

From Eugenics to Evidence: A Historical Perspective on Prenatal Physical Activity Guidelines and Their Present Impact on Maternal Health

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The World Health Organization (WHO, 2018) reported that physical inactivity is a leading risk factor for chronic illness and death, particularly among women. However, decades of cautionary guidelines on prenatal physical activity (PA), unsubstantiated fears for the fetus, and cultural expectations of women have done little to encourage PA participation during pregnancy. As little as 10% to 15% of women achieve the recommended level of prenatal PA despite extensive research confirming the intergenerational benefits of being active and the importance of healthy weight gain during pregnancy (Garland, 2017; Newton & May, 2017; Santo et al., 2017).

Maternal morbidity and mortality rates are increasing across the United States, likely associated with the corresponding rise in obesity (Chinn et al., 2020), chronic medical conditions, and cesarean deliveries (Hirshberg & Srinivas, 2017). Still, provider counseling on PA is usually limited and not aligned with national guidelines (Lott et al., 2019; Whitaker et al., 2019). However, pregnant patients often want clear and specific guidance (Harrison et al., 2019). In 2020, the American College of Obstetricians and Gynecologists (ACOG) released updated guidelines that included evidence about the safety and necessity of PA during pregnancy, using the most authoritative language to date. However, generations of misguided recommendations and fluctuating guidelines have left their mark.

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Historical Context of Prenatal Physical Activity Guidelines

While exercise is typically viewed as a matter of personal choice, personal choice has always been restricted when it comes to pregnancy. The centuries-long debate around prenatal PA has ranged from preserving a strong nation in the post-Civil War era to reducing the economic burden of poor health (Jette, 2018). In the nineteenth century, homeopathic physicians were concerned about the vitality of the upper class and advocated for the physical education of young women (only permitted for boys at the time) and participation in light gymnastics to improve American society (Vertinsky, 1986).

The idea gained support from physicians and moralists wanting to improve the White race. They used the Christian ideals of the time to strictly limit PA during pregnancy to walking, light gymnastics, and domestic duties. These limitations were believed to improve maternal capabilities and construct a “superior race” without compromising femininity or interfering with household responsibilities (Vertinsky, 1986, p. 28).

Changing Social Perceptions of Prenatal Physical Activity

Participation in prenatal PA beyond socially accepted boundaries was perceived negatively well into the twentieth century. It remained an area of contention even as women began stepping beyond the cultural gender stereotypes to pursue a broader range of goals. Dr. Bruser’s (1968) critique of the arbitrary physical limitations imposed on pregnant women, combined with the Women’s Liberation Movement of the late 1960s and 1970s, altered how people viewed women’s bodies and prenatal exercise (Kehler & Heinrich, 2015).

Women in the United States felt a new sense of freedom and ownership of individual health, but the changes in women’s societal role were happening too quickly for some. In the 1980s, many medical professionals began to speculate about possible complications that exercise during pregnancy might cause the fetus and raised concerns based on theories of the reproductive system, which had not been tested in research (Kehler & Heinrich, 2015).

The Role of Religion in Shaping Perceptions of Prenatal Physical Activity

Religious beliefs also played a significant role in shaping perceptions of prenatal PA. In the 1980s, leaders of the Southern Baptist Church felt the

Church and Southern culture were in crisis because of the rapidly shifting gender roles. They made public declarations affirming that women were to be submissive and stay home to fulfill maternal obligations, while men's roles were to work, protect, and lead (Early, 2018; Early, 2019). The primary message from the earliest discussions about women's bodies and their societal role has been that having just enough vigor to benefit others is encouraged, while too much is a challenge to the status quo and unacceptable in American culture. As Oliver & Kirk (2016) explained, "Active lifestyles widely practiced are a radical goal since it has the potential to be transformative of women's place in the gender order" (p 316).

Given the lack of science on prenatal PA, researchers and medical professionals disagreed on how much was safe. To provide clarity, ACOG published its first recommendations for PA during pregnancy in the mid-1980s, setting boundaries for active women and directing inactive women not to begin exercise during pregnancy. The guidelines advised caution and contributed to the widespread belief that pregnancy is a time for decreased PA.

The conservative guidance warned pregnant women not to reach a heart rate above 140 BPM and avoid vigorous activity lasting longer than 15 minutes (Wing & Stannard, 2016). The precaution to limit the heart rate became a widely accepted limitation for prenatal PA, which persists, even though it had no basis in empirical research (Mudd et al., 2009). It was removed from the next iteration of ACOG guidelines. If and how much pregnant women should exercise became a heavily debated topic among physicians and scientists, beginning an era of extensive research.

In the latter part of the twentieth century, researchers released dozens of scientifically rigorous studies that addressed many societal fears about PA during pregnancy. Dr. Clapp—a prominent researcher in prenatal exercise—challenged several prevalent hypotheses about how exercise during pregnancy may harm the mother and fetus (Clapp, 1990; Clapp & Capeless, 1990, 1991). Clapp and Little (1995) revealed a clear difference between the theoretical assumptions about prenatal PA and the scientific findings. Clapp's data indicated that the body's adaptations to exercise during pregnancy are beneficial and not a cause for concern. Other researchers found similar results but used more cautious language, thus perpetuating anxiety about prenatal PA.

The Impact of Historical Factors on Current Perceptions of Prenatal Physical Activity

Many researchers and physicians treated PA during pregnancy as something to be monitored and controlled rather than as a natural function of the human body. Dr. Artal (1992), a lead author of the original ACOG PA guidelines, referred to prenatal exercise as something to be prescribed to pregnant women; however, researchers and physicians could not agree on what a prescription for PA during pregnancy involved. Despite evidence to the contrary, women were often warned about the potential dangers of exercise during pregnancy rather than encouraged to participate.

Conclusive evidence for the safety of PA during pregnancy had mounted by the mid-1990s. The growing body of research was enough to sway some providers to concede that moderate PA was safe for healthy pregnancies; however, many continued to wrestle with the potential risks versus benefits (Kehler & Heinrich, 2015). As a result, ACOG (1994) released updated clinical guidance with few limitations for prenatal PA. The updated guidance may have increased awareness about the safety of moderate activity; however, limiting PA had already become the societal norm.

Since 1994, the ACOG has revised its recommendations frequently due to numerous studies supporting prenatal exercise and growing concerns over the effects of maternal obesity and chronic disease. Although perceptions of pregnant women being physically active have evolved, decades of warnings about the dangers of PA have been culturally ingrained. Modern society still perpetuates stereotypes of pregnancy as a disability and a time of rest. The safety and benefits of PA during pregnancy are clear. However, there remains a lack of public knowledge about current guidelines and inaccurate assumptions about women's bodies that inhibit PA during pregnancy (van Mulken et al., 2016).

Research shows that women who receive accurate provider advice about prenatal PA are more likely to remain active throughout pregnancy (Moore et al., 2018; Walasik et al., 2020). Unfortunately, many providers do not receive adequate medical training in PA (Dacey et al., 2014) or gestational weight gain (Murray-Davis et al., 2020), often inaccurate or insufficient counseling (Lott et al., 2019; Melton et al., 2016; Murray-Davis et al., 2019, 2020; Newton & May, 2017; Shulman & Kottke, 2016; Whitaker et al., 2016, 2019). A recent study found that women looked to their providers as the main source of support for

PA; however, provider counseling was ineffective at promoting PA and was associated with increased sedentary behavior (Rebelle et al., 2022).

Generations of prenatal PA restrictions and misinformation, combined with the lack of specific knowledge and training among providers, have contributed to the maternal health crisis in the United States. Informed providers can encourage PA by using evidence-based counseling to discuss the benefits, dispel myths, and support patients in overcoming common barriers. Ignoring the science of PA during pregnancy and the impact of historical factors is a missed opportunity to reduce inequities and improve intergenerational health.

Conclusion

Despite the growing body of research supporting the safety and benefits of prenatal PA, cultural stereotypes of pregnancy as a time of disability and rest persist. This, combined with the lack of specific knowledge and training among healthcare providers, has contributed to the maternal health crisis in the United States. Understanding the historical context of prenatal PA guidelines is essential for addressing the maternal health crisis. Providers must be equipped with accurate information and counseling strategies to encourage PA during pregnancy effectively. Ignoring the science of PA during pregnancy and the impact of historical factors is a missed opportunity to reduce inequities and improve intergenerational health.

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