

Podcast of the *Journal of Clinical Sleep Medicine*

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Welcome to the regular podcast of the *Journal of Clinical Sleep Medicine*. I am Dr. Stuart Quan, editor of the *Journal*. These podcasts are a regular feature of each issue of the *Journal* and can be downloaded at the *Journal's* website. Each podcast features summaries of important articles published in the current issue of the *Journal*, as well as occasional interviews with authors of these papers.

The first paper to be highlighted in this podcast is entitled, "Prolonged Sleep under Stone Age Conditions," by Dr. Hannah Piosczyk and colleagues from the Department of Psychiatry and Psychotherapy, University Medical Center, Freiburg, Germany and the Schoen Clinic Roseneck Prien Am Chiemsee, Germany. With the invention of the light bulb by Thomas Edison, the world has been evolving into a 24-hour society. Now, people can be found who are awake throughout the day working at various occupations. With this change in society, there have been marked alterations in the amount of time people sleep at night with decreasing amounts over the past 40 years, as well as changes in the time that people go to sleep. Despite the general acceptance that artificial lighting has been responsible for these changes in sleep behavior, there have been few studies in which this hypothesis has been tested. In this paper, the authors took advantage of a unique experiment in which five healthy adults lived for eight weeks under primitive, stone-age conditions as part of a German television series. As part of this experiment, the participants did not have any access to electricity, running water or any other modern conveniences such as television, mobile phone or radio. As part of the study, they wore an actigraph two weeks prior to beginning their life in stone-age conditions, during the entire eight weeks of the experiment, and for an additional two weeks afterwards.

Analyses of the data show two primary findings. The first was that the total amount of time during sleep increased by approximately 1.8 hours per night. Their total sleep time increased from 342 minutes before starting to 432 minutes during the stone-age conditions. The second finding was that this increased sleep was driven primarily by a two hour phase advance in their bedtime. Sleep onset changed from approximately 11:42 at night to 9:37 at night. However, final awakening only became earlier by 30 minutes. These data provide further evidence about how changes in society and especially lighting have altered people's sleep. It appears that over the course of time, with the advent of modern society, we now are going to sleep later at night and sleeping less. Recent data suggests that shorter sleep times may be having adverse impacts on our health including increased rates of cardiovascular disease and diabetes.

The next paper to be discussed in this podcast is entitled, "Restless Leg Syndrome, Sleep, and Quality of Life among Adolescents and Young Adults," by Dr. Graciella Silva and colleagues from the University of Arizona College of Nursing, Arizona Respiratory Center, College of Medicine, Milne & Enid Zuckerman College of Public Health all at the University of Arizona in Tucson, AZ, and the College of Nursing and Health Innovation, Arizona State University, Phoenix, AZ, and the Division of Sleep Medicine, Harvard Medical School, Boston, MA. Restless legs syndrome is a disorder which occurs commonly in the general population. Because of the uncomfortable sensations in the lower extremities, restless legs frequently results in affected individuals having difficulty initiating sleep and consequently having insomnia. Most reports of restless legs have come from cohorts of adult patients. There have been relatively few studies of children, adolescents and young adults and the impact of restless legs on their sleep and quality of life.

The report by Silva and colleagues is a cross-sectional analysis of Caucasian and Hispanic adolescents and young adults, aged 12-20 years, who were participants in the Tucson Children's Assessment of Sleep Apnea Study. They were administered questionnaires which enabled the investigators to determine whether or not participants had restless legs, to assess their quality of life and whether or not they were having difficulty falling asleep. The investigators found that the prevalence of restless legs in the cohort was 8.4% of the 214 participants who returned questionnaires. Restless legs was associated with trouble falling asleep with an odds ratio of 3.1. Furthermore, trouble falling asleep was associated with worse quality of life. The investigators concluded that restless legs in adolescents and young adults is associated with trouble falling asleep and therefore worse quality of life. In addition, the prevalence of restless legs in this population is similar to that reported in older adults.

The final study to be reviewed in this podcast is entitled, "Sleep Education Improves the Sleep Duration of Adolescents: A Randomized, Controlled Pilot Study," by Dr. Geoff Kira and colleagues from the School of Sports & Exercise, College of Sciences, Massey University, Palmerston North, New Zealand, National Institute for Health Innovation, School of Population Health, University of Auckland, Auckland, New Zealand, Mental Health Foundation of New Zealand, Auckland, New Zealand, Appleton Institute, CQ-University South Australia, Health and Use of Time Group, Sansom Institute of Health Research, University of South Australia, Adelaide, Australia. A number of epidemiologic studies have found that adolescent

sleep problems are common. In addition to the physiologic changes that occur with sleep timing in adolescence, some of these sleep problems are related to poor sleep hygiene practices adopted by adolescents themselves. Thus, it is possible that there could be a reduction in sleep problems in adolescents if they were better educated about the consequences of poor sleep habits. The present study is a randomized, controlled study of a classroom-based sleep education program compared to usual instruction to determine whether this specific sleep intervention would have any impact on the students' sleep habits. The intervention consisted of four 50-minute sessions presented during classroom time. The students were asked to keep sleep diaries to provide a measure of their sleep before and 10 weeks after the intervention. The control group received their usual health education class information with no particular emphasis on sleep. This was a small study and there were 29 students,

aged 13-16, who were randomized to either the intervention or control group. 15 were in the intervention group and 14 in the control group. After the intervention, those in the intervention group slept longer on weekend nights, with a mean increase of one hour and 32 minutes. However, no change was seen in sleep duration on weekday nights. Most participants felt that the program was informative, educational and helpful. This pilot study demonstrates that sleep education within the context of a school program is feasible. Major issues include finding the time available in the school day to accommodate such a program, as well as the cost for doing so.

This concludes the regular podcast of the *Journal of Clinical Sleep Medicine*. The listener is encouraged to read the contents of the *Journal* for additional information regarding each of the articles summarized in this podcast, as well as other papers published in this issue of the *Journal*.