

The Importance of Movement in the Workplace

Results of a nationwide study of U.S. office workers demonstrate the importance of supporting movement for health and productivity.

The Problem: Prolonged Static Postures

Today's office workers have the tendency and ability to be more sedentary than ever before thanks, in part, to advancements in technology, transportation, and entertainment. Research studies calling attention to the negative health implications of prolonged seated postures are simultaneously timely and terrifying.

Research suggests that sitting for long durations may contribute to serious negative health outcomes such as cardiac complications, increased risk for certain cancers, and even early mortality.^{1,2}

Health professionals and ergonomists are assumedly aware of the dangers of prolonged static postures, but Allsteel questioned whether this information was getting to those who need it the most – today's knowledge workers. Are office workers aware of the health implications of prolonged sedentary behaviors? Are American companies supportive of an active workplace that enables and encourages healthy habits? Are there differences in the perceived activity levels of workers from different generations?

Allsteel conducted a nationwide survey of office workers to better understand the challenges of introducing movement into the workplace. Ultimately, the goal of this study was to assess whether research regarding sedentary behaviors was inspiring changes in the office environment.

Methods

Surveys were distributed to 1,825 random participants across the U.S. Sixty-four percent (1,172) qualified to complete the survey by reporting they currently worked full time (40 or more hours) in an office environment. Demographic data such as age, gender, and geographic location were normally distributed, suggesting that the respondents were likely representative of the larger population of U.S. office workers.

Results

Results from the study are categorized as follows:

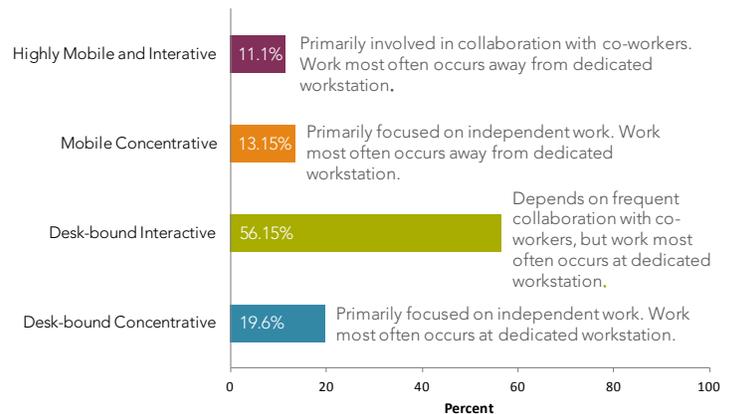
1. Workstyles: Types of work and workstation
2. Understanding: Knowledge about the importance of movement
3. Exposures: Duration of sedentary behaviors
4. Application: Acceptance and usage of alternative work environments

Workstyles: Types of Work and Workstation

To understand the application, limitations, and perceptions of movement in the workplace, we first needed to understand how and where work is being performed.

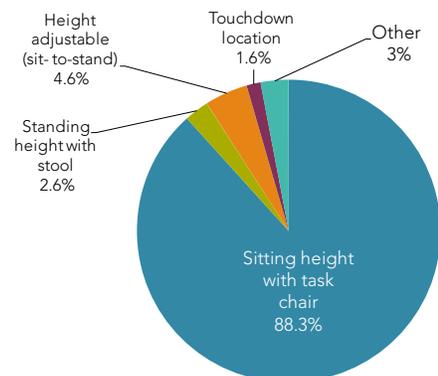
Question: How would you classify your work in terms of location and interactions?

Results:



Question: At what type of workstation do you typically work?

Results:



Implications

As expected, the majority of office workers divide their time between focused, individual work and collaborative work. Most workers report spending a significant amount of time at a dedicated, assigned workstation rather than touchdown or open spaces. Supporting both focused work and collaborative teams in a thoughtful and efficient way is essential in the office plan. It should be noted that many organizations that have used observational studies to document the percentage of time workers spend at their assigned seats have found a large gap between peoples' perceptions and the actual amount of time they spend at their desks. Most workers (with a few exceptions, like call center staff) report spending about 80% of their time at their desk, while the surprisingly consistent data suggests the real average is closer to 40%. The other 60% is likely to be spent in other areas of the floor or building, working alone or with others.⁴⁻⁷

Despite the recent and justified concern regarding the dangers of prolonged sitting, the vast majority (88.3%) of office workers report their assigned workstation is structured for seated work. Sitting is important both for biological and productivity reasons – sitting provides rest for the legs and feet and allows for stabilization for focused or detailed work. Limiting prolonged static postures, however, is valuable for health reasons. Sitting is important, but it is essential we reduce the duration of our seated postures. Even though the majority of office workers' assigned desks are at seated height, they are not doomed to a fate of poor health due to static postures. Simply breaking up the duration of static postures may have health benefits. It is recommended that seated workers spend 1-2 minutes moving after every 20 minutes of sitting. Dividing the workday into periods of sitting, standing, and moving can result in an overall healthier work environment.

There were no meaningful differences between age groups regarding how and where work is being performed. Younger office workers (18-29 years old) appear to be only slightly more mobile and equally collaborative as their older counterparts (45-60 years old). Therefore, it is not appropriate to assume that collaborative furniture need only appeal to Generation Y workers and super-progressive, open-office work environments. Instead, furniture that fosters collaboration needs to be physically comfortable and aesthetically acceptable to all users in all work environments.

An added benefit to collaborative work areas is they encourage desk-bound workers to move to new locations, potentially increasing their movement and posture changes.

For more information on sitting in moderation, please see *In Defense of the Office Chair*.

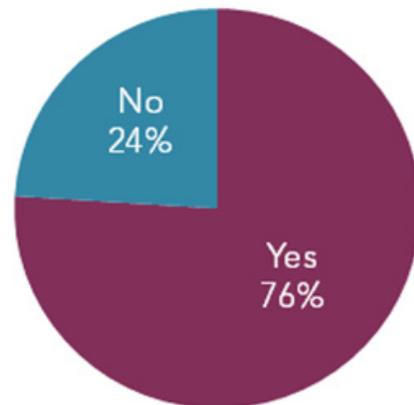
For more information on thoughtful space planning, please see *Just Because You Build it, Doesn't Mean They Will Come*.

Understanding: Knowledge About the Importance of Movement

With a majority of workers reporting working from a seated position, it is important there is an awareness of the dangers of prolonged static postures. Are office workers aware of the perils of prolonged sedentary behaviors?

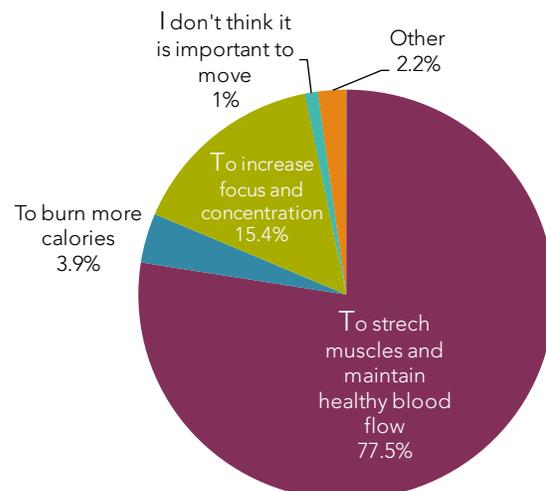
Question: Have you read or watched any material warning of the negative health implications of prolonged sitting?

Results:



Question: What is the most important reason to move and change postures at work?

Results:



The Good News

This data suggests the majority of U.S. office workers are informed, at least ostensibly, of the concern associated with prolonged static postures. It also appears that most office workers have a realistic appreciation of the benefits of movement in the workplace – to maintain circulation and muscle health. Interestingly, 15.4% felt the most important reason to stand was to increase productivity. This speaks to the perceived psychological benefits (in addition to the physical benefits) of an active workplace. In fact, there have been reported productivity, attention, and alertness benefits from moving frequently throughout the workday.³

While only a small percentage of respondents felt the most important reason to move was to burn more calories, this is a beneficial side effect of increased activity. Non-Exercise Activity Thermogenesis (NEAT) is a measure of the energy expended while doing everyday activities at work and home such as sitting, standing, walking, and even fidgeting. Sitting burns more calories than sleeping, and standing has been shown to burn more calories than sitting. An overall increase in fidgeting and posture changes can help increase our NEAT levels. This activity, however, is not a replacement for regular exercise and a healthy diet. Fortunately, only a very small minority (1%) of the sampled population considered movement unimportant for health reasons, indicating office workers generally understand and accept the science surrounding the negative health consequences of not moving frequently.

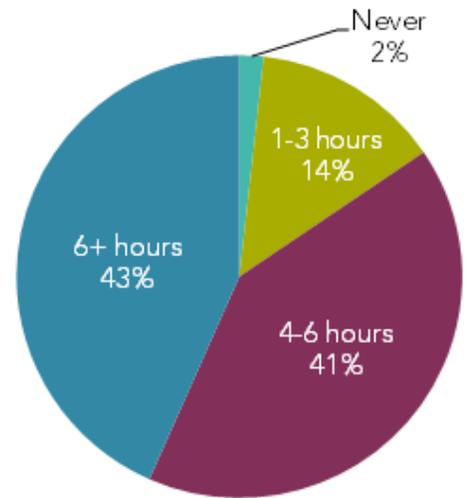
Exposures: Duration of Sedentary Behaviors

If most office workers are aware of the dangers of prolonged static postures, the assumption may follow that sitting duration has reduced at the workplace. Maybe not.

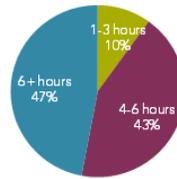
Question: During a typical workday, how many hours do you sit?

Results:

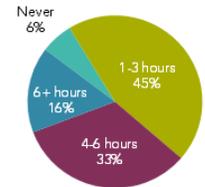
All Responses



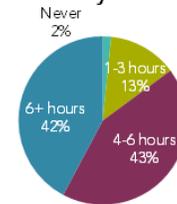
Sitting-Height Workstation



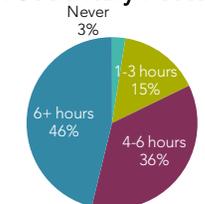
Height-Adjustable Workstation



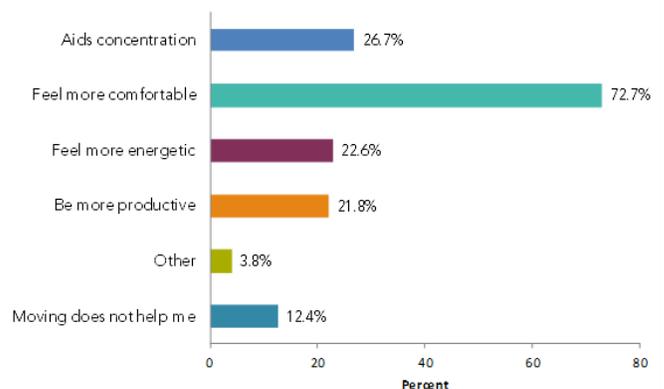
Read or Watched Report on Sedentary Postures



Never Read or Watched Report on Sedentary Postures



Question: How does moving help you during the workday? (Check all that apply)



The Bad News

Most office workers report spending a majority of the workday in seated postures. Sitting itself is not a harmful activity, but doing so for long durations without interruption can contribute to negative health implications. Although active sitting (moving, fidgeting, changing postures, and reclining in your chair) can help contribute to an overall more active workday, it is not a replacement for more dynamic, whole-body movement and posture changes. Interestingly, there was no meaningful difference in duration of sitting between individuals who had read or watched material regarding the health implications of prolonged sitting, and those who had not read or watched such material. Awareness of the dangers of prolonged sitting does not appear to result in a change in sitting habits. This may indicate one or more of the following: 1) There is mistrust or disbelief in the reports of negative health implications; 2) There may be a shortage of opportunities and locations to change postures; 3) There may be confusion about how to apply knowledge and work more actively; or 4) There is an understanding of the unhealthy behavior, yet a continued participation despite “knowing better” as is seen with unused gym memberships and unsuccessful diets.

Optimistically, the data suggests when office workers are provided with ways that may help to increase their activity levels (reduce their sitting time), such as sit-to-stand height-adjustable tables (HAT), they are used. Individuals who have HAT report sitting less than those whose primary workstation has a fixed, seated-height worksurface (with only 16% reporting sitting for 6 or more hours as compared to 47% at seated-height desks). It is important that causality is not inferred with this relationship; having a HAT did not necessarily cause office workers to sit less. It may be, for example, that individuals who wanted to stand more throughout the workday actively sought out these worksurfaces. Providing a HAT to employees is not sufficient to produce an increase in activity levels. Training and education are necessary to ensure users understand why and how they should be using their sit-to-stand stations.

There has been speculation and inferences in media outlets about prolonged sitting causing obesity. In the current study, sitting duration varied only slightly between individuals within different weight classifications.

Body mass index (BMI) is a method of categorizing an individual's level of obesity, and is calculated using weight and height. In this data, 50% of obese individuals (BMI greater than 30) sat for more than 6 hours a day, compared to 44% of normal-weight individuals (BMI between 18.5 and 25). Again, it is important that a causal relationship is not assumed prematurely. Two observed trends (increasing sitting duration and increasing obesity rates) may or may not be directly coupled. Extensive sitting may contribute to excess fat storage and weight gain; however, it is just as feasible that an individual with excess fat has a propensity to sit more than thinner individuals. Said another way, sitting may contribute to obesity, but it is also feasible that obese individuals prefer to sit more during the day.

Increases in movement have been shown to have physical and psychological benefits, and active sitting is a small way to increase daily activity levels. When asked to respond to the benefits of movement, respondents reported moving, fidgeting, reclining, and changing postures allowed them to feel more comfortable at work. Some even reported active sitting resulted in gains in concentration, productivity, and energy levels. Unfortunately, 12.4% of respondents reported no perceived benefits from movement at work. This, again, may speak to the lack in training or opportunities to practice an active workstyle.

Overall, the data suggests that, in general, people sit a lot at work – even those who know they shouldn't. Reading an article about movement or providing a HAT are not enough to motivate sustained behavior changes. Training and education need to be provided in addition to providing the proper work area to allow movement and changes in postures. Additionally, office workers need to feel encouraged and supported to use the tools and work environments for them to be effective.

Application: Acceptance and Usage of Alternative Work Environments

Finding the right balance between sitting and moving throughout the workday can have wellness and productivity benefits. One way to provide opportunities for movement and posture shifts is to offer collaborative or focused work areas with different furniture options. These alternative working areas, however, require thoughtful planning and cultural acceptance.

Question: Does your current office have alternative work areas available (separate from your dedicated workstation) for standing, lounging, and walking?

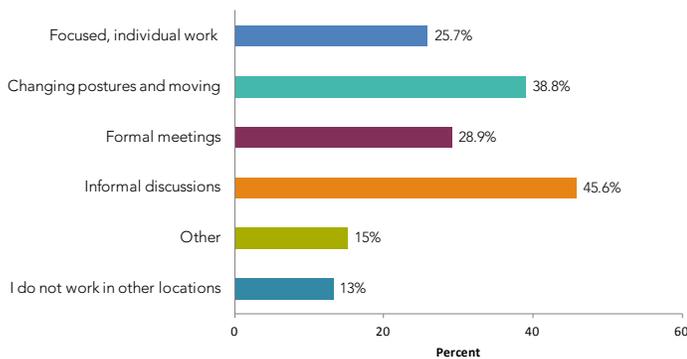
Results: Yes = 40%; No = 60%

Question: Does your supervisor support you working in places other than your dedicated workstation? That is, does your supervisor understand that even if you are not at your workstation, you are still being productive?

Results: Yes = 75%; No = 25%

Question: When do you work from alternative work areas? (Check all that apply)

Results:



Implications

Unfortunately, a majority of office workers report not having areas available at their current workplace for standing, lounging, or walking. Office workers may currently be missing opportunities for both casual, impromptu collaborations and a more active and healthy workstyle.

During seated work, office workers should use ergonomic task chairs that provide proper positioning, adjust to fit, and promote movement by allowing for comfortable reclining postures. Although sit-to-stand workstations are an excellent way to promote an active workstyle, other approaches are available as well. Office workers can benefit from having access to alternative work locations and from furniture that allows and encourages movement and changes in postures. Examples include:

- Shared, standing-height worksurfaces
- Places to lean and converse with co-workers
- More relaxed seating that allows for alternative postures
- Areas to walk

Fortunately, there does not appear to be a stigma against working from alternative locations. It is generally understood that even if employees are not sitting at their assigned workstations, they are still able to be productive. Of those that had access to these alternative work areas, an overwhelming majority (87%) took advantage of them. Participants reported actively seeking out these areas to collaborate, change postures, and focus on their work. This data suggests that investing resources and floor space to these alternative working locations results in perceived benefits for employees, and ultimately their employers.

For more information on efficiently enabling a dynamic work environment, please see *Brave New Workplace*.

Conclusions

Movement is important for health and wellness. The goal of this study was to better understand the challenges and perceptions of introducing movement into the workplace. Results indicate the benefits of active work are real and perceived by today's office employees. Knowledge workers are aware of the risks of prolonged static postures and they seem to be seeking a solution to allow a more active workstyle. The data indicates sitting is still an important part of the workday and needs to be supported, but other postures and collaboration need to be supported as well.

There are simple ways for office workers to reduce exposure to sedentary behaviors and create a more active workplace. Examples include:

- Moving to alternative working areas to change postures when not involved in intensive computer tasks (which should be well supported with an ergonomic task chair)
- Walking and standing more during the workday (pacing during phone calls and having walking or standing meetings)
- Reclining and fidgeting while seated
- Utilizing sit-to-stand workstations and alternating postures frequently

Permitting, encouraging, and supporting movement has always been a core element of seating design at Allsteel. We strive to design seating that supports movement and healthy postures and collaboration products that encourage workers to leave their assigned desks and change postures. Overall, thoughtful integration of these products in a way that appeals to all workstyles, work types, and ages can contribute to overall employee wellness.

References

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3. T. Ebara, et al (2008). *Effects of adjustable sit-stand VDT workstations on workers' musculoskeletal discomfort, alertness and performance*. *Industrial Health*. 46: 497 – 505.
4. http://www.cisco.com/web/about/ciscoitatwork/downloads/ciscoitatwork/pdf/Cisco_IT_Case_Study_Connected_Workplace_POC.pdf
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For more information

allsteeloffice.com/ergo

Ergonomics at Allsteel

Our ergonomics team studies workers: who they are, the way they work, and what they need to be comfortable and healthy. These insights are built into every product we make. Our goal is to develop products that respond to the issues confronting today's office workforce.

About the Author

Dr. Lauren Gant, Ph.D., CPE heads the Ergonomics Group at Allsteel. Lauren's background in biomedical engineering allows her to apply human factors and ergonomics principles to the design of office furniture, and to research emerging trends in the office environment. Lauren has taught engineering and ergonomics courses at the university level, has conducted extensive research in the field of ergonomics, and holds a doctoral degree in biomedical engineering from the University of Iowa. She is a member of the Human Factors and Ergonomics Society, and is a Certified Professional Ergonomist, granted by the Board of Certification in Professional Ergonomics.

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