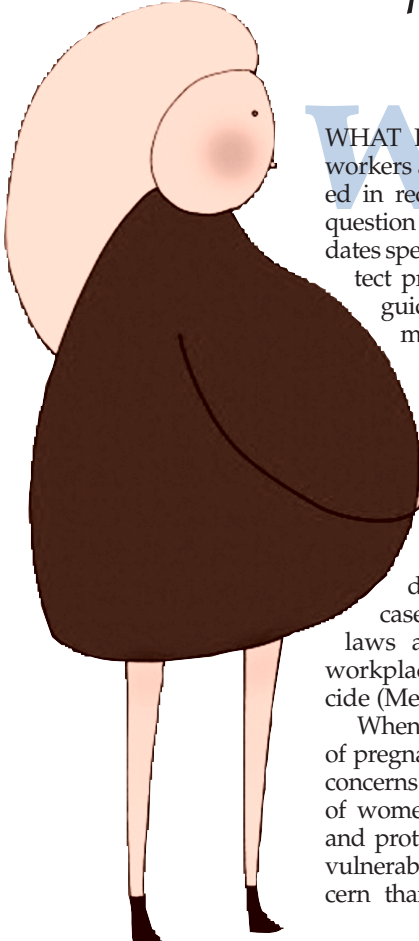


# Pregnant Employees

*Special considerations for  
protecting their safety and health*

**By Julia A. Kalish and Niaz Latif**




WHAT ERGONOMIC LIMITATIONS for pregnant workers are mandated through regulation or stipulated in recommended practices? This is not an easy question to answer. In the U.S., no strict legal mandates specify compulsory ergonomic standards to protect pregnant women. However, suggestions and guidelines have been established by governments in other countries, and other stakeholders internationally. Before exploring these suggestions, one must understand the position of the U.S. on these issues.

## **Background: Rights vs. Reality**

In the U.S., few (if any) limitations or mandates are imposed on women or employers regarding pregnancy or reproductive health. This has not always been the case in this country. Although many current laws and regulations protect women's rights, workplace realities and practices do not always coincide (Messing).

When considering the ergonomic health concerns of pregnant workers, issues become compounded by concerns over the rights of the fetus and by concerns of women's reproductive capacities. Understanding and protecting a pregnant woman against increased vulnerability to ergonomic injury is a different concern than protecting her unborn child from birth



defects or a preterm delivery. The literature often treats these two areas of concern as inseparably connected, which is not necessarily the case. Drawing a line between the health of a woman who is pregnant and the health of the fetus that she is carrying is not easy, but it can be done. Although historically the concerns of fetal health often override considerations of the individual woman, this article focuses on the health of the pregnant woman herself (Bertin).

## **Evolution of Pregnancy in the Workplace**

The socioeconomic realities brought about by World War II (WWII) encouraged substantial changes in work norms in the U.S. While men were serving in the military, women began to fill jobs once held predominantly or exclusively by men. Once women entered those factory doors, the workplace landscape changed forever (Huckle). The number of women in the workforce tripled between 1948 and 1988—a reflection of the changes that occurred following WWII (Misner, et al). Despite this increase in the number of working women, the playing field has remained unequal for women in some situations. An example of this is the fact that Bureau of Labor Statistics (BLS) did not include investigations of women's workplace injuries and illness until 1980 (Larosa and Alexander).

Over the last 40 years, several laws have been enacted to address employment discrimination issues such as hiring, promotion, compensation and job assignments for marginalized groups. One of the first highly influential laws to consider employment discrimination against women was Title VII of the Civil Rights Act of 1964. Although this law is best known for its reference to discriminatory practices related to race, it also made it illegal to fire, hire or promote based on sex.

**Julia A. Kalish** is a doctoral student at Purdue University's School of Technology, where she is studying ergonomics. She has worked in a managerial capacity in various manufacturing settings and has also served in the military. Kalish's major area of research focuses on the unique ergonomic concerns of working women.

**Niaz Latif, Ph.D.**, is a professor in and head of the Dept. of Industrial Technology at Purdue University. He has an M.S. from South Dakota State University and a Ph.D. from the University of Missouri, Columbia, both in Agricultural Engineering. Latif received the 1998 Outstanding Professor of Industrial Technology Award for Region 3 from the National Assn. of Industrial Technology.

The act did not contain verbiage on employment practices pertaining to pregnancy, however, so although women were now legally protected, the issue of what that meant to the condition of pregnancy was still unknown (Bertin). The Pregnancy Discrimination Act was passed in 1978 as an amendment to the Civil Rights Act. It specifically stipulated protocol for handling the condition of pregnancy, guaranteeing that the rights of women would be protected in much the same way as rights of employees with other medical conditions and disabilities (Huckle). Further defining the rights of both men and women, the Family Medical Leave Act of 1993 identified entitlements for unpaid leave for various situations including pregnancy and childbirth (Bertin).

When considering women's health in the workplace, much attention has been given to the health of the reproductive system, not to the woman as an entire person. This phenomenon is consistent in many forms of research and protection initiatives (Bertin; Larosa and Alexander; Messing). Although the ability to reproduce and the health and well-being of unborn children are certainly important, these considerations do not encompass the far-reaching value and contributions that women make to the world. This sentiment is well-stated in a recent report concerning women's health issues.

The health effect of women's work is often considered only to the extent that work is thought to pose a risk to reproduction, an approach that devalues women's own health, elevates women's childbearing activities over their economic and intellectual contributions, and obscures the health-enhancing effects of work (Bertin 9).

The Johnson Controls case provides an example of a precedence-setting case concerning a woman's right to chose employment that would negatively affect her fetus (499 U.S. at 192). This case established that an employer could not discriminate against a woman because she might become pregnant. Cases such as this frequently are cited when discussing pregnancy and employment concerns; however, as noted, this case primarily considers legal aspects of women's employment rights as they are affected by fetal protection concerns. It gives employers or employees no information and options concerning the health and well-being of pregnant workers (Magid).

### State of Current Workplace Practices

It is against this legal and historic backdrop that the current regulations and guidelines affecting pregnant women must be considered. OSHA has taken a stance of neutrality concerning the pregnant condition, citing the need to protect the rights of women to work free from gender bias (Bertin).

OSHA maintains an extensive website with links to volumes of information on regulations, safety and health topics, and enforcement plans, as well as links to other agencies such as BLS, NIOSH and Centers for Disease Control and Prevention. A search of the OSHA website to find regulations that contain the

word "pregnancy" yielded only 14 responses—all of which were primarily concerned with the effects of exposure to reproductive health. A search of NIOSH's website returned similar results. Although regulatory documents containing suggestions and mandates concerned with issues such as safe lifting weights, hours of continuous work and comfortable working surface heights are readily available for men and nonpregnant women, this is not the case for pregnant employees.

In cases where no specific standard covers a situation that is deemed dangerous, an OSHA inspector can cite the General Duty Clause as the enforcement mechanism requiring change of an unsafe practice in industry. However, this clause is ambiguous and vague, meaning the protection of working women who are pregnant is not guaranteed. In the authors' opinion, few employers or OSHA inspectors likely can tangibly discern what is or is not hazardous to pregnant women.

Although legally protected from inequitable treatment and discrimination due to pregnancy, many women find themselves in situations that do not live up to these legal promises. In "Women in the Construction Workplace: Providing Equitable Safety and Health Protection," construction workers shared personal accounts of what really occurs on the job. One worker reported, "I knew they'd tell me I couldn't work if they knew I was pregnant, so I just wore big clothes and said nothing. No one knew, and I worked through my eighth month." Another worker reiterated the concerns many women have regarding job security when pregnant. "When I got pregnant my company agreed to give me light duty. But then they laid me off when everybody else was still working" (OSHA). Such experiences present challenges to all SH&E professional as it is possible that employees may be reluctant to announce a pregnancy or to seek work modification even when it is in their own best interest.

### Practices & Guidelines from Canada & U.K.

Countries such as Canada and the U.K. have taken a more proactive approach to this issue by outlining specific acceptable behaviors aimed at eliminating many ergonomic concerns of pregnant women.

Safety and health laws in Canada encourage employers to use a factsheet published by Occupational Health Clinics for Ontario Workers Inc. These laws stipulate that it is the employer's responsibility to not only provide a safe working environment for pregnant workers, but to also provide safety and health information to the pregnant woman (Bauer and Keupfer). The factsheet includes general information on ergonomic factors that should be avoided or limited during pregnancy; these include "physically strenuous work, work requiring balance, heavy lifting, loud noise, shiftwork, long working hours, unadjustable workstations, prolonged sitting, prolonged standing and electromagnetic field exposure." However, most of these factors are not explained or are defined in vague terms such as "loud," "physically strenuous" or "long."

**This article reviews legal, historic and social realities of pregnancy in the workplace. Its focus is the safety, health and comfort of pregnant women. Topics include the evolution of workplace customs with respect to pregnancy and the current state of practices in the U.S. and internationally, as well as safe procedures and recommended guidelines in the areas of fatigue, workstation design, upper-body strength, shiftwork, stress, work pace, secondhand smoke, posture and work environment.**

## Ergonomic Considerations for Pregnant Employees

Ergonomic Considerations	General Recommendation	Specific Guide or Special Note
Standing*	Avoid prolonged standing.	• ≤three hours during the workday.
Sitting*	Avoid prolonged sitting.	• ≤three hours during the workday. • Use a chair with lumbar support while sitting.
Lifting*	Avoid heavy lifting.	• Do not lift more than 22 pounds repeatedly. • Extra caution in lifting may need to continue for up to six months postpartum.
Work requiring balance <sup>†</sup>	Avoid work that requires balance.	• Do not perform work that involves balance, especially in the third trimester.
Environmental factors <sup>†</sup>	Avoid loud noises, extreme heat, extreme cold, full-body vibration.	• Wear proper attire when in hot or cold environments. • Stay properly hydrated. • Wear proper hearing protection.
Shiftwork <sup>‡</sup>	Avoid shiftwork.	• Avoid either night shift or a rotating shift especially if fatigue or stress become health concerns.
Work hours <sup>§</sup>	Avoid long hours of work.	• Avoid exceeding 40 hours of work per week or eight hours per day.
Awkward posture <sup>  </sup>	Avoid awkward postures.	• Workstations should be adjustable to accommodate the woman's changing body shape and work envelope should not extend past 70 cm.
No rest <sup>  </sup>	Increase the number of breaks.	• True breaks should be taken where the employee gets to relax and literally put her feet up (to prevent swelling). • Additional bathroom breaks should be provided as well.
Repetitive work*	Avoid repetitive work.	• Assembly line jobs are considered repetitive work.
Work pace <sup>  </sup>	The pace of work should be flexible and not too strenuous.	• The woman should have some control over setting her own work pace.
Secondhand smoke <sup>  </sup>	Pregnant women should avoid exposure to second-hand smoke.	
Stress <sup>  </sup>	Emotional and physical stress should be minimized.	• Reduce stress by adhering to all the other ergonomic suggestions and by providing emotional support for the pregnant woman. • Provide control over break times, work schedule and job latitude. • Provide a supportive atmosphere. • Change hours to avoid rush hour as needed.

Note: Chemical and biological exposure information and guidelines have purposely been omitted as they are predominately concerned with the health of the fetus, while this article has attempted to focus on the health of the pregnant woman.

Sources: \*Bauer and Keupfer. §Mamelle, et al; Fenster, et al; Henriksen, et al.  
 †Gilmour; Williams. ||Paul, et al.  
 ‡Hruba, et al; Politakis. ¶HSE.

Other ergonomics risk factors are better defined with quantifiable limits. For example, some aspects of what is considered physically strenuous work are clearly defined—"prolonged standing for more than three hours a day" and "repetitive lifting more than 10 kg (22 pounds)" are considered physically strenuous (Bauer and Keupfer). To minimize awkward postures, the factsheet recommends that workstations be adjustable to accommodate body changes brought on by pregnancy, yet it offers no suggestions about concerns such as working surface heights, reach envelopes or hours worked per day (Bauer and Keupfer).

A guide published by the U.K. Health and Safety Executive (HSE) delineates legal rights and responsibilities of employers and employees concerning the safety and health of expectant mothers. These guidelines extend to any woman who might become pregnant, has delivered a baby in the previous six months or is currently nursing. It contains no blanket state-

ments about what are or are not safe working conditions for the pregnant woman. Instead, the guide states that it is the combined responsibility of the woman, her doctor/midwife and her employer to determine risk factors based on specific employment considerations as well as individual needs (HSE).

Although no laws mandate such an approach, SH&E professionals can take cues from this approach to working with all workers who have health concerns or physical limitations. Many of the same ergonomic considerations mentioned in the Ontario factsheet are identified as risk concerns in the U.K. guide. Other factors mentioned include secondhand smoke, stress created by commuting during rush hour and the need to provide facilities to accommodate more frequent bathroom breaks. The guide also defines government-mandated workplace assessment and accommodation procedures for all interested parties, and provides legal and contact information.

## Suggestions from Research

In addition, some published studies and articles have focused on the health and welfare of pregnant workers. Several studies provide useful information concerning shiftwork, workstation design, upper-body strength, fatigue and work environment.

### Shiftwork

Working at night has been found to affect hormones and increase fatigue. Some studies have reported a connection between working nights and intrauterine growth retardation (Hruba, et al). Some attention has also been given to the effect of fatigue on the quality of life of pregnant women. In addition to shiftwork, long hours have been a concern of those trying to understand the effects of employment on pregnancy. Many industrialized nations provide protection for nursing and expectant mothers by prohibiting night work or by accommodating a woman's request to be removed from the nightshift (Politakis).

### Workstation Design

Paul, et al conclude that workstations should be adjustable to accommodate the possibility of women wanting to make their standing workstations lower to accommodate their enlarged abdomen in the third trimester of pregnancy. The same study established that pregnant women found work more "effortful" as it was done further away from the body. Increased effort began at 50 cm for some women; by 70 cm from the body, 92 percent described the task as being effortful. Only 40 percent of nonpregnant women found working at 70 cm from the body to be effortful. Although the term "effortful" was not defined, it may still be appropriate to state that workstation designs which allow for tasks to be performed closer to the body will be more comfortable for pregnant workers.

### Upper-Body Strength

One study revealed a potential decrease in upper-body strength for pregnant women. These researchers recommended that pregnant women (primarily those in their third trimester) avoid becoming fatigued, back strain, and rapid or frequent movements which could potentially lead to falls. The study also suggests that there may be a concern of dropping loads due to diminished strength or the possibility of an increase in overall fatigue experienced by the pregnant woman (Master and Smith).

### Fatigue

Concerns about the effects of fatigue are expressed often in the literature, frequently in association with negative fetal outcomes. Unfortunately, "fatigue" is a poorly defined concept. Many conflicting findings can be cited in relationship to what causes fatigue and what effect fatigue has on an expectant mother. Several studies consider working hours in their relationship to fatigue and fetal health (Mamelle, et al; Fenster, et al; Henriksen, et al). The results are not definitive, leaving one to wonder exactly what "long" hours are and how fatigue affects pregnant women. Vague suggestions recommend a 40-hour work week, noting that working overtime may be a point of concern.

## Environment

High temperatures may cause some pregnant women problems. Not only can the heat leave a person feeling faint or dizzy, but she can also be more susceptible to developing various heat stress conditions such as dehydration. This can continue to be a problem after delivery, especially if the woman is breastfeeding. To manage this potentially harmful situation, pregnant women should wear suitable attire, take breaks as needed and consume sufficient amounts of noncaffeinated beverages (Gilmour; Williams).

## Conclusion

This article began by asking what ergonomic limitations are mandated through regulations or stipulated in recommended practices for pregnant women in the workplace. Reviewing the various sources of information concerning pregnancy and working is a daunting but important task. Table 1 presents the findings and suggestions reported in the literature. Although these suggestions are not compulsory, the information is a good starting point for creating awareness and understanding about this issue. ■

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## Reader Feedback Question

What's your experience with developing policies/practices for protecting pregnant employees? What special precautions does your firm take? Does your company have a formal policy or guideline? Share your feedback by sending an e-mail to [professional\\_safety@asse.org](mailto:professional_safety@asse.org) or by completing the reader feedback form at [www.professionalsafety.org](http://www.professionalsafety.org).