

The remaining 80 percent of jobs, the researchers report, are sedentary or require only light activity. The shift translates to an average decline of about 120 to 140 <u>calories</u> a day in physical activity, closely matching the nation's steady weight gain over the past five decades, according to <u>the report</u>, <u>published Wednesday in the journal PLoS One</u>.

Today, an estimated one in three Americans are obese. Researchers caution that workplace physical activity most likely accounts for only one piece of the obesity puzzle, and that diet, lifestyle and <u>genetics</u> all play an important role.

But the new emphasis on declining workplace activity also represents a major shift in thinking, and it suggests that health care professionals and others on the front lines against obesity, who for years have focused primarily on eating habits and physical activity at home and during leisure time, have missed a key contributor to America's weight problem. The findings also put pressure on employers to step up workplace heath initiatives and pay more attention to physical activity at work.

"If we're going to try to get to the root of what's causing the obesity epidemic, work-related physical activity needs to be in the discussion," said Dr. Timothy S. Church, a noted exercise researcher at the Pennington Biomedical Research Center in Baton Rouge, La., and the study's lead author. "There are a lot of people who say it's all about food. But the work environment has changed so much we have to rethink how we're going to attack this problem."

The report shows that in 1960, one out of two Americans had a job that was physically active. Now it is estimated that only one in five Americans achieves a relatively high level of physical activity at work. Dr. Church notes that because the research doesn't factor in technological changes, like increasing reliance on the Internet and e-mail, many people in service and desk jobs that have always involved only light activity are now moving less than ever, meaning the findings probably understate how much physical activity has been lost during work hours.

While it has long been known that Americans are more sedentary at work compared with the farming and manufacturing workers of 50 years ago, the new study is believed to be the first in which anyone has estimated how much daily caloric expenditure has been lost in the workplace.

"It's a light bulb, 'aha' moment," said Barbara E. Ainsworth, the presidentelect of the American College of Sports Medicine and an exercise researcher at Arizona State University. "I think occupational activity is part of that missing puzzle that is so difficult to measure, and is probably contributing to the inactivity and creeping obesity that we're seeing over time."

For years, the role that physical activity has played in the obesity problem has been uncertain. Numerous studies suggest there has been little change in the average amount of leisure-time physical activity, posing a conundrum for researchers trying to explain the country's steady weight gain. As a result, much of the focus has been on the rise of fast-food and soft drink consumption.

Other studies have suggested that changing commuting habits, declining reliance on public transportation and even increased time in front of the television have played a role in the fattening of America. But none of those issues can fully explain the complex changes in nationwide weight-gain patterns.

Some earlier research has hinted at the fact that workplace physical activity is

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associated with weight and health. One seminal set of studies of London bus drivers and conductors showed that the sedentary bus drivers had higher rates of heart disease than the ticket-takers, who moved around during the workday.

Dr. Church said that during a talk on the country's obesity patterns, he was struck by the fact that Mississippi and Wisconsin both have high rates of obesity, despite having little in common in terms of demographics, education or even weather. It occurred to him that both states have waning agricultural economies, prompting him to begin exploring the link between changes in the labor force and declines in workplace physical activity.

He quickly discovered that a decline in farming jobs alone could not explain increasing obesity around the country, and began exploring job shifts over several decades. Using computer models, Dr. Church and colleagues assigned metabolic equivalent values to various job categories and then calculated changes in caloric expenditure at work from 1960 to 2008.

"You see the manufacturing jobs plummet and realize that's a lot of physical activity," said Dr. Church. "It's very obvious that the jobs that required a lot of physical activity have gone away."

Ross C. Brownson, an epidemiologist at Washington University in St. Louis, said that both health professionals and the public needed to broaden the traditional definition of physical activity as something that occurs during planned exercise, like running or working out at the gym.

"We need to think about physical activity as a more robust concept than just recreational physical activity," said Dr. Brownson, whose 2005 report on declining physical activity in the workplace is cited in the PLoS One report. "In many ways we've engineered physical activity out of our lives, so we've got to find ways to put it back into our lives, like taking walks during breaks or having opportunities for activity that are more routine to our daily lives, not just going to the health club."

Researchers said it is unlikely that the lost physical activity can ever be fully restored to the workplace, but employers do have the power to increase the physical activity of their employees by offering subsidized gym memberships or incentives to use public transit. Some companies have set up standing workstations, and marketers now offer treadmill-style desks. Employers can also redesign offices to encourage walking, by placing printers away from desks and encouraging face-to-face communication, rather than e-mail.

"The activity we get at work has to be intentional," said Dr. Ainsworth. "When people think of obesity they always think of food first, and that's one side of it, but it's high time to look at the amount of time we spend inactive at work."



overwhelming, but it doesn't have to be.



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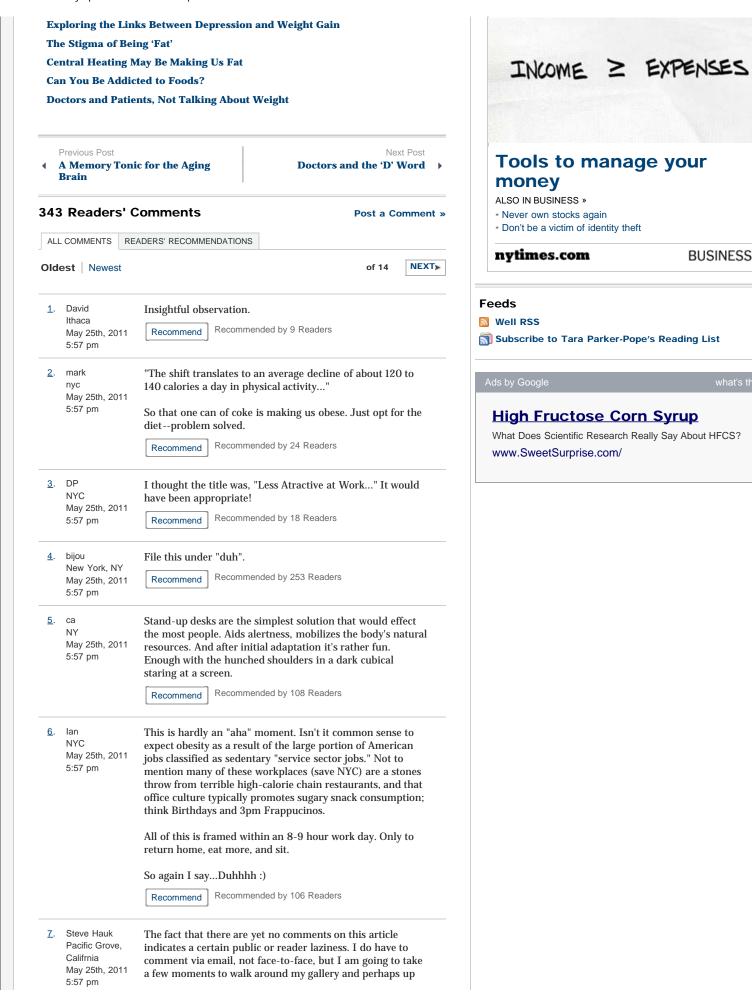
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		the block There, that's done. By the way, I keep an eight- pound medicine ball under my desk and hoist it while staring at the computer. Also good at the desk, a grip exerciser and dumbell. They help. Recommend Recommend
<u>8</u> .	mary browning miami beach, FL May 25th, 2011 5:57 pm	Indeed, the defination of Work has changed here in the US. Often now, it is about being chained to a desk and computer for hours and hours. The way that one arrives to the workplace is not on foot or by standing on the subway mostly, but by sitting in our cars.
		Still, our bodies seem to think that we should eat the amounts that we used to get, and also this food is many times provided by fast food places. In the past, workers most usually brought food from home, in "food pails" and this was not fried food at all.
		This problem is one that is going to be dealt with by the citizens/workers themselves, facing the changes and coping with them. The government can't fix it but the people, themselves, should and can.
		Eat less, just as oftenabout every four hours, to match the human food need patternand lay off the starches and sugars.
		Try, try, to find time to be physically active.
		Recommended by 23 Readers
<u>9</u> .	Jeff	They needed to do a study to realize this?
	New York May 25th, 2011 5:57 pm	Recommended by 108 Readers
<u>10</u> .	Pickles Boston, MA May 25th, 2011 5:57 pm	Another work-related physical activity is the act of commuting. People using public transportation engage more physical activities, like walking, climbing up/down steps, than those driving from home to parking lot. A few side benefits are there: 1) reducing traffic congestion, 2) improving air quality, and 3) reducing energy consumption.
		Recommended by 79 Readers
<u>11</u> .	JE Rio de Janeiro May 25th, 2011	How does this thesis apply to the ever more common problem of obesity in the young who do not work?
	5:57 pm	Recommended by 125 Readers
<u>12</u> .	Tournachonadar Chicago May 25th, 2011 5:57 pm	To paraphrase the exquisitely awful performance of Amanda Donohoe as high priestess in "Lair of the White Worm," my one friend and I have developed our own litany: colossus the sprawling, colossus the insatiable, colossus the ravenous, colossus the rejected obese oneyou get the point. An entire nation has sold its gluttonous soul to the greasy gorgons of fast food and the demons of devouring diabetes.
		Recommended by 15 Readers
<u>13</u> .	FoodFitnessFres Philadelphia May 25th, 2011 6:04 pm	Sedentary jobs are the ones that pay, so we won't be able to fix the obesity problem with a physically active workforce. I do really like the idea of subsidizing gym memberships and encouraging employees to exercise though. The other day I was at a Wegman's grocery store, and to my surprise, someone came over the loud speaker to remind the employees to stop and take a quick stretch break. It was great! This should be implemented within office buildings. And maybe we should also find a way to advocate a greater push towards adopting physically active hobbies, like

		work part-time at a CSA, and it's one heck of a workout. Working on a large scale farm is obviously going to be physically intensive, but even a small backyard garden can add a good level of exercise to someone's life. And fresh veggies!
		www.FoodFitnessFreshAir.com Recommend Recommended by 59 Readers
<u>14</u> .	Brenda Culver City May 25th, 2011 6:04 pm	As well as the lack of physical activity is the amount of time given to have a proper lunch and the availability of decent food to purchase at lunch or later hours at work. The restaurants surrounding most corporate offices if not high end and unaffordable are fast food full of obesity making ingredients. Yes we should all make the right choices and prepare our own foods but for many that is just not an option. It's not just the lack of physical activity. Recommend Market by 34 Readers
<u>15</u> .	x New York City May 25th, 2011 6:04 pm	I think this incidental movement is so important. I have been trying to make sure I get up and move often, that I "fidget" a bit at the computer, that I take an extra lap around the room or a a couple of extra stairs every time I get up just to make sure I have movement in my life. After a while it becomes kind of funespecially when I'm working from home and dance to the bathroom or high kick up to the laundry. I've been losing weight! Recommended by 25 Readers
<u>16</u> .	ShowMe Missouri May 25th, 2011 6:09 pm	Another major contributor to obesity in the USA is our food. Now too much of it is processed and sweetened with high- fructose sugar. We used to eat more fresh from the garden, or canned/frozen after it was picked from the garden. Recommended by 53 Readers
<u>17</u> .	cdl Los Angeles May 25th, 2011 6:09 pm	My employer has built a gym for its employees, but regulates its use so tightly that it is difficult to enjoy. It is small (compact) and the rules require that you use it on your lunch break or other off time. Therefore, it is PACKED at lunch and very lightly used the rest of the day. The women's locker room is so small,that it is hard to get dressed without constantly bumping into other women. You have to line up to use the shower. This is stupid and creates a huge disincentive to use the benefit. Recommended by 43 Readers
<u>18</u> .	Tempest Points West May 25th, 2011 6:09 pm	I stand at work. I move more and am more flexible and I don't feel sluggish at mid day. My tummy is a bit flatter since my posture is now more upright.I made a platform /riserfor my keyboard. Took me a little work to get the right height-since if you don't your wrists may hurt. Cost me all of \$15 for a pine board, wood screws, stain and wood glue. Also wear comfortable shoes (and hiking socks) and a floor mat to stand on. I move more and am more flexible and I don't feel sluggish at mid day. About 80% time now I'm on my feet. Do a GOOGLE on the benefits of standing at a desk job.
		Also I swim, walk and use weights in my garage-and watch what I eat. Go ahead an experiment with small boxes and telphone books. People at work do ask will I keep doing it-I have for the past 6 months and I'm not going back to it.

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<u>19</u> .	Jack Illinois May 25th, 2011 6:21 pm	Steppenwolf from Brazil, you're asking questions this column does not want to answer. The folks here want to adhere to the Puritanical notion to blame people for their laziness and sloth. It is not a question of nutrition, the acceptable theories are to place guilt on overweight people. The most ridiculous idea is if you drink one less can of soda a year you can lose 6 pounds in a year. Our bodies are not penny jars that accumulate coins until full. Recommend by 39 Readers
<u>20</u> .	Tempest Points West May 25th, 2011 6:21 pm	Sorry about my earlier post-I STILL STAND AT WORK. I'm not going back to sitting all day. Recommend Recommend
<u>21</u> .	Bill Sodeman Honolulu May 25th, 2011 6:22 pm	I stand at my office desk every work day. That's one way to burn more calories at work. Recommended by 7 Readers
<u>22</u> .	Terence Hughes New York, NY May 25th, 2011 6:22 pm	Now that I'm ancient and no longer in the workplace, I am happy to report that, living here in NYC, I walk all the time. rI may not have the motivation to go to the city rec center (\$10 a year! for over 55!), but I do need to get out and about of my small apartment.
		Of course, this is a luxury for most people in the US. We've engineered out the bits that make people exert some efforts, burn some calories.
		Anecdote: Several years ago I observed a very overweight tourist from what we condescending city slickers call the Heartland (awful name). She was struggling up the subway stairs and remarked to her traveling companion, "Now I know why New Yorkers stay so thin!"
		True up to a point. She clearly hadn't been to poorer areas in the Bronx and Brooklyn
		Recommended by 46 Readers
<u>23</u> .	Dan Green Delray Beach Florida May 25th, 2011 6:22 pm	Fructose and salt in our processed food. Farmers are even fat.Mexicans picking veggies, or cutting your grass are slim. Most Wal Mart shoppers are fat. Concentrate on a couple reasons, and we have a shot at losing a few lbs.
		Recommended by 43 Readers
<u>24</u> .	Trillian New York City May 25th, 2011 6:22 pm	Even the average desk job used to involve a variety of movements. Now most everyone sits and stares at a screen and moves their wrist and forefinger.
		Recommended by 41 Readers
<u>25</u> .	Josh Hill New London, Conn. May 25th, 2011 6:22 pm	The problem I have with this is that the research I've seen says that increased physical activity leads to increased appetite, and vice-versa. If something else hadn't changed, people would have automatically dialed back on their caloric intake as their activity levels decreased. I don't think one has to look far for that something: the balanced meal of 50 years ago has been replaced by high carbohydrate junk, and studies show that Americans consume more calories than they used to, even though, if this study is correct, they expend less energy. Recommend by 39 Readers
		of 14 NEXT»