Is Sitting Too Long Hurting Your Health?

By now you may have heard the phrase “sitting is the new smoking.” The average US adult office worker sits for about 10 hours a day! The US has seen a major increase in office jobs vs. manual labor in the last half century. In addition, screen time has increased. The rise of stationary occupations and electronic entertainment have had a major impact on human health. Prolonged sitting and inactivity have been linked to risk factors for obesity, heart disease, diabetes, some cancers as well as muscle and joint problems.

In a meta-analysis from 2015 published in the Annals of Internal Medicine, researchers found that an increase in prolonged sedentary time was positively associated with an increased risk of all-cause mortality, cardiovascular disease incidence, cancer incidence and type 2 diabetes. Additionally, research from the Journal of Diabetes found that blood glucose and insulin levels in postmenopausal women can be reduced by incorporating small bouts of walking or standing throughout the day. All in all, breaking up prolonged sitting can have positive effects on our overall health.

It is recommended that adults get a cumulative 150 minutes a week of moderate-to-vigorous intensity physical activity, yet this alone may not be enough to reduce the risk of disease and illness. Individuals who meet the recommended physical activity requirements are still at risk for poor health outcomes if they repeatedly sit for too long over the course of the day. Researchers are finding that in addition to 150 minutes of physical activity, we also need to get up and move regularly throughout the day. In other words, no one should be sitting for long periods at a time regardless of whether they get their 150 minutes of physical activity in a week or not. We need to move often throughout the day in addition to getting a cumulative 2.5 hours of physical activity in a week.

Exact recommendations for avoiding poor health outcomes due to prolonged sitting are still under debate. However, an international group of experts were invited to provide guidelines for employers to promote the avoidance of prolonged periods of sedentary work, which were ranked in quality by the American College of Sports Medicine. The guidelines suggest that individuals begin to accumulate two hours a day of standing and light activity (light walking) and increase over time to four hours a day during working hours. These recommendations are based on occupations which are predominantly desk based. To get in two to four hours of standing or movement throughout your day, consider some of the recommendations below.

Add Movement into Your Day
Follow the tips below to help keep yourself moving throughout the work day:

- **Arrange a walking meeting.**
  Instead of meeting in a conference room, consider an outdoor walking meeting with your coworkers.

- **Set an hourly alarm to remind you to move.**
  Try to move for 5 minutes every hour. Go for a short walk around your building, do some squats by your desk, or take a stretching break!
• **Invest in a standing desk.**
  Look into the possibility of getting a standing desk at your workplace. Stand at your desk for a half hour every couple of hours.

• **Talk face to face instead of using the phone.**
  Get in contact with your co-worker by walking to their desk instead of calling.

• **Take the stairs.**
  Choose to take the stairs instead of the elevator whenever possible.

Not only is frequent movement beneficial to health, but it can also increase work productivity. So, in addition to getting your 150 minutes of physical activity in a week, remember to get up from your desk throughout the work day and keep your body moving!

**References:**

By Abby Diehl and Jessica Clifford

**Flour and Food Safety**

As outreach educators who provide food safety information, we are well acquainted with produce or meat safety questions and have answers ready to go but flour has not been a product of focus. That is starting to change. Flour, a food staple for hundreds of years, is emerging as a potential carrier of pathogens like *Salmonella* and Shiga toxin producing *E. coli*. On July 1, 2016, General Mills expanded its recall of products (now at 30 million pounds) linked to an on-going multistate outbreak of *E. coli* O121. The outbreak involves 21 states and four confirmed cases have been reported in Colorado. Although dry flour does not provide an environment that is conducive to microbial growth, it is a minimally processed agricultural ingredient and not generally considered ready-to-eat. In response to recent foodborne illness outbreaks, *some* flour products are now treated to reduce the risk of pathogens and these may be classified RTE.

The risk of flour contamination is challenging to control since grains are grown in an open environment, harvesting equipment is not easily cleaned and sanitized, and treatments, like washing, are not an option with grains which need to stay dry. In general, microbial contamination on flour has not a significant problem because baking, boiling, or frying would inactivate pathogens. However, if flour is consumed raw, in cookie dough for example, illness may result. Potential also exists for cross-contamination if utensils or containers that come in contact with flour are used with ready-to-eat products.
Here is more information regarding outbreaks associated with raw flour.

2008: An outbreak of *Salmonella* Typhimurium in New Zealand was associated with the consumption of uncooked baking mixture containing contaminated flour (McCallum et al. 2013).

2009: Flour was the suspected cause of a foodborne illness outbreak associated with Nestle Tollhouse Cookie Dough; it was the only ingredient not cleared in the investigation. CDC’s summary lists 72 cases from 30 states. The demographics of this outbreak varied from most other foodborne illness outbreaks because 65% of ill persons were under the age of 19 and 71% were female.

2016: Shiga toxin-producing *Escherichia coli* (STEC O121) was isolated from samples of General Mills flour collected from the homes of ill people in Arizona, Colorado, and Oklahoma. On July 1, 2016, General Mills expanded its recall to include additional lots of Gold Medal Flour, Signature Kitchens Flour, and Gold Medal Wondra Flour.

**What is the milling industry doing to improve safety of flour?**

Food safety programs often include HACCP, GMP, and audits to ensure best practices are being followed. To reduce the risk of contamination, specialized heat treatments are sometimes used on flour. Radiation was considered but found to impart an off-odor to the flour.

Ardent Mills, headquartered in Denver, has developed a “SafeGuard™ Ready-To-Eat Flour and the SafeGuard Treatment and Delivery System which involves a lethality treatment to achieve up to a 5-log validated pathogen reduction (5-log reduction means lowering the number of microorganisms by 100,000-fold – i.e. from 100,000 per unit of measure to 1). Ardent Mills has posted information about their food safety management systems at these links:


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Flour requires extensive handling during harvesting, milling, packing, and storage, creating multiple opportunities for contamination. To lower risk of foodborne illness, it is recommended that products containing raw flour, such as raw cookie dough, not be consumed.

From: [http://farmtotable.colostate.edu/docs/cf-flour.pdf](http://farmtotable.colostate.edu/docs/cf-flour.pdf)

**References:**


By Marisa Bunning