 47m <sub>G</sub>  |
| Traveling in a vehicle or public transit      |              | 1h 19m               | 1h 7m           | 1h 20m <sub>F</sub> | 1h 28m <sub>F</sub>  |
| Doing hobbies                                 |              | 43m                  | 38m             | 41m                 | 54m                  |
| <b>Less than 20 minutes SITTING while...*</b> | n=           | (1,000)              | (238)           | (579)               | (183)                |
| Watching television                           |              | 8%                   | 11%             | 8%                  | 6%                   |
| Using a computer                              |              | 10                   | 10              | 8                   | 15 <sub>G</sub>      |
| Reading                                       |              | 28                   | 29              | 27                  | 33                   |
| Socializing with family and friends           |              | 13                   | 11              | 14                  | 14                   |
| Traveling in a vehicle or public transit      |              | 12                   | 13              | 11                  | 14                   |
| Doing hobbies                                 |              | 52                   | 57              | 51                  | 48                   |
| <b>20 minutes or more SITTING while...*</b>   | n=           | (1,000)              | (238)           | (579)               | (183)                |
| Watching television                           |              | 89%                  | 88%             | 89%                 | 91%                  |
| Using a computer                              |              | 88                   | 90 <sub>K</sub> | 89 <sub>K</sub>     | 82                   |
| Reading                                       |              | 68                   | 68              | 70                  | 63                   |
| Socializing with family and friends           |              | 82                   | 85              | 81                  | 81                   |
| Traveling in a vehicle or public transit      |              | 84                   | 85              | 86 <sub>K</sub>     | 78                   |
| Doing hobbies                                 |              | 40                   | 38              | 40                  | 43                   |

Base= Total sample

\*Top mentions

Letters indicate significant differences at the 95% confidence level.

Q43



## Additional Data- Time spent sitting (continued)

| Time spent sitting (continued)                |    |              |                     |                    |                      |
|---|----|--------------|---------------------|--------------------|----------------------|
|   | n= | Total<br>(A) | Sleep Quality (Q30) |                    |                      |
|   |    |              | Very Good<br>(L)    | Fairly Good<br>(M) | Bad<br>(Q)           |
| <b>Average Time SITTING while...*</b>         |    | (1,000)      | (190)               | (569)              | (241)                |
| Watching television                           |    | 2h 11m       | 1h 45m              | 2h 8m <sub>L</sub> | 2h 41m <sub>LM</sub> |
| Using a computer                              |    | 3h 55m       | 3h 23m              | 4h 2m <sub>L</sub> | 4h 2m <sub>L</sub>   |
| Reading                                       |    | 1h 2m        | 50m                 | 1h 5m <sub>L</sub> | 1h 4m                |
| Socializing with family and friends           |    | 1h 31m       | 1h 36m              | 1h 26m             | 1h 40m               |
| Traveling in a vehicle or public transit      |    | 1h 19m       | 1h 14m              | 1h 18m             | 1h 23m               |
| Doing hobbies                                 |    | 43m          | 56m <sub>M</sub>    | 40m                | 41m                  |
| <b>Less than 20 minutes SITTING while...*</b> |    | (1,000)      | (190)               | (569)              | (241)                |
| Watching television                           |    | 8%           | 12% <sub>M</sub>    | 7%                 | 8%                   |
| Using a computer                              |    | 10           | 11                  | 8                  | 13                   |
| Reading                                       |    | 28           | 32                  | 26                 | 31                   |
| Socializing with family and friends           |    | 13           | 12                  | 13                 | 14                   |
| Traveling in a vehicle or public transit      |    | 12           | 17 <sub>M</sub>     | 10                 | 13                   |
| Doing hobbies                                 |    | 52           | 53                  | 50                 | 55                   |
| <b>20 minutes or more SITTING while...*</b>   |    | (1,000)      | (190)               | (569)              | (241)                |
| Watching television                           |    | 89%          | 86%                 | 91%                | 88%                  |
| Using a computer                              |    | 88           | 88                  | 89                 | 85                   |
| Reading                                       |    | 68           | 65                  | 70                 | 65                   |
| Socializing with family and friends           |    | 82           | 84                  | 82                 | 80                   |
| Traveling in a vehicle or public transit      |    | 84           | 81                  | 87 <sub>L</sub>    | 82                   |
| Doing hobbies                                 |    | 40           | 44                  | 41                 | 35                   |

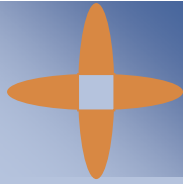
Base= Total sample

\*Top mentions

Letters indicate significant differences at the 95% confidence level.

Q43





## Additional Data- Time spent sitting (continued)

| Time spent sitting                     |               |                                      |                            |                       |   |
|--|---------------|--------------------------------------|----------------------------|-----------------------|---|
|  | Total<br>(A)  | Sleep Quality on Exercise Days (Q45) |                            |                       |   |
|  |               | Improves<br>(N)                      | Worsens<br>(O)             | Stays the same<br>(P) | Don't know/Refused/<br>No exercise<br>(Q) |
| <b>Time per day SITTING</b> n=         | (1,000)       | (509)                                | (22*)                      | (426)                 | (43)                                      |
| Less than 2 hours                      | 6%            | 6%                                   | 5%                         | 7%                    | 5%  |
| 2 hours or more                        | 90            | 91                                   | 95                         | 89                    | 81  |
| Less than 3 hours                      | 15            | 14 <sub>Q</sub>                      | 9                          | 17 <sub>Q</sub>       | 5   |
| 3 to less than 8 hours                 | 46            | 46                                   | 36                         | 46                    | 37  |
| 8 to less than 10 hours                | 16            | 15                                   | 18                         | 16                    | 14  |
| 10 hours or more                       | 20            | 20                                   | 36                         | 17                    | 30  |
| Less than 6 hours                      | 45            | 44                                   | 32                         | 48 <sub>Q</sub>       | 33  |
| 6 to less than 8 hours                 | 16            | 17                                   | 14                         | 15                    | 9   |
| 8 hours or more                        | 35            | 36                                   | 55 <sub>p</sub>            | 33                    | 44  |
| <i>Average amount of time (hours)</i>  | <i>6h 20m</i> | <i>6h 23m</i>                        | <i>8h 35m<sub>NP</sub></i> | <i>6h 2m</i>          | <i>7h 41m<sub>NP</sub></i>                |
| <b>What time of day<sup>1</sup></b> n= | (1,000)       | (509)                                | (22*)                      | (426)                 | (43)                                      |
| More than 8 hours before bed           | 36%           | 37%                                  | 50%                        | 34%                   | 42%                                       |
| 4 to 8 hours before bed                | 44            | 45                                   | 41                         | 44                    | 37  |
| 4 or more hours before bed             | 67            | 69                                   | 77                         | 63                    | 63  |
| Less than 4 hours before bed           | 44            | 43                                   | 41                         | 48 <sub>Q</sub>       | 30  |
| Don't know/Not sure/Refused            | 3             | 2                                    | -                          | 3                     | 16 <sub>NP</sub>                          |

Base= Total sample

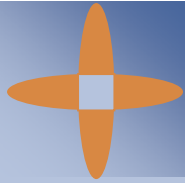
<sup>1</sup>Multiple responses accepted

B= Those doing \_\_\_\_ activity

\*Caution: Small Base

Letters indicate significant differences at the 95% confidence level.

Q42, Q44



## Additional Data- Time spent sitting (continued)

| Time spent sitting (continued)         |               |   |                 |                       |   |
|--|---------------|---|-----------------|-----------------------|---|
|  | Total<br>(A)  | Length of Sleep Time on Exercise Days (Q46) |                 |                       |   |
|  |               | Improves<br>(R)                             | Worsens<br>(S)  | Stays the same<br>(T) | Don't know/Refused/<br>No exercise<br>(U) |
| <b>Time per day SITTING</b> n=         | (1,000)       | (285)                                       | (18*)           | (655)                 | (42)                                      |
| Less than 2 hours                      | 6%            | 6%  | 6%              | 6%                    | 10%                                       |
| 2 hours or more                        | 90            | 89  | 83              | 91                    | 79  |
| Less than 3 hours                      | 15            | 14  | 17              | 15                    | 10  |
| 3 to less than 8 hours                 | 46            | 48  | 28              | 46                    | 33  |
| 8 to less than 10 hours                | 16            | 14  | 22              | 16                    | 17  |
| 10 hours or more                       | 20            | 19  | 22              | 20                    | 29  |
| Less than 6 hours                      | 45            | 46 <sub>U</sub>                             | 33              | 45 <sub>U</sub>       | 29  |
| 6 to less than 8 hours                 | 16            | 16  | 11              | 16                    | 14  |
| 8 hours or more                        | 35            | 33  | 44              | 36                    | 45  |
| <i>Average amount of time (hours)</i>  | <i>6h 20m</i> | <i>6h 16m</i>                               | <i>7h 26m</i>   | <i>6h 16m</i>         | <i>7h 25m</i>                             |
| <b>What time of day<sup>1</sup></b> n= | (1,000)       | (285)                                       | (18*)           | (655)                 | (42)                                      |
| More than 8 hours before bed           | 36%           | 40%   | 28%             | 35%                   | 43%                                       |
| 4 to 8 hours before bed                | 44            | 42  | 33              | 45                    | 45  |
| 4 or more hours before bed             | 67            | 70  | 50              | 66                    | 69  |
| Less than 4 hours before bed           | 44            | 40  | 61 <sub>U</sub> | 47 <sub>U</sub>       | 26  |
| Don't know/Not sure/Refused            | 3             | 2   | 6               | 2                     | 17 <sub>RT</sub>                          |

Base= Total sample

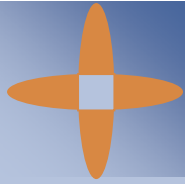
<sup>1</sup>Multiple responses accepted

B= Those doing \_\_\_\_\_ activity

\*Caution: Small Base

Letters indicate significant differences at the 95% confidence level.

Q42, Q44



## Additional Data- Time spent sitting (continued)

| Time spent sitting (continued)                   |           |                                      |                    |                     |                                    |
|--|-----------|--------------------------------------|--------------------|---------------------|------------------------------------|
|  | Total (A) | Sleep Quality on Exercise Days (Q45) |                    |                     |                                    |
|  |           | Improves (N)                         | Worsens (O)        | Stays the same (P)  | Don't know/Refused/No exercise (Q) |
| <b>Average Time SITTING while...*</b> n=         | (1,000)   | (509)                                | (22*)              | (426)               | (43)                               |
| Watching television                              | 2h 11m    | 2h                                   | 3h 1m <sub>N</sub> | 2h 19m <sub>N</sub> | 2h 51m <sub>N</sub>                |
| Using a computer                                 | 3h 55m    | 4h 1m                                | 4h 57m             | 3h 42m              | 4h 20m                             |
| Reading  | 1h 2m     | 1h 1m                                | 53m                | 1h 1m               | 1h 27m                             |
| Socializing with family and friends              | 1h 31m    | 1h 25m                               | 2h 4m <sub>N</sub> | 1h 36m              | 1h 50m                             |
| Traveling in a vehicle or public transit         | 1h 19m    | 1h 20m                               | 1h 19m             | 1h 16m              | 1h 14m                             |
| Doing hobbies                                    | 43m       | 43m                                  | 58m                | 43m                 | 43m                                |
| <b>Less than 20 minutes SITTING while...*</b> n= | (1,000)   | (509)                                | (22*)              | (426)               | (43)                               |
| Watching television                              | 8%        | 8%                                   | 5%                 | 8%                  | 12%                                |
| Using a computer                                 | 10        | 8                                    | 9                  | 12 <sub>N</sub>     | 14                                 |
| Reading  | 28        | 26                                   | 18                 | 31                  | 35                                 |
| Socializing with family and friends              | 13        | 12                                   | 5                  | 15 <sub>O</sub>     | 16                                 |
| Traveling in a vehicle or public transit         | 12        | 11                                   | 9                  | 13                  | 12                                 |
| Doing hobbies                                    | 52        | 50                                   | 32                 | 55 <sub>O</sub>     | 58 <sub>O</sub>                    |
| <b>20 minutes or more SITTING while...*</b> n=   | (1,000)   | (509)                                | (22*)              | (426)               | (43)                               |
| Watching television                              | 89%       | 90%                                  | 86%                | 89%                 | 79%                                |
| Using a computer                                 | 88        | 90 <sub>P</sub>                      | 82                 | 86                  | 81                                 |
| Reading  | 68        | 72 <sub>P</sub>                      | 73                 | 65                  | 58                                 |
| Socializing with family and friends              | 82        | 83                                   | 86                 | 81                  | 72                                 |
| Traveling in a vehicle or public transit         | 84        | 87 <sub>Q</sub>                      | 77                 | 83                  | 72                                 |
| Doing hobbies                                    | 40        | 42 <sub>Q</sub>                      | 55 <sub>Q</sub>    | 38                  | 26                                 |

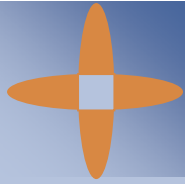
Base= Total sample

\*Caution: Small Base

\*Top mentions

Letters indicate significant differences at the 95% confidence level.

Q43



## Additional Data- Time spent sitting (continued)

| Time spent sitting (continued)                   |           |   |                 |                    |                                    |
|--|-----------|---|-----------------|--------------------|------------------------------------|
|  | Total (A) | Length of Sleep Time on Exercise Days (Q46) |                 |                    |                                    |
|  |           | Improves (R)                                | Worsens (S)     | Stays the same (T) | Don't know/Refused/No exercise (U) |
| <b>Average Time SITTING while...*</b> n=         | (1,000)   | (285)                                       | (18*)           | (655)              | (42)                               |
| Watching television                              | 2h 11m    | 2h 10m                                      | 2h 26m          | 2h 10m             | 2h 37m                             |
| Using a computer                                 | 3h 55m    | 4h 10m                                      | 4h 12m          | 3h 45m             | 4h 44m                             |
| Reading  | 1h 2m     | 1h 2m                                       | 1h 30m          | 59m                | 1h 29m                             |
| Socializing with family and friends              | 1h 31m    | 1h 33m                                      | 2h 8m           | 1h 29m             | 1h 46m                             |
| Traveling in a vehicle or public transit         | 1h 19m    | 1h 26m                                      | 1h 43m          | 1h 15m             | 1h 11m                             |
| Doing hobbies                                    | 43m       | 47m   | 55m             | 41m                | 41m                                |
| <b>Less than 20 minutes SITTING while...*</b> n= | (1,000)   | (285)                                       | (18*)           | (655)              | (42)                               |
| Watching television                              | 8%        | 6%  | -%              | 9%                 | 14%                                |
| Using a computer                                 | 10        | 8   | -               | 11                 | 7                                  |
| Reading  | 28        | 28  | 28              | 28                 | 38                                 |
| Socializing with family and friends              | 13        | 12  | 11              | 14                 | 14                                 |
| Traveling in a vehicle or public transit         | 12        | 9   | 11              | 13 <sub>R</sub>    | 10                                 |
| Doing hobbies                                    | 52        | 43  | 33              | 56 <sub>RS</sub>   | 57                                 |
| <b>20 minutes or more SITTING while...*</b> n=   | (1,000)   | (285)                                       | (18*)           | (655)              | (42)                               |
| Watching television                              | 89%       | 92% <sub>U</sub>                            | 89%             | 89%                | 79%                                |
| Using a computer                                 | 88        | 89  | 89              | 87                 | 86                                 |
| Reading  | 68        | 68  | 61              | 69                 | 55                                 |
| Socializing with family and friends              | 82        | 84  | 78              | 82                 | 74                                 |
| Traveling in a vehicle or public transit         | 84        | 88  | 78              | 84                 | 76                                 |
| Doing hobbies                                    | 40        | 46 <sub>TU</sub>                            | 56 <sub>U</sub> | 38                 | 29                                 |

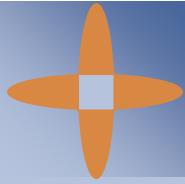
Base= Total sample

\*Caution: Small Base

\*Top mentions

Letters indicate significant differences at the 95% confidence level.

O43



## Additional Data- Time spent sitting (continued)

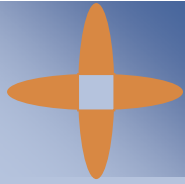
| Time spent sitting                    |               |                                   |                 |
|---------------------------------------|---------------|-----------------------------------|-----------------|
|                                       | Total<br>(A)  | Modified Epworth Sleepiness Scale |                 |
|                                       |               | Normal<br>(L)                     | Sleepy<br>(M)   |
| <b>Time per day SITTING</b>           | n= (1,000)    | (808)                             | (134)           |
| Less than 2 hours                     | 6%            | 6%                                | 6%              |
| 2 hours or more                       | 90            | 91                                | 90              |
| Less than 3 hours                     | 15%           | 14%                               | 13%             |
| 3 to less than 8 hours                | 46            | 47                                | 46              |
| 8 to less than 10 hours               | 16            | 16                                | 16              |
| 10 hours or more                      | 20            | 20                                | 21              |
| Less than 6 hours                     | 45            | 45                                | 42              |
| 6 to less than 8 hours                | 16            | 16                                | 17              |
| 8 hours or more                       | 35            | 36                                | 37              |
| <i>Average amount of time (hours)</i> | <i>6h 20m</i> | <i>6h 21m</i>                     | <i>6h 32m</i>   |
| <b>What time of day<sup>1</sup></b>   | n= (1,000)    | (808)                             | (134)           |
| More than 8 hours before bed          | 36%           | 36%                               | 40%             |
| 4 to 8 hours before bed               | 44            | 44                                | 50              |
| 4 or more hours before bed            | 67            | 66                                | 75 <sub>L</sub> |
| Less than 4 hours before bed          | 44            | 46 <sub>M</sub>                   | 36              |
| Don't know/Not sure/Refused           | 3             | 3                                 | -               |

Base= Total sample

<sup>1</sup>Multiple responses accepted; B= Those doing \_\_\_\_ activity

Letters indicate significant differences at the 95% confidence level.

Q40, Q41, Q42, Q44



## Additional Data- Time spent sitting (continued)

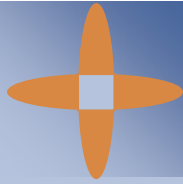
| Time spent sitting (continued)                |    |              |                                   |               |
|---|----|--------------|-----------------------------------|---------------|
|   | n= | Total<br>(A) | Modified Epworth Sleepiness Scale |               |
|   |    |              | Normal<br>(L)                     | Sleepy<br>(M) |
| <b>Average Time SITTING while...*</b>         |    | (1,000)      | (808)                             | (134)         |
| Watching television                           |    | 2h 11m       | 2h 10m                            | 2h 28m        |
| Using a computer                              |    | 3h 55m       | 3h 54m                            | 4h 19m        |
| Reading                                       |    | 1h 2m        | 1h 2m                             | 1h 5m         |
| Socializing with family and friends           |    | 1h 31m       | 1h 31m                            | 1h 34m        |
| Traveling in a vehicle or public transit      |    | 1h 19m       | 1h 19m                            | 1h 20         |
| Doing hobbies                                 |    | 43m          | 43m                               | 49m           |
| <b>Less than 20 minutes SITTING while...*</b> |    | (1,000)      | (808)                             | (134)         |
| Watching television                           |    | 8%           | 8%                                | 7%            |
| Using a computer                              |    | 10           | 10                                | 7             |
| Reading                                       |    | 28           | 28                                | 28            |
| Socializing with family and friends           |    | 13           | 12                                | 15            |
| Traveling in a vehicle or public transit      |    | 12           | 12                                | 8             |
| Doing hobbies                                 |    | 52           | 52                                | 51            |
| <b>20 minutes or more SITTING while...*</b>   |    | (1,000)      | (808)                             | (134)         |
| Watching television                           |    | 89%          | 90%                               | 90%           |
| Using a computer                              |    | 88           | 88                                | 91            |
| Reading                                       |    | 68           | 69                                | 69            |
| Socializing with family and friends           |    | 82           | 83                                | 81            |
| Traveling in a vehicle or public transit      |    | 84           | 85                                | 87            |
| Doing hobbies                                 |    | 40           | 40                                | 43            |

Base= Total sample

\*Top mentions

Letters indicate significant differences at the 95% confidence level.

Q43



# Survey Instrument



## NATIONAL SLEEP FOUNDATION 2013 SLEEP IN AMERICA POLL: PHYSICAL ACTIVITY AND SLEEP SCREENING QUESTIONNAIRE

DISPLAY NAME OF MARKET WITH PHONE NUMBER TO DIAL.

IF NAMED SAMPLE: May I please speak with [INSERT NAME FROM SAMPLE]?

IF NO NAME IN SAMPLE: May I please speak with a head of household?

**INTERVIEWER NOTE:** If the respondent doesn't understand the term "head of household," you may explain that it is the man or woman of the house. You may also speak with any adult between 23 and 60 years old even if they are not a head of the household.

Hello, my name is \_\_\_\_\_ with WB&A, a national public opinion company. I am calling on behalf of the National Sleep Foundation to conduct the annual Sleep in America poll, a survey about sleep among people in America. This is not a sales call; it is a national research study. Your responses will be kept strictly confidential. This call may be monitored or recorded for quality assurance purposes.

**INSIDE HOVER BOX OVER NATIONAL SLEEP FOUNDATION:** The National Sleep Foundation conducts polls throughout the year to compare the sleep habits, attitudes and bedtime routines of people living in the United States, as well as other topics related to sleep. You may have heard of results from prior polls mentioned on the news.

**(ONLY IF ASKED, READ:** This survey will take approximately 20 minutes of your time, depending on your responses.)

**READ:** First, I have just a few questions to make sure we speak to a variety of people all over the United States.

S1. What is your age? \_\_\_\_\_ (98=REFUSED AND 00-22 AND 61-97 THANK AND TERMINATE. 23-60 CONTINUE. TRACK RANGES 23-29; 30-39, 40-49, 50-60)

**SEPARATE SCREEN BEFORE TERMINATE DO NOT READ SCREEN:**  
S1A. SELECT THE PROPER DISPOSITION

- 01 There is no one between 23-60 years in the household
- 02 The respondent refused household information

S2. What has been your employment status over the past month? Were you primarily...  
(READ LIST. ACCEPT ONLY ONE RESPONSE.)

- 01 Working full-time or part-time,
- 02 A full-time homemaker,
- 03 Not working, retired, or
- 04 Something else?
- 98 DO NOT READ: Refused
- 99 DO NOT READ: Don't know

S3. RECORD, DO NOT ASK: Gender

- 01 Male
- 02 Female

S4. What state do you live in? (TRACK REGIONS)

DROP DOWN LIST FOR STATE

## 2013 SLEEP IN AMERICA POLL MAIN QUESTIONNAIRE

### ASK EVERYONE

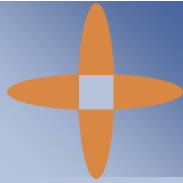
First, I'd like to ask you some general questions about your sleep. Throughout this survey, please think about your sleep schedule in the past two weeks. Keep in mind, there are no right or wrong answers.

1. At what time do you usually go to bed on nights before workdays or weekdays? This is not necessarily the time you turn off the lights and begin trying to sleep. (DO NOT READ LIST. INTERVIEWER NOTE: "NIGHT" DOES NOT HAVE TO BE PM HOURS.)

- |    |                           |    |                     |
|----|---------------------------|----|---------------------|
| 01 | 12:00 AM (Midnight)       | 13 | 9:45 PM - 9:59 PM   |
| 02 | 12:01 AM - 12:59 AM       | 14 | 10:00 PM - 10:14 PM |
| 03 | 1:00 AM - 1:59 AM         | 15 | 10:15 PM - 10:29 PM |
| 04 | 2:00 AM - 5:00 AM         | 16 | 10:30 PM - 10:44 PM |
| 05 | 5:01 AM - 8:59 AM         | 17 | 10:45 PM - 10:59 PM |
| 06 | 9:00 AM - 11:59 AM        | 18 | 11:00 PM - 11:14 PM |
| 07 | 12:00 PM (Noon) - 6:59 PM | 19 | 11:15 PM - 11:29 PM |
| 08 | 7:00 PM - 7:59 PM         | 20 | 11:30 PM - 11:44 PM |
| 09 | 8:00 PM - 8:59 PM         | 21 | 11:45 PM - 11:59 PM |
| 10 | 9:00 PM - 9:14 PM         | 98 | Refused             |
| 11 | 9:15 PM - 9:29 PM         | 99 | Don't know          |
| 12 | 9:30 PM - 9:44 PM         |    |                     |

2. Thinking about the past two weeks, at what time do you usually get up and out of bed for good on workdays or weekdays? (DO NOT READ LIST. INTERVIEWER NOTE: PUNCHES DIFFERENT FROM Q1.)

- |    |                     |    |                           |
|----|---------------------|----|---------------------------|
| 01 | 12:00 AM (Midnight) | 15 | 8:00 AM - 8:14 AM         |
| 02 | 12:01 AM - 4:59 AM  | 16 | 8:15 AM - 8:29 AM         |
| 03 | 5:00 AM - 5:14 AM   | 17 | 8:30 AM - 8:44 AM         |
| 04 | 5:15 AM - 5:29 AM   | 18 | 8:45 AM - 8:59 AM         |
| 05 | 5:30 AM - 5:44 AM   | 19 | 9:00 AM - 9:14 AM         |
| 06 | 5:45 AM - 5:59 AM   | 20 | 9:15 AM - 9:29 AM         |
| 07 | 6:00 AM - 6:14 AM   | 21 | 9:30 AM - 9:44 AM         |
| 08 | 6:15 AM - 6:29 AM   | 22 | 9:45 AM - 9:59 AM         |
| 09 | 6:30 AM - 6:44 AM   | 23 | 10:00 AM - 10:59 AM       |
| 10 | 6:45 AM - 6:59 AM   | 24 | 11:00 AM - 11:59 AM       |
| 11 | 7:00 AM - 7:14 AM   | 25 | 12:00 PM (Noon) - 5:59 PM |
| 12 | 7:15 AM - 7:29 AM   | 26 | 6:00 PM - 11:59 PM        |
| 13 | 7:30 AM - 7:44 AM   | 98 | Refused                   |
| 14 | 7:45 AM - 7:59 AM   | 99 | Don't know                |



# Survey Instrument (continued)

Thinking about your usual non-workday or weekend in the past two weeks, please answer the following questions.

3. At what time do you usually go to bed on nights you do not work the next day or weekends? This is not necessarily the time you turn off the lights and begin trying to sleep. (DO NOT READ LIST. INTERVIEWER NOTE: "NIGHT" DOES NOT HAVE TO BE PM HOURS.)

- |    |                           |    |                     |
|----|---------------------------|----|---------------------|
| 01 | 12:00 AM (Midnight)       | 13 | 9:45 PM – 9:59 PM   |
| 02 | 12:01 AM – 12:59 AM       | 14 | 10:00 PM – 10:14 PM |
| 03 | 1:00 AM – 1:59 AM         | 15 | 10:15 PM – 10:29 PM |
| 04 | 2:00 AM – 5:00 AM         | 16 | 10:30 PM – 10:44 PM |
| 05 | 5:01 AM – 8:59 AM         | 17 | 10:45 PM – 10:59 PM |
| 06 | 9:00 AM – 11:59 AM        | 18 | 11:00 PM – 11:14 PM |
| 07 | 12:00 PM (Noon) – 6:59 PM | 19 | 11:15 PM – 11:29 PM |
| 08 | 7:00 PM – 7:59 PM         | 20 | 11:30 PM – 11:44 PM |
| 09 | 8:00 PM – 8:59 PM         | 21 | 11:45 PM – 11:59 PM |
| 10 | 9:00 PM – 9:14 PM         | 98 | Refused             |
| 11 | 9:15 PM – 9:29 PM         | 99 | Don't know          |
| 12 | 9:30 PM – 9:44 PM         |    |                     |

4. Thinking about the past two weeks, at what time do you usually get up and out of bed for good on days you do not work or weekends? (DO NOT READ LIST. INTERVIEWER NOTE: PUNCHES ARE DIFFERENT FROM Q3.)

- |    |                     |    |                           |
|----|---------------------|----|---------------------------|
| 01 | 12:00 AM (Midnight) | 15 | 8:00 AM – 8:14 AM         |
| 02 | 12:01 AM – 4:59 AM  | 16 | 8:15 AM – 8:29 AM         |
| 03 | 5:00 AM – 5:14 AM   | 17 | 8:30 AM – 8:44 AM         |
| 04 | 5:15 AM – 5:29 AM   | 18 | 8:45 AM – 8:59 AM         |
| 05 | 5:30 AM – 5:44 AM   | 19 | 9:00 AM – 9:14 AM         |
| 06 | 5:45 AM – 5:59 AM   | 20 | 9:15 AM – 9:29 AM         |
| 07 | 6:00 AM – 6:14 AM   | 21 | 9:30 AM – 9:44 AM         |
| 08 | 6:15 AM – 6:29 AM   | 22 | 9:45 AM – 9:59 AM         |
| 09 | 6:30 AM – 6:44 AM   | 23 | 10:00 AM – 10:59 AM       |
| 10 | 6:45 AM – 6:59 AM   | 24 | 11:00 AM – 11:59 AM       |
| 11 | 7:00 AM – 7:14 AM   | 25 | 12:00 PM (Noon) – 5:59 PM |
| 12 | 7:15 AM – 7:29 AM   | 26 | 6:00 PM – 11:59 PM        |
| 13 | 7:30 AM – 7:44 AM   | 98 | Refused                   |
| 14 | 7:45 AM – 7:59 AM   | 99 | Don't know                |

5. On average worknights or weeknights, how many hours, not including naps, do you usually sleep during one night? (RECORD NUMBER OF HOURS AND MINUTES BELOW. DO NOT ACCEPT RANGES. 98=REFUSED; 99=DON'T KNOW. INTERVIEWER NOTE: RESPONDENT MIGHT NOT SLEEP AT "NIGHT," BUT HOW LONG IN A 24 HOUR PERIOD?)

Hours: \_\_\_\_\_  
Minutes: \_\_\_\_\_

6. On average nights you do not work or weekend nights, how many hours, not including naps, do you usually sleep during one night? (RECORD NUMBER OF HOURS AND MINUTES BELOW. DO NOT ACCEPT RANGES. 98=REFUSED; 99=DON'T KNOW. INTERVIEWER NOTE: RESPONDENT MIGHT NOT SLEEP AT "NIGHT," BUT HOW LONG IN A 24 HOUR PERIOD?)

Hours: \_\_\_\_\_  
Minutes: \_\_\_\_\_

7. Thinking about the past two weeks, how many naps did you take on workdays or weekdays? Would you say... (READ LIST.)

- |    |                         |   |              |
|----|-------------------------|---|--------------|
| 01 | Zero or None,           | → | SKIP TO Q9   |
| 02 | 1 to 2 naps,            | } | → CONTINUE   |
| 03 | 3 to 5 naps,            |   |              |
| 04 | 6 to 10 naps, or        |   |              |
| 05 | More than 10 naps?      |   |              |
| 98 | DO NOT READ: Refused    | } | → SKIP TO Q9 |
| 99 | DO NOT READ: Don't know |   |              |

THOSE WHO TOOK NAPS [Q7 (02-05)], ASK Q8.

8. On average, how many minutes would you say you usually nap on workdays or weekdays? Would you say... (READ LIST.)

- |    |                             |
|----|-----------------------------|
| 01 | Less than 15 minutes,       |
| 02 | 15 up to 30 minutes,        |
| 03 | 30 up to 45 minutes,        |
| 04 | 45 minutes up to 1 hour, or |
| 05 | 1 hour or more?             |
| 98 | DO NOT READ: Refused        |
| 99 | DO NOT READ: Don't know     |

ASK EVERYONE:

9. Thinking about the past two weeks, how many naps did you take on days off or weekends? Would you say... (READ LIST.)

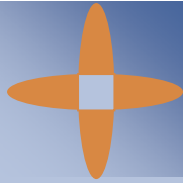
- |    |                         |   |               |
|----|-------------------------|---|---------------|
| 01 | Zero or None,           | → | SKIP TO Q11   |
| 02 | 1 to 2 naps,            | } | → CONTINUE    |
| 03 | 3 to 5 naps,            |   |               |
| 04 | 6 to 10 naps, or        |   |               |
| 05 | More than 10 naps?      |   |               |
| 98 | DO NOT READ: Refused    | } | → SKIP TO Q11 |
| 99 | DO NOT READ: Don't know |   |               |

THOSE WHO TOOK NAPS [Q9 (02-05)], ASK Q10.

10. On average, how many minutes would you say you usually nap on days off or weekends? Would you say... (READ LIST.)

- |    |                             |
|----|-----------------------------|
| 01 | Less than 15 minutes,       |
| 02 | 15 up to 30 minutes,        |
| 03 | 30 up to 45 minutes,        |
| 04 | 45 minutes up to 1 hour, or |
| 05 | 1 hour or more?             |
| 98 | DO NOT READ: Refused        |
| 99 | DO NOT READ: Don't know     |





# Survey Instrument (continued)

**ASK EVERYONE:**

11. On how many worknights or weeknights would you say "I had a good night's sleep"? Would you say... (READ LIST.)

- 04 Every night,
- 03 Almost every night,
- 02 Rarely, or
- 01 Never?
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know

12. On how many nights you do not work or on weekend nights would you say "I had a good night's sleep"? Would you say... (READ LIST.)

- 04 Every night,
- 03 Almost every night,
- 02 Rarely, or
- 01 Never?
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know

13. In recent times, how likely are you to doze off or fall asleep while doing the following activities, in contrast to just feeling tired? (READ LIST.)

**READ FIRST TIME THEN ONLY AS NEEDED:** Would you say you have no chance of dozing, a slight chance of dozing, a moderate chance of dozing or a high chance of dozing? (**ASK IN ORDER.** PROGRAMMING NOTE: IF 98/99 TO ANY, SKIP IMMEDIATELY TO Q14.)

|  | No chance | Slight chance | Moderate chance | High chance | Refused | Don't know |
|--|-----------|---------------|-----------------|-------------|---------|------------|
| a. Sitting and reading   | 00        | 01            | 02              | 03          | 98      | 99         |
| b. Watching TV   | 00        | 01            | 02              | 03          | 98      | 99         |
| c. In a car, while stopped for a few minutes in traffic          | 00        | 01            | 02              | 03          | 98      | 99         |
| d. As a passenger in a car for an hour without a break           | 00        | 01            | 02              | 03          | 98      | 99         |
| e. Sitting and talking to someone                                | 00        | 01            | 02              | 03          | 98      | 99         |
| f. Sitting quietly after a lunch without alcohol                 | 00        | 01            | 02              | 03          | 98      | 99         |
| g. Lying down to rest in the afternoon when circumstances permit | 00        | 01            | 02              | 03          | 98      | 99         |

14. Thinking about the past two weeks, on average how many hours of sleep do you need to function at your best the next day? (**DO NOT READ LIST.**)

- 01 Less than 5 hours
- 02 5 to less than 6 hours
- 03 6 to less than 7 hours
- 04 7 to less than 8 hours
- 05 8 to less than 9 hours
- 06 9 to less than 10 hours
- 07 10 to less than 11 hours
- 08 11 to less than 12 hours
- 09 12 hours or more
- 98 Refused
- 99 Don't know

15. Thinking about the past two weeks, does your current work schedule or typical weekday routine, including your duties at home, allow you to get adequate sleep?

- 01 Yes
- 02 No
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know

16. On a typical day, how much of an impact has "not getting adequate sleep" had on your (INSERT)?

**READ FIRST TIME THEN ONLY AS NEEDED:** Would you say it has had a major impact, some impact or no impact? (**RANDOMIZE.**)

|   | Major impact | Some impact | No impact | Not applicable | Refused | Don't know |
|---|--------------|-------------|-----------|----------------|---------|------------|
| a. Work                                 | 03           | 02          | 01        | 96             | 98      | 99         |
| c. Social life or leisure activities    | 03           | 02          | 01        | 96             | 98      | 99         |
| d. Family life or home responsibilities | 03           | 02          | 01        | 96             | 98      | 99         |
| e. Mood                                 | 03           | 02          | 01        | 96             | 98      | 99         |
| f. Intimate or sexual relations         | 03           | 02          | 01        | 96             | 98      | 99         |

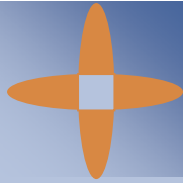
**ASK EVERYONE:**

17. Thinking about the past two weeks, how many minutes, on most worknights or weeknights, does it take you to fall asleep? Would you say... (READ LIST.)

- 01 Less than 5 minutes,
- 02 5 up to 10 minutes,
- 03 10 up to 15 minutes,
- 04 15 up to 30 minutes,
- 05 30 up to 45 minutes,
- 06 45 minutes up to 1 hour, or
- 07 1 hour or more?
- 96 **DO NOT READ:** Depends/Varies
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure

18. How many minutes, on most nights you do not work or on weekend nights, does it take you to fall asleep? Would you say... (READ LIST.)

- 01 Less than 5 minutes,
- 02 5 up to 10 minutes,
- 03 10 up to 15 minutes,
- 04 15 up to 30 minutes,
- 05 30 up to 45 minutes,
- 06 45 minutes up to 1 hour, or
- 07 1 hour or more?
- 96 **DO NOT READ:** Depends/Varies
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure



# Survey Instrument (continued)

19. In the past two weeks, would you say you [INSERT] every night or almost every night, a few nights a week, rarely or never? (RANDOMIZE. PROGRAMMING NOTE: ASK ITEMS B AND C LAST.)

|  | Every night or almost every night | A few nights a week | Rarely | Never | Refused | Don't know |
|--|-----------------------------------|---------------------|--------|-------|---------|------------|
| a. Had difficulty falling asleep                     | 04                                | 03                  | 02     | 01    | 98      | 99         |
| b. Woke up during the night                          | 04                                | 03                  | 02     | 01    | 98      | 99         |
| c. Woke up too early and could not get back to sleep | 04                                | 03                  | 02     | 01    | 98      | 99         |
| d. Woke up feeling un-refreshed                      | 04                                | 03                  | 02     | 01    | 98      | 99         |

**[MODIFIED STOP BANG]**

20. Do you snore loudly? Loudly, meaning louder than talking or loud enough to be heard through a closed door?

- 01 Yes
- 02 No
- 98 DO NOT READ: Refused
- 99 DO NOT READ: Don't know/Not sure

21. Do you often feel tired, fatigued or sleepy during the day?

- 01 Yes
- 02 No
- 98 DO NOT READ: Refused
- 99 DO NOT READ: Don't know/Not sure

22. Has anyone observed you stop breathing during your sleep?

- 01 Yes
- 02 No
- 98 DO NOT READ: Refused
- 99 DO NOT READ: Don't know/Not sure

23. Do you have or are you being treated for high blood pressure?

- 01 Yes
- 02 No
- 98 DO NOT READ: Refused
- 99 DO NOT READ: Don't know/Not sure

**[HEALTH HABITS/HEALTHY BEHAVIORS]**

24. How would you rate your overall health? Would you say... (READ LIST.)

- 01 Poor,
- 02 Fair,
- 03 Good, or
- 04 Excellent
- 98 DO NOT READ: Refused
- 99 DO NOT READ: Don't know/Not sure

25. Do you now or have you ever smoked cigarettes, cigars or a pipe? (IF YES, CLARIFY.)

- 01 Yes, I currently smoke
- 02 Yes, I used to smoke but quit less than 3 years ago
- 03 Yes, I used to smoke but quit 3 or more years ago
- 04 No, I have never smoked
- 98 DO NOT READ: Refused
- 99 DO NOT READ: Don't know/Not sure

26. Do you drink alcoholic beverages?

- 01 Yes → CONTINUE
- 02 No → SKIP TO Q29
- 98 DO NOT READ: Refused → SKIP TO Q29
- 99 DO NOT READ: Don't know/Not sure → SKIP TO Q29

**THOSE WHO DRINK ALCOHOLIC BEVERAGES [Q26 (01)] ASK Q27 AND Q28**

27. In the last two weeks, how many days have you had an alcoholic beverage? Would you say... (READ LIST.)

- 01 Zero days,
- 02 1 to 3 days,
- 03 4 to 6 days,
- 04 7 to 10 days, or
- 05 More than 10 days
- 98 DO NOT READ: Refused
- 99 DO NOT READ: Don't know/Not sure

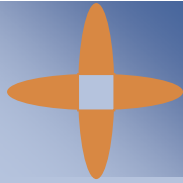
28. On days you have a drink, how many alcoholic beverages do you normally consume? A single alcoholic beverage is 12 ounces of beer, 6 ounces of wine, or 2 ounces of liquor. Would you say... (READ LIST.)

- 01 1 to 2 drinks,
- 02 3 to 5 drinks,
- 03 6 to 9 drinks, or
- 04 10 drinks or more
- 98 DO NOT READ: Refused
- 99 DO NOT READ: Don't know/Not sure

**ASK EVERYONE:**

29. Thinking about the last two weeks, how many 12 ounce servings of caffeinated beverages, such as soda, soft drinks, coffee, tea, and energy drinks do you drink on an average weekday or workday... (READ LIST. RECORD NUMBER FOR EACH BELOW. DO NOT ACCEPT RANGES. 98=REFUSED; 99=DON'T KNOW; 00=NONE; 97=LESS THAN ONE.)

|  | # Caffeinated Beverages |
|--|-------------------------|
| a. Between 5:00 AM and noon?                     |                         |
| b. Between noon and 5:00 PM?                     |                         |
| c. Between 5:00 PM and 5:00 AM the next morning? |                         |



# Survey Instrument (continued)

30. During the past two weeks, how would you rate your overall sleep quality? Would you say... (READ LIST.)

- 01 Very good,
- 02 Fairly good,
- 03 Fairly bad, or
- 04 Very bad
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure

31. During the past two weeks, how often have you taken medicine, prescribed or over-the-counter, to help you sleep? Would you say... (READ LIST.)

- 01 Never in the past two weeks,
- 02 Less than once a week in the past two weeks,
- 03 Once or twice a week in the past two weeks, or
- 04 Three or more times a week in the past two weeks
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure

32. During the past two weeks, how often have you had trouble staying awake while driving, eating meals or engaging in social activity? Would you say... (READ LIST.)

- 01 Never in the past two weeks,
- 02 Less than once a week in the past two weeks,
- 03 Once or twice a week in the past two weeks, or
- 04 Three or more times a week in the past two weeks
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure

33. During the past two weeks, how much of a problem has it been for you to keep up enough enthusiasm to get things done? Would you say... (READ LIST.)

- 01 No problem,
- 02 Only a very slight problem,
- 03 Somewhat of a problem, or
- 04 A very big problem
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure

**ASK EVERYONE:**

**[MODIFIED IPAQ]**

34. Please think about the activities you do at work, at your house, yard work, getting from place to place, and activities you do in your spare time for recreation, exercise or sport. Think only about those physical activities that you do for at least 10 minutes at a time. In the past 7 days, which of the following phrases best describes your activity level? Would you say you... (READ ENTIRE LIST. TRACK 01-04.)

- 01 Participate in vigorous activities which require hard physical effort such as: running, cycling, swimming or competitive sports,
- 02 Participate in moderate physical activities which require more effort than normal such as: yoga, tai chi and weight lifting,
- 03 Participate in light physical activity such as walking, or
- 04 Participate in no physical activity?
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure

35. In the past 7 days, from 0% meaning completely outdoors to 100% meaning completely indoors, what percentage of the physical activities you do are indoors?

- \_\_\_ % Indoors
- 996 **DO NOT READ:** I do not exercise
- 998 **DO NOT READ:** Refused
- 999 **DO NOT READ:** Don't know/Not sure

**IF Q34(02-04):** I understand you said you typically [INSERT RESPONSE FROM Q34], but since some days may be different than others please answer the following questions and ...

**IF Q34 (01,98,99):** Please... think about all the vigorous activities which take hard physical effort that you did in the past 7 days. Vigorous activities make you breathe much harder than normal and may include running, cycling, swimming and competitive sports. Please think only about those physical activities that you do for at least 10 minutes at a time.

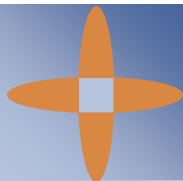
36. How much time per day did you spend doing vigorous physical activities in the past 7 days? [IF NEEDED: Think only about those physical activities that you do for at least 10 minutes at a time. Your best estimate is fine. DO NOT ACCEPT RANGES.]

- \_\_\_ Hours per day [Range: 00-24]
- \_\_\_ Minutes per day [Range: 00-59]
- 98 **DO NOT READ:** Refused → SKIP TO Q38
- 99 **DO NOT READ:** Don't know/Not sure → SKIP TO Q38

**THOSE PARTICIPATE IN VIGOROUS PHYSICAL ACTIVITY [Q36(01-24)]. ASK Q37**

37. What time of day did you do vigorous activities? Would you say... (READ LIST. MULTIPLE RESPONSES ACCEPTED.)

- 01 More than 8 hours before bedtime,
- 02 4 to 8 hours before bedtime, or
- 03 Less than 4 hours before bedtime
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure



# Survey Instrument (continued)

**ASK EVERYONE:**

**READ IF NECESSARY: IF Q34(01,03,04):** I understand you said you typically [INSERT RESPONSE FROM Q34], but since some days may be different than others please answer the following questions and...

**IF Q34 (02,98,99):** Please...think about all the **moderate physical effort** activities, which require more effort than normal, which you did in the past 7 days. Moderate physical activities make you breathe somewhat harder than normal and may include carrying light loads, yoga, tai chi and weight lifting. Do not include walking. Please think only about those physical activities that you do for at least 10 minutes at a time.

38. How much time per day did you spend doing **moderate** physical activities in the past 7 days?  
**[IF NEEDED: Think only about those physical activities that you do for at least 10 minutes at a time. Your best estimate is fine. DO NOT ACCEPT RANGES.]**

- \_\_\_ Hours per day [Range: 00-24]
- \_\_\_ Minutes per day [Range: 00-59]
- 98 **DO NOT READ:** Refused → SKIP TO Q40
- 99 **DO NOT READ:** Don't know/Not sure → SKIP TO Q40

**THOSE WHO PARTICIPATE IN MODERATE PHYSICAL ACTIVITY [Q38 (01-24)], ASK Q39**

39. What time of day did you do moderate activities? Would you say...**(READ LIST. MULTIPLE RESPONSES ACCEPTED.)**

- 01 More than 8 hours before bedtime,
- 02 4 to 8 hours before bedtime, or
- 03 Less than 4 hours before bedtime?
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure

**ASK EVERYONE:**

**READ IF NECESSARY: IF Q34(01,02,04):** I understand you said you typically [INSERT RESPONSE FROM Q34], but since some days may be different than others please answer the following questions and...

**IF Q34 (03,98,99):** Please... think about all the **light** physical activity that you did in the past 7 days. This includes yard work at home, walking to travel from place to place, and any other walking that you have done solely for recreation, sport, exercise, or leisure. Please think only about those physical activities that you do for at least 10 minutes at a time.

40. How much time per day did you usually spend doing **light** physical activities, such as walking, in the past 7 days? **[IF NEEDED: Think only about those physical activities that you do for at least 10 minutes at a time. Your best estimate is fine. DO NOT ACCEPT RANGES.]**

- \_\_\_ Hours per day [Range: 00-24]
- \_\_\_ Minutes per day [Range: 00-59]
- 98 **DO NOT READ:** Refused → SKIP TO Q42
- 99 **DO NOT READ:** Don't know/Not sure → SKIP TO Q42

**THOSE WHO PARTICIPATE IN LIGHT PHYSICAL ACTIVITY [Q40 (01-24)], ASK Q41**

41. What time of day did you do **light** physical activities? Would you say...**(READ LIST. MULTIPLE RESPONSES ACCEPTED.)**

- 01 More than 8 hours before bedtime,
- 02 4 to 8 hours before bedtime, or
- 03 Less than 4 hours before bedtime?
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure

**ASK EVERYONE:**

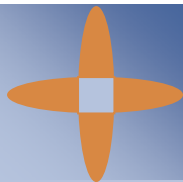
Now, when answering the following questions please think about all the time you spent **sitting** in the past 7 days. Include time spent at work, at home, while doing course work, and during leisure time. This may include time spent sitting at a desk, visiting friends, reading, or sitting or lying down to watch television.

42. How much time per day did you spend **sitting** in the past 7 days? Your best estimate is fine. **DO NOT ACCEPT RANGES.]**

- \_\_\_ Hours per day [Range: 00-24]
- \_\_\_ Minutes per day [Range: 00-59]
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure

43. How much total time per day did you spend **sitting** during each of the following activities in the past 7 days: **(READ LIST. PAUSE FOR RESPONSE BETWEEN ACTIVITIES. DO NOT ACCEPT RANGES.)**

|  | Hours per day (0-24) | Minutes per day (0-59) | Refused | Don't know |
|--|----------------------|------------------------|---------|------------|
| A. Watching television                               |                      |                        | 98      | 99         |
| B. Using a computer                                  |                      |                        | 98      | 99         |
| C. Reading   |                      |                        | 98      | 99         |
| D. Socializing with friends or family                |                      |                        | 98      | 99         |
| E. Traveling in motor vehicle or on public transport |                      |                        | 98      | 99         |
| F. Doing hobbies                                     |                      |                        | 98      | 99         |
| G. Something else (SPECIFY)                          |                      |                        | 98      | 99         |



# Survey Instrument (continued)

44. What time of day did you spend the most time sitting in the past 7 days? Would you say... (READ LIST.)

- 01 More than 8 hours before bedtime,
- 02 4 to 8 hours before bedtime, or
- 03 Less than 4 hours before bedtime?
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure

Now I am going to ask you a series of questions about sleep and exercise. **IF Q34 (04):** I understand you said you did not participate in any physical activity in the past 7 days, but since some days are different than others please answer the following questions.

45. Do you believe that, on the days you exercise your quality of sleep...? (READ LIST.)

- 01 Improves
- 02 Worsens, or
- 03 There is no difference in your sleep.
- 96 **DO NOT READ:** I do not exercise
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure

46. Do you believe that, on the days after you exercise your length of sleep time...? (READ LIST.)

- 01 Improves
- 02 Worsens, or
- 03 There is no difference in your sleep.
- 96 **DO NOT READ:** I do not exercise
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure

47. What effect does exercise have on your awakening during the night? Would you say... (READ LIST.)

- 01 I spend much more time awake during the night after I exercise,
- 02 I spend a little more time awake during the night,
- 03 Exercise has no effect on how much time I am awake during the night,
- 04 I spend a little less time awake during the night, or
- 05 I spend much less time awake during the night
- 96 **DO NOT READ:** I do not exercise
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure

48. Are you more likely to exercise on weekend days, the days you have off or weekdays, the days you work? Would you say you are... (READ LIST.)

- 01 Much more likely to exercise on weekends or off days,
- 02 A little more likely to exercise on weekends or off days,
- 03 There is no difference when you are more likely to exercise,
- 04 A little more likely to exercise on weekdays or days you work, or
- 05 Much more likely to exercise on weekdays or days you work
- 96 **DO NOT READ:** I do not exercise
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure

49. When you have a night of little sleep or poor sleep, the following day your level of exercise and or physical activity...? (READ LIST.)

- 01 Is liable to be much less than usual,
- 02 Is liable to be a little less than usual,
- 03 Is liable to be the same as usual, or
- 04 Is liable to be more than usual
- 96 **DO NOT READ:** I do not exercise
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure

50. If you are unable to exercise on a day when you would usually exercise, how is your sleep on that night affected? Would you say... (READ LIST.)

- 01 My sleep is much worse,
- 02 My sleep is somewhat worse,
- 03 My sleep is no different,
- 04 My sleep is somewhat better, or
- 05 Sleep is much better
- 96 **DO NOT READ:** I do not exercise
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know/Not sure

51. Now for just this question, please think about the past month. Thinking of the past month, how many times have you driven a car or motor vehicle while feeling drowsy? Would you say you have driven drowsy... (READ LIST.)

- 04 3 or more times a week,
- 03 1 to 2 times a week,
- 02 1 to 2 times a month,
- 02 Less than once a month, or
- 01 You have not driven drowsy in the past month?
- 96 **DO NOT READ:** Don't drive/Don't have a license
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know

**READ:** These last questions are for classification purposes only and will also be kept strictly confidential.

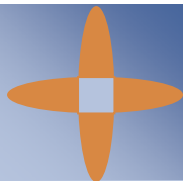
### DEMOGRAPHICS

52. How tall are you in feet and inches? \_\_\_\_\_ (Range: 0-8 ft) \_\_\_\_\_ (Range: 0-11 in.)

52A. What is your weight in pounds? \_\_\_\_\_

53. What is your marital status? Are you...? (READ LIST. ACCEPT ONE RESPONSE ONLY.)

- 01 Married or partnered,
- 02 Single,
- 03 Living with someone,
- 04 Divorced,
- 05 Separated, or
- 06 Widowed?
- 98 **DO NOT READ:** Refused



## Survey Instrument (continued)

54. What is the highest degree or level of school that you have completed? (READ LIST IF NECESSARY. ACCEPT ONE RESPONSE ONLY.)

- 01 Less than a High school diploma
- 02 GED
- 03 High school diploma
- 04 Some college
- 05 Associate's degree
- 06 Bachelor's degree
- 07 Master's degree
- 08 Professional Degree beyond a Bachelor's degree
- 09 Doctorate degree
- 98 **DO NOT READ:** Refused

55. What was your annual household income from all sources?

- 01 Less than \$25,000
- 02 \$25,000 to less than \$50,000
- 03 \$50,000 to less than \$75,000
- 04 \$75,000 to less than \$100,000
- 05 \$100,000 or more
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know

56. Do you consider yourself to be Hispanic or Latino?

- 01 Yes
- 02 No
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know

57. Would you consider yourself to be White/Caucasian, Black/African-American, Asian or of some other racial or ethnic background? (MULTIPLE RESPONSES ACCEPTED.)

- 01 White/Caucasian
- 02 Black/African-American
- 03 Asian
- 04 Alaska Native
- 05 American Indian
- 06 Native Hawaiian
- 07 Other Pacific Islander
- 08 Hispanic/Latino
- 95 Other (SPECIFY)
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know

58. Prior to today's call, have you ever heard of the National Sleep Foundation?

- 01 Yes
- 02 No
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know

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CLOSE

Finally, for quality control purposes, you may receive a follow-up phone call from my supervisor to verify that I have completed this interview. Can I please have your name or initials so they know who to ask for if they call back? On behalf of the National Sleep Foundation, we would like to thank you very much for your time and opinions.

**IF RESPONDENT ASKS FOR MORE INFORMATION ON THE NATIONAL SLEEP FOUNDATION, SAY:**

You may want to look for the poll results during the second week in March. You can go to the National Sleep Foundation's Web site to see how your answers compare to others at [www.sleepfoundation.org](http://www.sleepfoundation.org).

**RECORD NAME AND CONFIRM PHONE NUMBER FOR SUPERVISOR VERIFICATION.**

This concludes the survey. Thank you, and have a good day/evening.

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