

# spry

## Snooze Alarm

A new clinical trial finds a link between sleep deprivation and skin aging.  
BY JANE WILKENS MICHAEL | POSTED AUGUST 30, 2013



When my kids were little they never wanted to go to sleep at night, no doubt thinking that they might be missing something. And now that my oldest son has babies of his own he realizes what he was, in fact, missing – sleep!! We all know the repercussions of being sleep-deprived. The next day we are irritable, easily frustrated, uncaring; and the little things that would normally not bother us if we were properly rested, become major bubba monsters.

In fact, just the other day I read in The New York Post that a hand-eye coordination study showed that each hour awake instead of their ideal sleep time sets a person back as much as imbibing .004 percent alcohol in their blood stream. That basically equates to one Heineken. So think of it this way: If you are the average person needing 8 hours sleep, missing just a little over 2 hours, say going to bed at 1:30 a.m. versus 11:15 p.m., would make you as competent to drive as someone exceeding the usual legal blood alcohol limit. Scary!!

Beauty-wise, sleep also has a tremendous impact on our looks. We've all heard our mothers tell us to get our beauty sleep, right? (Of course, my mother also had to add: 'And you might consider combing your hair, too.')

But now there's hard core evidence to back this up. In a first-of-its-kind clinical trial, physician-scientists at University Hospitals (UH) Case Medical Center found that sleep quality does indeed have a great effect on skin function and aging. The recently completed study, commissioned by Estée Lauder, demonstrated that poor sleepers had increased signs of skin aging and slower recovery from a variety of environmental stressors, such as disruption of the skin barrier or ultraviolet (UV) radiation. Furthermore, they also had a worse assessment of their own skin and facial appearance.

The research team was led by Primary Investigator Elma Baron, MD, Director of the Skin Biology, Global Research & Development, The Estée Lauder Companies. She is also an Associate Professor of Dermatology at the Case School of Medicine. Her research has been published in International Investment Bank of London, and in an abstract in Scotland in an abstract journal titled "Skin Barrier and Function." Here's a link to the study: [http://www.elsevier.com/locate/jaad.2013.05.011](#)

"Our study is the first to show that sleep deprivation is correlated with redness, dryness, and a decrease in skin barrier function," she says. "While chronic sleep problems such as obstructive sleep apnea have been shown to have effects on skin function, this study is the first to show that sleep deprivation itself can lead to skin aging and a decrease in skin barrier function." She goes on to say that "While chronic sleep problems such as obstructive sleep apnea have been shown to have effects on skin function, this study is the first to show that sleep deprivation itself can lead to skin aging and a decrease in skin barrier function."

The skin works as an important barrier to harmful external factors such as environmental toxins and sun-induced DNA damage. The research team set out to determine if both function and appearance were impacted by sleep quality, which is vital to the growth and renewal of the body's immune and physiological systems.

The study involved 60 pre-menopausal women between the ages of 30 and 49, with half of participants falling into the poor quality sleep category. The classification was made on the basis of average duration of sleep and the Pittsburgh Sleep Quality Index, a standard questionnaire-based assessment of sleep quality. Included in the study was a visual skin evaluation and participation in several non-invasive skin challenge tests such as UV light exposure and skin barrier disruption. Additionally, participants filled out a sleep log for one week.

The researchers discovered that good quality sleepers bounced back more efficiently from stressors to the skin. For example, recovery from sunburn was more sluggish in poor quality sleepers, with erythema (redness) remaining higher over 72 hours, indicating that

Dr. Baron concludes that the key points people should take away from this study is that chronic poor quality sleep results in premature aging and decreases the skin's ability to respond to external stressors. "It's important to look at sleep's impact on skin function," she says, "because the skin is the most external organ and serves as a barrier against environmental insults. If recovery from stressors such as UV is impaired, then there's more chance for the harmful effects of UV to set in, such as skin cancer."

While there's no substitute for good sleep, there are products that can be used to improve the skin barrier function like moisturizers, and sunscreens that help protect against UV damage. Adds Dr. Nadine Fernodet, Executive Director of Skin Biology, Global Research & Development, The Estée Lauder Companies: "We can't give anyone a good night's sleep, but using Estée Lauder's Advanced Night Repair

Your bedroom also shouldn't be too hot (61 to 66 degrees is ideal), and if you have a computer there, install a software program that cuts down on the blue light that resets your circadian clock. If your spouse happens to snore like a warthog, wear earplugs (I like Macks). Or try SleepPhones—a soft, fleece headband with built-in speakers that can be paired with most MP3 players, smart phones and audio books. You can use your own music or download from the SleepPhones site.

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