

# Obesity risks for aged: light exposure

BY KATHRYN DOYLE  
REUTERS

Older people exposed to high lighting in the evening, and low light in the morning are more likely to gain weight, and the opposite light exposures may encourage weight loss, Japanese researchers say.

Over two years, lighting exposure was tied to abdominal weight gain regardless of other factors like calorie intake, exercise and what time people went to sleep or woke up, the study found.

“Our results are reasonable because human beings have evolved under the lighting condition of daytime high and nighttime low light intensity,” said lead author Dr. Kenji Obayashi of Nara Medical University School of Medicine.

This is the first evidence in humans that disturbing circadian rhythms (the internal body clock) with a different pattern of light exposure relates to obesity risk, Obayashi told Reuters Health by email.

“In addition, our results added more details on the previous knowledge of the association between shift work and the obesity risk,” he said. The researchers objective-

ly measured ambient light exposure with wrist light meters over a two-day period for 1,110 study participants with an average age of 72. They also measured waist circumference, height and body weight and administered questionnaires on smoking, drinking and socioeconomic status. These measurements were repeated an average of 21 months later.

At the beginning of the study, 138 people had abdominal obesity, which the researchers defined as a waist-to-height ratio of 0.6 or higher. The other 972 people did not have abdominal obesity.

The study team measured light exposure in lux, a unit based on human perception of brightness. For example, outdoor light levels on a bright day are about 11,000 lux while at twilight they would be about 11 lux. Indoors, next to the window on a bright day, light levels might be around 1,000 lux while interior areas away from the window might have just 25-50 lux.

Based on light exposure measurements throughout the day and night and compared to participants without abdominal obesity, researchers found that those with big waists at the beginning of the

study period tended to be exposed to lower light intensity from rising time to early evening and higher light intensity after that.

## Getting more sunlight in daytime and less artificial light from TVs, smartphones at night may be best for obesity prevention

At follow-up, people who were exposed to light levels of 3 lux or more in the late evening and during the night were much more likely to have increased their waist size.

Conversely, people who spent a longer time exposed to 500 lux or more in the morning were more likely to have reduced their waist size at follow-up.

An increase in body mass index, a measure of weight relative to height, over time was also associated with evening or nighttime exposure to higher light intensity, according to the results in the Journal of Clinical Endocrinology and Metabolism.

“Artificial light exposure during the solar night is associated with an increased risk of obesity,” said Dr.

Charles Czeisler, chief of the division of sleep and circadian disorders at Brigham and Women’s Hospital in Boston, who was not part of the study.

Light exposure during the first and last hour of sleep has been tied to weight gain, while more light during the solar day has been tied to weight loss, he told Reuters Health.

The new study only collected light data on two days, which may not have been representative for all people, and it is possible that people who have lights on at night have them on because they are eating, but the results are still exciting, he said.

Inappropriate light exposure may alter human melatonin secretion pattern, a hormone associated with energy expenditure, Obayashi said.

“From the viewpoint of circadian misalignment, light sources with short wavelength (blue light) have more effect on human biological rhythms,” he said. “So using these light sources (blue light) in evening/nighttime would promote obesity more.”

Trying to get more sunlight in daytime and less artificial light from TVs, smartphones and bedroom lights at night may be best for obesity prevention, he said.

# Haskell

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quire special treatment and maybe even get hurt. She was politely insistent, suggesting, somewhat insincerely, that if the rafting guide thought it was a bad idea for her to join the trip, she’d happily wait for us at the lodge and knit.

As her ideas often did, it all worked out fine. At the suggestion of the guide, Mary Lou opted out of the first half of the trip, which was the wildest and most difficult stretch. But when our little group of rafts pulled out on a sandy beach at noontime, Mary Lou arrived with the staff that met us there with a terrific picnic lunch. She trotted easily down the long, steep stairway from the roadside to the riverbank, wearing her fanny pack, her aviator shades and a big smile.

She loaded up a plateful of food and engaged easily with the others in the group. After lunch, she climbed aboard our raft and thoroughly enjoyed the second half of the trip downriver, which featured less dramatic but still exciting rapids, beautiful scenery and the opportunity, in quieter stretches, to swim alongside the raft.

Mary Lou impressed us all that day with her enthusiasm, her easy athleticism and her can-do spirit. Having her along enriched the whole experience and remains the highlight of my memory.

Relationships take time to build. I was initially wary of my in laws, not having grown up in a particularly warm or close-knit family myself. I felt protective of my relationship with Wes and the life we were building together with our children. I did not warm easily to having Mary Lou come for visits. But she visited anyway, especially after she was widowed, especially after our sons were born, undeterred by my tepid hospitality.

She would arrive with small gifts for each of us — a

simple toy for the boys, a packet of family photos for Wes, a new dish towel for me. She’d set up camp in the guest room, no fuss, no bother. She never stayed for more than a couple of days. She was as low maintenance a houseguest as anyone could ask for. She frequently asked to prepare a meal or tidy up the kitchen afterward. She was always interested in Wes’ work and his hobbies, asking insightful questions and encouraging him to pursue his artistic nature. She engaged easily with Jackson and Luke, playing with them in the backyard, taking them to the children’s museum or the park, reading to them at bedtime. They adored their Nana.

I was a tougher nut to crack. But over time, I came to appreciate and then deeply love this witty, practical, intelligent woman who was so determined to make me part of her life. When Wes and I separated and then divorced, I believe she was as bewildered and sad about it as we were. I am endlessly grateful that, after the tragedy of his death, she and I were able to rebuild our loving relationship. I visited her a few days before she died and came away filled with peace and tenderness.

I remarried about a year ago and am blessed with another fantastic mother-in-law — smart, funny, opinionated and warm. This time around, I recognize the sweet gift of this relationship. I won’t waste precious time fending off the opportunity to love and be loved by the wise, older woman who raised the man I adore. Because now, of course, with me in my 60s and her in her 90s, there is a little time to be lost.

But tomorrow, as I come coursing down the Kennebec in the good company of adventurers, thrill-seekers and guides, I will hold Mary Lou close in my heart, remembering all the laughter, love and adventure she brought into my life.

Read more of Meg Haskell at [livingitforward.bangordailynews.com](http://livingitforward.bangordailynews.com).



MICKY BEDELL | BDN

People gather in Pickering Square in Bangor recently to watch a free public movie presented by River City Cinema as part of its “Summer of Love.” City Council Chairman Sean Faircloth said that the city is embarked on a comprehensive effort to make Bangor more attractive to people of all ages.

# Bangor

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providing services to needy residents of any age.

“Under this model, it doesn’t matter the age of people being served or the age of the person providing the service,” he said.

The challenge of organiz-

ing the network of volunteers and dues-paying members who need services such as transportation, basic home maintenance and other tasks will fall to the Penquis community agency. In the village model, members in need of services pay a sliding scale annual fee based on their income.

“I like to think of it as sort of a Peace Corps for your

town,” Faircloth said. “It’s an opportunity to do something for your community.”

Parham said Maine is ahead of most other states in long-term planning for the needs of an aging population. The organization is working with communities across the state, not only the 17 designated age-friendly municipalities but many others that have requested

support in organizing and planning for a growing population of older residents.

Still, she said, “many communities aren’t really thinking about the aging of their residents.”

AARP Maine can offer support, she said, including the services of a professional city planner and small grants and other tools for assessing community needs.

# Music

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achieved a 36 percent reduction, she said — the fifth highest in the nation — by encouraging the use of other interventions such as physical exercise, social engagement and distraction to derail escalating behaviors.

At Narraguagus Bay Health Care, Trombley said the change has been good for residents and staff alike. For example, one resident — a former office manager — who was on high doses of an antipsychotic medication was gradually weaned to a much lower dose, while staff have found ways to engage her more creatively with paperwork, stapling and other office-related tasks.

“It gives her a sense of purposeful activity and has reduced her wandering,” Trombley said.

In addition, the move away from sedating patients and toward more personal interaction with residents has made “a huge improvement in staff morale,” he said, resulting in an overall boost in the positive culture of the facility.

In nursing homes all across Maine, Grasso said the impacts of reducing the use of psychoactive drugs is similar — improved resident care, boosted staff morale and generated savings in medication spending.

“But the fact that we have met the federal goal is not enough,” she added.

In partnership with other

professional groups, the Maine Health Care Association has continued to look for ways to change the culture of long-term care and improve the quality of life for residents.

Grasso said the Music and Memory program promises to further reduce the need for medications by promoting social interaction and countering depression and isolation. And apparently, Centers for Medicare and Medicaid Services agrees, since it recently issued a \$83,000 grant to help bring the program to 40 Maine facilities and the residents they serve.

Participating facilities may enroll up to 10 residents. The grant pays for training and certification and a dedicated laptop computer for storing music files, which must be acquired in compliance with licensing and copyright rules. Facilities must pay for their own iPods and headsets; Trombley said it cost his facility about \$80 apiece to outfit participating residents.

Before beginning the program, staff document each participant’s behaviors, moods, functional status, use of antipsychotic medications and other factors. Working with family members, friends and others, they develop a personalized playlist for each participant and build the listening activity into the resident’s care plan. Every three months, staff reassess the resident’s status to determine the impact, look-



ASHLEY L. CONTI | BDN

Kay Beal smiles and sings along while listening to a customized selection of music on her iPod on Tuesday in the common area at Narraguagus Bay Health Care in Milbridge.

ing for improvement in social outlook and cognition and a reduction in the need for psychoactive medications.

It’s not all Elvis and Frank Sinatra, said Trombley.

“We’ve got a guy here who really likes old rock ‘n’ roll — Led Zeppelin, AC/DC, [Jimi] Hendrix,” he said. “He’ll start tapping his toes, and then he’s up dancing with the staff and other residents.”

Trombley hopes to expand the program over time at Narraguagus Bay Health Care, so more residents can benefit from Music and Memory.

Dr. Jabbar Fazeli, a Portland-based geriatrician who advises long-term care facilities and the medical directors who serve them, said there’s an important role for powerful antipsychotic medications in treating bona

fide cases of schizophrenia, depression and other mental disorders.

“But we don’t want to use these drugs to make residents more amiable to care,” he said.

In addition to avoiding side effects and complications, Fazeli said the move away from using psychoactive drugs has helped nursing home staff to become more skilled at determining the cause of residents’ agitation and other behaviors, which may be related to treatable conditions such as pain, infection or simply the need to use the bathroom.

As for Music and Memory, Fazeli said it’s hard to argue with the appeal and apparent success of the program.

“It may be hard to prove it works, statistically,” he said, but common sense and observation bear out its positive effects.

sible to deny her goal.

Sassy recently marked her 10th birthday, and it’s bringing up unresolved emotions for me.

When Jim died from pancreatic cancer in December 2010, Sassy and Jim’s Brittany dog Bullet never left my side. They mourned with me and tried to comfort me, and they are an important link to Jim, and our life together.

Having Sassy’s age land in the double digits is a milestone, and it makes me think about our Rosie and caring for senior dogs, including the ultimate decisions we have to make for them. Somehow it’s a reminder to me that death waits for all of us, and I cannot bear that it waits for her.

Plus it’s another connection to Jim that’s slowly slipping away from me. I try not to dwell there because Sassy is healthy, and it’s possible she will outlive us all.

I’ve had enough loss in my life to know how quickly things can change. So although she’s a healthy 10-year-old, I find myself scrutinizing Sassy’s every move, making sure she’s still OK, trying not to think about our passage into double-digit senior dog status.

I still feel connected to Jim through Sassy and Bullet, and that means something for me as those two dogs age.

As a longtime employee of the Bangor Daily News, Julie Harris has served many roles over the years, but she now has her dream job as community editor. She lives in Hermon with her four Brittany dogs: Sassy, Bullet, Thistle and Quincy, who keep her busy in various dog sports. She was widowed at age 51 when her husband, Jim, died of pancreatic cancer. Follow her blog at [curves.bangordailynews.com](http://curves.bangordailynews.com).

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