

House the Homeless, Inc.

P.O. Box 2312 Austin, TX 78768-2312

512) 796-4366 www.HouseTheHomeless.org

www.UniversalLivingWage.org

Health Sleep Study 2011

Investigators:

Richard R. Troxell

Hugh Simonich

According to health authorities, people's need for sleep varies from 5-10 hours per night. The key to the amount of sleep people need is based on two basic factors: **Quality of sleep** and the **Requirement of the individual**.

Neuroscientists believe that quality, uninterrupted sleep is not only critical for basic survival and brain development, but also in converting the day's experiences into usable permanent memory.

According to Dr. Michael J. Breus, a clinical psychologist and both a Diplomat of the American Board of Sleep Medicine and Fellow of the American Academy of Sleep Medicine, "Reducing your nighttime sleep by as little as one and a half hours for just one night can result in reduction of alertness by as much as 32%."

Insomnia, a sleep disorder, can be caused by conditions such as painful arthritis, or by endocrine disturbances that include the introduction of certain drugs or the withdrawal of others such as alcohol. Other causes include psychological problems including anxiety or depression.

According to Professor Mack Mahowald at the University of Minnesota Medical School, "One complete night of sleep deprivation is as impairing in simulated driving tests as a legally intoxicating blood-alcohol level."

Furthermore, according to Dr. Eve Van Cauter with the University of Chicago School of Medicine, people who do not get enough sleep become "**less sensitive to insulin**." Obviously, this increases their risk of diabetes and high blood pressure.

Dr. Cauter's research indicates that, "Chronic sleep loss may not only **hasten the onset** but also **increase the severity** of age-related ailments such as diabetes, hypertension, obesity, and memory loss. Also, it is believed that people, especially men, who fail to get good quality sleep, often are more likely to experience depression."

Additionally, the increased possibility of stroke has been shown to be related to **snoring, sleep duration** and **daytime drowsiness**. **Disordered breathing** and **disrupted sleep** associated with snoring can lead to attention-deficits and hyperactivity, asthma, allergies and aggression.

Finally, scientists, including F. Javier Nieto, MD, PhD at Johns Hopkins School of Hygiene and Public Health, in a study of 6,100 subjects found "a clear association between increasing frequency of (apnea) events and hypertension particularly among patients classified as obese.

The following sleep study was conducted by **House the Homeless, Inc.** in Austin, Texas on January 1, 2011, at the 10th Annual House the Homeless Thermal Underwear Drive. Of the several hundred participants, only those having experienced shelter stays were asked to participate in the survey. There were 204 respondents. Finally, only non-case managed individuals were invited to answer the final question. The question investigates the amount of time required to get through the mat/bed acquisition process. Anyone in case management was excluded from the survey as their bed is assured and their process time is truncated.

Sleep Health Survey January 2011

Shelter Sleepers ONLY RESPONDENTS: 204

1. About how many hours of good, solid sleep do you get each night on average?

5.1 hours - the average for all 204 respondents.

93.1% responded they need more sleep.

2. About how many minutes does it usually take you to fall asleep?

25% responded that it takes them one or more hours.

50% responded that it takes one half hour or longer.

3. If you are awakened, how long does it take you to get back to sleep on average?

Over 30% responded that it takes them one or more hours.

Approximately 2.5% responded that they do not return to sleep at all.

4. What wakes you up?

Snoring - 64%

Loud talking - 64%

| | |
|-----------------------|-------|
| Doors slamming - | 39% |
| Telephones - | 27.5% |
| Alarm clocks - | 25% |
| Traffic noise - | 24.5% |
| Leg pain or twitching | 21.6% |
| Trash removal - | 18.1% |
| Gasping for breath - | 11.3% |
| Computer activity - | 8% |
| Other - | 10.3% |

5. Do people tell you that you snore?

Over 40% responded yes.

6. Where do you usually sleep?

Over 82% sleep at the ARCH - 40% on the first floor, 24% on the second floor; over 18% on third floor.

Over 32% sleep at the Salvation Army.

7. What keeps you from sleeping?

Over 51% responded that their mind keeps racing.

Over 27% responded that they fear being hurt.

10% responded that they hear voices in their heads.

8. Do you dream? Of the over 77% who responded yes,

Over 39% have violent dreams;

72% have dreams that wake them up.

9. When you wake in the morning, do you feel rested?

Over 68% responded no;

Over 71% say they are so tired, they cannot function normally during the day.

Over 50% say this feeling of fatigue lasts 3 or more days.

10. By computing the weight and height of each of the 197 responding individuals, and using the **Body Mass Index, BMI**, we calculated:

66% are overweight;

Over 50% of those are considered to be **obese**.

11. 88% of respondents were male; 12% were female

12. Medications taken for following conditions:

21% - Depression

13% - High Blood Pressure

16% - Sleep

6% - Diabetes

13. Have you been diagnosed with:

Please check all that apply:

High Blood Pressure-**51** Memory Problems-**23** Anger Issues-**20** Diabetes-**19**
Restless Leg Syndrome-**14** Schizophrenia-**13** Sleep Apnea-**12** ADHD-**11**
Chronic Fatigue Syndrome-**8** Chronic Snorer-**6** Seizures-**6** The Shakes (feelings of
instability)-**5**
Bi-Polar Disorder-**3** Schizoaffective Disorder-**2**

DEPRESSION-123

mild-**43** moderate-**51** severe-**29**

Please circle: Eat way too much-**34** Sleep way too much-**13**

Eat way too little-**61**

Sleep way too little-**103**

None: **58**

14. Non-Case Management people ONLY

On average, how many hours a day does it take you to get approved or denied for a mat or bed?

Please circle 1hour-**11** 1.5 hours-**15** 2 hours-**35** 2.5 hours-19 3 hours-47

On case management or non-responsive-**85**

Findings and Observations

1a) With people receiving only 5.06 hours of good solid sleep on average, this is at the very low end of minimally satisfactory sleep requirements. This leaves the vast majority (190 out of 204) stating that the amount of sleep they need is less than the amount they receive.

1b) Only about 1/3 of the shelter consumers, upon waking in the morning, felt rested.

1c) 143 out of 204 shelter users OR 70% reported that they occasionally felt so tired that they could not function normally during the day.

1d) 103 or half of the shelter consumers interviewed (204) woke feeling that they could not function normally during the day **and this feeling lasted 3 days or more.**

2) 180 people surveyed (88%) take 15 minutes or longer (beyond an hour) to fall asleep.

3) 158 people (77%) required 15 minutes or longer to return to sleep once awakened.

4) 130 people (64%) said that loud talking alone was a significant factor involved in waking them up. **Other controllable noise factors** included ringing telephones (56), alarm clocks (51), doors slamming (79), computer activity (16), traffic noise (16), and trash removal (37).

5) 82 people in the study have been told by others that they snore but only 6 people reported to have been diagnosed as being a "chronic snorer."

6) Only about half (27) of the people diagnosed with high blood pressure (51) are being treated for that condition.

7) 47 out of 127 people not on case management said that it took them three hours or more to get approval or denial for a mat or bed. At the same time, 35 out of 127 said the same process took them two hours or more.

Recommendations

- 1) Further study is required to explore the relationship between sleep deprivation and the health condition of people sleeping at city shelters.
- 2) Individual sleep study research should be conducted on site at shelters.
- 3) Specific steps should immediately be taken to reduce or eliminate controllable noise factors
 - a) ringing telephones should be replaced with flashing light telephones.
 - b) all alarms should be silenced
 - c) slamming doors should be muted
 - d) isolate or end all computer activity
 - e) install sound deadening materials in the ceiling and walls
 - f) delay trash removal until waking hours
 - g) stop all unnecessary loud talking
- 4) Encourage all smokers to enter a smokers cessation program in an effort to help address snoring.
- 5) Coordinate with the Community Care Health Clinic to ensure that people with unmet health needs begin to be addressed.
- 6) Expedite the application process for securing a mat or bed so that it does not exceed one hour in length for non-case managed applicants.
- 7) Coordinate Dietitians and shelter food providers to create healthful, nutritional and balanced meals incorporating the findings of this report.
- 8) Involve people experiencing homelessness in designing and running non-contact exercise/sports programs.