11

Sport for All, or Fit for Two? Governing the (In)active Pregnancy

Shannon Jette

'Who says athletes can't be pregnant?' (Ms magazine, 1978).

The above quote appeared in the feminist magazine, *Ms.*, in 1978, and is indicative of a more permissive attitude toward physical activity in pregnancy that grew out of second-wave feminism. This attitude was quickly called into question, however, by members of the medical profession as well as pregnant women who were themselves concerned with harming their unborn child. The result was the emergence of the field of exercise and pregnancy science that aimed to measure and delineate the exact limits of safe exercise for pregnant women.

I share this anecdote in order to introduce my argument that, where the pregnant body is concerned, the Sport for All model is superseded by the imperative that women be 'fit for two.' That is to say, the appropriateness of the activities of the mother-to-be is, ultimately, judged according

S. Jette (✉)
University of Maryland, College Park, MD, USA

R. A. Dionigi, M. Gard (eds.), *Sport and Physical Activity across the Lifespan*,
https://doi.org/10.1057/978-1-137-48562-5_11

to the potential harms or benefits that they pose to her unborn child. In this regard, the advice, guidelines, and policies put into place concerning exercise in pregnancy can be viewed as part of a larger project of making citizens responsible in the name of health (and life) that took form in the eighteenth century and has continued since (Rose 2007; Rose and Miller 1992). As Foucault (1990) has demonstrated, during the eighteenth century, there was a shift in the way that power was exercised in Western societies: political power was no longer exercised by threat of death (at the hand of the sovereign) but rather, by fostering life and wellbeing of the population. This power over life (biopower) developed around two opposite yet complementary poles: the *disciplining* of the individual body through the working of various social institutions including the prison, school, and factory, and the *regulation* of the population through a range of techniques such as the collection of demographic information, life expectancy, birth and death rates that then informed population-level interventions. The pregnant body is an obvious site for the implementation of tools, techniques, and means intended to produce a healthy social body: by disciplining the individual pregnant body, the health of the (future) population is also regulated. While, historically, the pregnant body was subject to more direct forms of control through the medicalization and pathologiziation of pregnancy by (mostly male) physicians (see Arney 1982; Oakley 1984), in a contemporary Western society characterized by a neoliberal emphasis on personal responsibility for health, pregnant women are more likely to be produced as subjects who strive to manage pregnancy-related risks in order to *enhance* the health of their unborn child (Lupton 2012; Weir 2006).

In what follows, I explore the changing ideas about exercise in pregnancy by focusing on three different 'moments' or contexts that have shaped how the active, pregnant body has been understood: the rise of medicine and public health at the turn of the twentieth century; the emergence of second-wave feminism and the ensuing debates about active pregnant (sporting) bodies (1960s to early 1990s); and the so-called obesity epidemic (1990s to the present).[1] My approach is underpinned by the notion that scientific knowledge is neither neutral nor objective, but shaped by societal concerns and context. As such, it is instructive to explore trends in medical research—how research on a certain issue

skyrockets in relation to a perceived societal problem, requiring a range of solutions in the form of techniques, knowledge, policies, and practices that constitute an ensemble of power relations that Foucault (2003a, 2003b) termed 'governmentality,' and which are intended to regulate the population by providing guidance on how individuals should conduct themselves. According to Rose and Miller (1992), the workings of power or 'governmentality' may be analyzed in terms of *political rationalities* (the broad discursive frame of reference through which political problems and solutions are identified and considered) and in terms of the *technologies of government* (a consideration of the techniques, tools, and means through which practical policies are devised and inserted). It is through an analysis of the intricate inter-dependencies between political rationalities (e.g., liberalism, welfarism, neoliberalism) and governmental technologies that we can begin to understand the multiple and delicate networks (or the various technologies) that 'connect the lives of individuals, groups and organizations to the aspirations of authorities' (Rose and Miller 1992: 175–176). Thus, by exploring how medical advice about prenatal exercise has shifted over the years in relation to perceived societal problems, we can better understand the power relations at work.

Building a Healthy Nation State: From Late Nineteenth Century Medical Advice to the Rise of Prenatal Care

In the United States and Britain (including its colonies of Australia and Canada), women's reproductive health became a special object of medical interest in the late nineteenth century, and a central role taken on by the ascendant (male) medical profession was the dissemination of advice to help young women grow into healthy wives who produced robust children and, in turn, nurtured a healthy nation (Arnup 1994; Lupton 1995; Oakley 1984). Feminist scholars have illustrated how this advice was informed by, and further perpetuated, notions of proper gender roles, and was used to justify the exclusion of women from higher education as well as the sporting realm (see Vertinsky 1994). Pregnant women, in particular, were the object of medical advice concerning appropriate exercise

practices, as upper and middle class women (the intended audience of the advice manuals) were thought to require a modicum of exercise in order to prepare for birth (Jette 2009; Vertinsky 1994). In medical texts and advice manuals published in the final years of the nineteenth century, pregnant women were cautioned by doctors to resist a sedentary or 'indolent' lifestyle of luxury (with excess of food and entertainment) and were encouraged to train for labor as it would lead to an easier birth (Jette 2009). The texts pointed to the quick and painless childbirth experiences of poor women, colored women, and indigenous women who were reportedly able to resume their occupation the following day with little pain or inconvenience. By living a less luxurious lifestyle, it was thought that birth could be made easier for middle and upper class women, suggesting that advice to train for childbirth was in large part meant to encourage these women to reproduce, and as such was part of a larger biopolitical project concerned with preventing race suicide (a perceived threat posed by high rates of immigration and lower birth rates within the white upper/middle classes) and preserving the vitality of the nation state.

While physical activity was encouraged, appropriate exercise for middle and upper class women included easy walking, simple calisthenics, or light housework—and was never to be taken to the extreme (Jette 2009). Pregnant women were warned of the dangers of prolonged standing or sitting (especially when bent over a writing table) and strongly cautioned to avoid stooping, lifting heavy weights, running, horse-riding, and dancing as these activities were thought to frequently induce a miscarriage. While walking was often promoted as an excellent form of exercise for pregnant women, allowing exposure to open air and sunshine, even this activity was viewed as potentially dangerous if overdone, especially during a woman's first pregnancy.

The first half of the twentieth century witnessed significant changes in the care of the pregnant body as concerns about high rates of infant and maternal mortality provided the impetus for the widespread medicalization (and hospitalization) of childbirth and the advent of formalized and routine prenatal care for all women—working, middle, and upper class (Arney 1982; Jette 2009). With regard to exercise in pregnancy, medical advice changed slightly, as it was now recognized that some of the recipients of prenatal care were women who worked rigorously in their daily

lives (on farms, cleaning their houses and/or in factories), and that 'additional' exercise was unwise as well as often hard to obtain (Jette 2009). Thus, while walking continued to be viewed as the best way in which the expectant mother could keep herself in condition for birth, pregnant women (especially working women) were advised to rest in the hope that this would help to stem the high rates of infant and maternal mortality (Jette 2009). For example, in the popular Canadian magazine, *Chatelaine*, Dr. John W.S. McCullough explained that a woman 'may continue to carry on her household duties, taking care that she does not unduly tire herself. Overwork, lifting of heavy weights or straining overhead work and over-reaching must be avoided' (1933: 60). Women with time to engage in leisure activities continued to be advised to avoid running, sudden motions, lifting heavy weights, going up and down stairs quickly, horseback riding, cycling, motoring over rough roads, golf, tennis, dancing, and swimming (Jette 2009).

With the increased attention toward antenatal care and the pathologies of pregnancy in the early decades of the twentieth century, the notion that proper hygiene in pregnancy could prevent the 'diseases' of pregnancy was given increasing weight—and scientific authority. Prenatal advice was no longer intended only for upper class women but all women, and this was reflected in the emphasis on the importance of receiving sufficient rest during pregnancy. Despite these subtle changes, notions about the dangers of violent activities persisted, as did exercise prescriptions that reinforced the separate sphere ideology—although the rise of second-wave feminism would create the context in which to challenge these ideas.

Who Says Athletes Can't Be Pregnant? Second-wave Feminism Meets Exercise Science (1960s–Early 1990s)

Medical advice about exercise during pregnancy remained much the same entering into the second half of the twentieth century (Jette 2009, 2011). However, in the newly developing field of sport medicine, physicians and trainers began to challenge long-held assumptions about the

abilities of the pregnant body. For instance, Dr. Michael Bruser, a Canadian physician from Winnipeg, wrote an editorial that appeared in the November 1968 edition of *Obstetrics and Gynecology* and which dissected many of the previous claims about physical activity in pregnancy. Bruser (1968) began his editorial by calling into question the vagueness of typical guidelines, observing that '[t]extbooks have little to say about the topic of sporting activities during pregnancy beyond stressing the need for caution and for common sense—yet there can be no precise definition of the phrase "common sense"' (p. 721). He also pointed to the illogic of texts suggesting that physical activity to any degree of violence is 'contraindicated' during pregnancy, yet in the next sentence cites a list of pregnant athletes who competed in the Olympic games—with no adverse effect on the progression of pregnancy or the fetus. Bruser further argued that it has generally been considered that a large number of conditions (such as abortion, premature labor, abruption placentae and others) may occur spontaneously without physical activity or stress being a major factor in their production, and 'unless and until it is proved that any of these conditions occurs as a result of physical activity, it would appear to be an exercise in timidity to disallow such physical activity through fear of such events' (p. 724).

Throughout the 1970s, there was a growing sense of permissiveness with regards to appropriate activities for pregnant women on several fronts—within the sports medicine literature, government health promotion texts, and the consumer culture industry as exemplified by fitness guru, Jane Fonda's book: *Jane Fonda's Pregnancy, Birth, and Recovery Program* (Jette 2009, 2011). In some instances, and as mentioned previously, the call to be physically active while pregnant was overtly linked to second-wave feminism such as was seen in the feminist magazine *Ms.*, which featured a story in 1978 entitled 'Who says athletes can't be pregnant?' followed by the subheading: 'You can—and should—swim, run, jog, row, exercise, cycle, skate and play tennis, squash, volleyball, soccer, softball, basketball, field hockey' (Kelly et al. 1978: 47).

The promotion of calisthenic and muscle toning exercises for pregnant women (with an emphasis on building abdominal/pelvic strength and flexibility to help to 'train' for birth) was not new, but the advocacy of more rigorous aerobic exercise—and sport—was, of course, antithetical

to the prescriptions provided to pregnant women by the medical profession for many years. This change encountered resistance as some healthcare professionals as well as pregnant women wondered exactly how much was prudent—if any at all. These questions and concerns were met with a rapid increase in research on the topic in the 1980s, as exercise scientists and individuals in the health profession sought to more clearly define the limits of safety.[2] Within this newly emerging body of literature, methodological difficulties were identified as a central barrier to the study of exercise during pregnancy: ethical considerations prevented pregnant women from being tested under strenuous conditions such that the most reliable physiologic data during this first decade of research were derived from animal studies that were of limited applicability to humans, not to mention inconsistent in their results (see Jette 2009, 2011).

Significantly, the lack of conclusive evidence led to disagreements within the scientific community as a number of health practitioners (general medical practitioners, sport exercise physicians, exercise physiologists, nutritionists, and obstetricians) weighed in on how much was safe (Jette 2011). In May 1985, the American College of Obstetricians and Gynecologists published a set of guidelines concerning exercise and pregnancy entitled 'Exercise During Pregnancy and the Postnatal Period' (ACOG 1985) that quickly became the subject of controversy. In an article featured in *The Physician and Sportsmedicine* almost a year following the release of the ACOG guidelines, assistant editor Michele Gauthier (1986) wrote that some exercise researchers, athletes, and physicians disagreed with the guidelines, complaining that they lacked input from other professionals beyond the eight-member ACOG committee; that the sweeping conclusions articulated in the guidelines were not based on existing data; that the guidelines were overly conservative in nature and failed to acknowledge individual differences in women's fitness levels; and finally, that the ACOG may have unwittingly set a legal standard with the result that physicians lacking knowledge on exercise and pregnancy would closely adhere to the guidelines because of possible legal complications. The debate continued until the mid-1990s when, with a greater evidence base gathered after a decade of research, less conservative guidelines were issued (see ACOG 1994). It was generally agreed that exercise in pregnancy is, indeed, safe in moderate

amounts in a low risk pregnancy but that the upper limits are still unknown. Rigorous activity continues to be viewed with caution and concern (Jette 2011).

The mounting anxieties about the pregnant exerciser or athlete must (once again) be placed within the social context of the time. The growing participation of pregnant women in sports and fitness activities (both high level and recreational) was, as discussed above, tied to the emergence of second-wave feminism and challenged long-held notions about the physical capabilities of pregnant women and the social roles of women more generally. There was, then, something of a backlash to the idea that pregnant women were now running, playing tennis, and performing aerobics. But anxieties were also likely exacerbated by the reconfiguration of the pregnant body in the latter half of the twentieth century whereby the expectant woman was increasingly constructed as a risk to the fetus and responsible for controlling this risk to ensure a healthy pregnancy. For instance, the 'reproductive revolution'—which began in the late 1960s with the approval of birth control and led to the abortion debates of the 1970s—repositioned reproduction as a 'choice' and the mother and fetus as separate entities, even adversaries (Wetterberg 2004). Adding to this, technological advances in fetal imaging and assessment (amniocentesis, ultrasonography and fetal monitoring) meant that the fetus could literally be seen, monitored, and tested and was more firmly established as a patient in its own right, with needs separate from (and often placed above) those of the mother (Lee and Jackson 2002). Also relevant to these increasing anxieties around the reproductive body (and women's growing appetite for physical activity during pregnancy) was the emergence of epidemiological research linking women's behaviors and lifestyle during pregnancy to congenital birth defects and other unfavorable birth outcomes (Weir 2006). Identified risk factors for birth defects included drug and alcohol use, exposure to environmental toxins, alcohol consumption, tobacco smoking—and exercise during pregnancy (Jette 2011).

Since this time, the onus of risk management has arguably become even greater for the pregnant woman (Lupton 2012), and this pressure has further intensified in light of recent research suggesting that various metabolic diseases (including diabetes and obesity) are being programmed in utero by women who are obese prior to pregnancy or gain too much

weight during pregnancy (McNaughton 2011; Warin et al. 2011). How concerns about maternal obesity have shaped ideas around exercise in pregnancy is the focus of the following section.

Programming Obesity or 'Fit for Two'? Prenatal Exercise at the Intersection of the Obesity Epidemic and the Epigenetic Revolution

Every so often, social commentary emerges about the risk of excessive activity in pregnancy as seen, for example, when a CrossFit enthusiast posted pictures of herself lifting heavy weights at 8 months pregnant on Facebook (she received thousands of comments, both disparaging and supportive—see Wilson 2013), or when champion marathoner, Paula Radcliffe, continued training during pregnancy. Such discussions, however, are side stories to the larger discussion about physical activity in the context of maternal obesity. That is to say, the twenty-first century has brought with it yet another shift in dominant medical views of exercise in pregnancy: physical activity is viewed as a technique for women to avoid excess weight gain as well as decrease the risk of giving birth to a 'too large' baby that will develop chronic disease and obesity as it grows into adulthood (Jette and Rail 2013). The latter is informed, in large part, by increased attention to the concept of the Developmental Origins of Health and Disease (DOHaD) or fetal programming: the study of how early exposures in the womb (often linked to the behaviors of the pregnant woman and/or environmental exposures) can influence developmental pathways and induce permanent metabolic changes and, in effect, 'program' the fetus for future chronic disease (Warin et al. 2011). While the biologic mechanisms underlying the DOHaD are not well understood, researchers are increasingly interested in the potential role of epigenetic mechanisms whereby certain exposures in utero (as well as early life) can, in effect, turn the 'volume' of a gene up or down, altering the way it is expressed (i.e., phenotype) as opposed to changing the actual DNA (genotype) (Waterland and Michels 2007).

While much of the early DOHaD research focused on how exposure of pregnant women to inadequate nutrition and general conditions of poverty led to poor health outcomes in offspring (namely, low birth weight associated with hypertension, heart disease and type 2 diabetes), in the past decade (and in conjunction with panic that we are in the midst of an obesity epidemic) attention has shifted to an examination of how excessive maternal weight gain can program adult obesity and other metabolic diseases in the fetus (Jette and Rail 2013; McNaughton 2011; Warin et al. 2011). Thus, while the gene-environment interaction is crucial to fetal origins research, in much of the literature concerning pregnancy weight gain, there tends to be a very narrow (and decontextualized) view of the environment, whereby it is reduced to a woman's behaviors.

The first studies about obesity, pregnancy, and exercise appeared in the mid-1990s, but the focus was on how gaining too much weight during pregnancy would lead to excess postpartum weight and/or gestational diabetes mellitus.[3] However, in the past five years, there has been a rapid increase in literature suggesting that inactivity in pregnancy contributes to fetal disease. Much of the research is epidemiological in nature—examining how/if exercise in pregnancy can control gestational weight gain to help the mother have a baby/child who is of 'normal' weight. There has also been a rise in research explaining women's understandings of exercise, as well as barriers to and facilitators of exercise in pregnancy so as to aid in the creation of exercise interventions. The past few years, in particular, have witnessed a proliferation of interventions with names such as 'Fit for Delivery' or IMPROVE (Improving Maternal & Progeny Obesity Via Exercise), which aim to use exercise as one strategy to limit women's weight gain to recommended levels.[4] Race and class also emerge as an issue in this body of literature, but in a different way than previously, when upper class white women were directed to engage in gentle activity, so they might give birth more easily like women of color working in fields, or when working class women (during the rise of prenatal care) were advised to rest. The current literature suggests that women of color and women on low income are gaining too much weight (see Chasan-Taber et al. 2015; Lui et al. 2015; Shirazian et al. 2016), and there has been a growth in research exploring their ideas/perceptions of exercise in pregnancy, including barriers and facilitators, so that exercise interventions can be created (see Chang et al. 2008; Groth and Morrison-Beedy

2013; Kieffer et al. 2002; Krans and Chang 2012; Thornton et al. 2006). The goal is to prevent these pregnant women from giving birth to unhealthy children who are at risk of growing into unhealthy, overweight/obese adults that will be a strain upon the healthcare system.

Concluding Thoughts and Policy Implications

At the intersection of the obesity epidemic and a growing interest in epigenetics, all pregnant women are constructed as needing to control the environment of their womb to enhance the life of their offspring and prevent expensive, obese bodies. In this context, exercise in pregnancy is no longer simply about avoiding excessive exertion or sport to protect the baby from acute harm (e.g., miscarriage), or to make birth easier for upper class women in order to strengthen the nation state. Rather, it is positioned as a technique that can potentially improve the metabolism of a woman's unborn child and allow for optimal gene expression. It is a technique to help women to be 'fit for two' and actually enhance the life of her child.

My intent is not to suggest that physical activity in pregnancy does not provide potential benefits to mother and child. However, and following other feminist scholars (Guthman and Mansfield 2012; Yoshizawa 2012), I believe that the fetal environment must be located within the wider social, environmental, and political context given that many environmental stressors (e.g., pollutants that act as endocrine disruptors) are out of *all* women's control (see Guthman and Mansfield 2012). Moreover, not all women have the same opportunity, resources or 'choices' to focus upon *enhancing* the life of their child. Following this second point, there is a growing body of literature linking chronic stress (due to racism and/or poverty) to the creation of a toxic fetal environment that, through epigenetic mechanisms, leads to future disease (Thayer and Kuzawa 2011; Well 2010).

This leads me to suggest two considerations for the development of policy and/or guidelines concerning exercise in pregnancy. First, we must recognize that while exercise in pregnancy has the potential to both improve and harm the unborn child's health, a range of other important social and structural factors have been shown to have a significant impact

on the health of mother and child, and exercise in pregnancy is just a piece of the puzzle. Thus, ensuring policies are in place to provide all women with the conditions required to promote a healthy pregnancy (i.e., access to safe housing, adequate nutrition and reliable prenatal care) should take precedence. Second, if exercise in pregnancy is promoted, we should first ensure that women have the opportunity to engage in the movement of their choice, also recognizing that many women who might not engage in leisure exercise actually engage in movement in other ways such as paid and unpaid work. As I have attempted to illustrate in this chapter, exercise in pregnancy has long served a biopolitical function and my hope is that the political context of the time is considered prior to the creation of guidelines, policies, as well as informal advice that might prevent women from engaging in the activities that they wish to pursue or, alternatively, might push them to engage in activities in which they do not wish to participate.

Notes

1. The discussion that follows is based upon extensive searches of scientific databases (as well as key journals) in which I focused upon articles pertaining to physical activity during pregnancy, and attended to what was constructed as a problem as well as proposed solutions. For a more detailed description of the methods used to identify the literature discussed in the first two sections, see Jette (2009). Data for the final section is based on a more recent PubMed search (conducted November 2014) in which the keywords were: 'obesity,' 'pregnancy,' and either 'exercise' or 'physical activity'.
2. To illustrate this point, a PubMed search of the term 'exercise and pregnancy' yielded 8 studies from 1950–1969, 20 studies from between 1970–79, and 141 studies from 1980–90. See Jette (2009, p. 199).
3. A PubMed search using the keywords 'obesity,' 'pregnancy,' and either 'physical activity' or 'exercise' yielded 8 studies in the ten year period from 1996–2005, 26 in total over the next 4 years (2006–9), followed by 21 (2010), 22 (2011), 25 (2012), 30 (2013), and 43 (2014) with many of these referring to the potential of exercise to prevent the fetal programming of obesity in the paper rationale.
4. In 2014, for instance, 20 of 43 studies identified were intervention studies.

References

American College of Obstetricians and Gynecologists (ACOG). (1985). Technical bulletin number 87—ACOG guidelines: Exercise during pregnancy and the postnatal period. In R. A. Mittelmark, R. Wiswell, & B. Drinkwater (Eds.), *Exercise in pregnancy* (2nd ed., pp. 313–319). London: Williams & Wilkins.

American College of Obstetricians and Gynecologists (ACOG). (1994). Technical bulletin number 189 (Feb. 1994): Exercise during pregnancy and the postpartum period. *International Journal of Gynecology & Obstetrics, 45*, 65–70.

Arney, W. R. (1982). *Power and the profession of obstetrics*. Chicago: University of Chicago Press.

Arnup, K. (1994). *Education for motherhood: Advice for mothers in twentieth-century Canada*. Toronto: University of Toronto Press.

Bruser, M. (1968). Sporting activities during pregnancy. *Obstetrics and Gynecology, 32*(5), 721–725.

Chang, M. W., Nitzke, S., Guilford, E., Adair, C. H., & Hazard, D. L. (2008). Motivators and barriers to healthful eating and physical activity among low-income overweight and obese mothers. *Journal of the American Dietetic Association, 108*(6), 1023–1028.

Chasan-Taber, L., Marcus, B. H., Rosal, M. C., Tucker, K. L., Hartman, S. J., Pekow, P., et al. (2015). Proyecto Mamá—A lifestyle intervention in overweight and obese Hispanic women: A randomised controlled trial study protocol. *BMC Pregnancy & Childbirth, 15*(1), 157.

Foucault, M. (1990). *The history of sexuality, volume 1: An introduction*. New York: Vintage Books. (French original published 1976).

Foucault, M. (2003a). Governmentality. In P. Rabinow & N. Rose (Eds.), *The essential Foucault: Selections from essential works of Foucault, 1954–1984* (pp. 229–245). New York: The New Press.

Foucault, M. (2003b). *"Society must be defended": Lectures at the College de France, 1975–1976* (M. Bertani, & A. Fontana, Eds., D. Macey, Trans.). New York: Picador.

Gauthier, M. (1986). Guidelines for exercise during pregnancy: Too little or too much? *The Physician and Sportsmedicine, 14*(4), 162–169.

Groth, S. W., & Morrison-Beedy, D. (2013). Low-income, pregnant, African American women's views on physical activity and diet. *Journal of Midwifery & Women's Health, 58*(2), 195–202.

Guthman, J., & Mansfield, B. (2012). The implications of environmental epigenetics: A new direction for geographic inquiry on health, space, and nature-society relations. *Progress in Human Geography, 37*(4), 486–504.

Jette, S. (2009). *Governing risk, exercising caution: Western medical knowledge, physical activity and pregnancy*. Doctoral dissertation, University of British Columbia, Vancouver, BC.

Jette, S. (2011). Exercising caution: The production of medical knowledge about physical exertion during pregnancy. *Canadian Bulletin of Medical History/Bulletin canadien d'histoire de la medicine, 28*(2), 383–401.

Jette, S., & Rail, G. (2013). Ills from the womb? A critical examination of evidence-based medicine and pregnancy weight gain advice. *Health, 17*(4), 407–421.

Kelley, J., Leavy, J., & Northup, A. (1978). Who says athletes can't be pregnant? *Ms., 7*, 47–48.

Kieffer, E. C., Willis, S. K., Arellano, N., & Guzman, R. (2002). Perspectives of pregnant and postpartum Latino women on diabetes, physical activity, and health. *Health Education & Behavior, 29*(5), 542–556.

Krans, E. E., & Chang, J. C. (2012). Low-income African American women's beliefs regarding exercise during pregnancy. *Maternal and Child Health Journal, 16*(6), 1180–1187.

Lee, E., & Jackson, E. (2002). The pregnant body. In M. Evans & E. Lee (Eds.), *Real bodies: A sociological introduction* (pp. 115–132). Hampshire: Palgrave.

Liu, J., Wilcox, S., Whitaker, K., Blake, C., & Addy, C. (2015). Preventing excessive weight gain during pregnancy and promoting postpartum weight loss: A pilot lifestyle intervention for overweight and obese African American women. *Maternal and Child Health Journal, 19*(4), 840–849.

Lupton, D. (1995). *The imperative of health: Public health and the regulated body*. Thousands Oaks, CA: Sage Publications.

Lupton, D. (2012). "Precious cargo": Foetal subjects, risk and reproductive citizenship. *Critical Public Health, 22*(3), 329–340.

McCullough, J. (1933, February). Chatelaine's baby clinic: No. 1, prenatal care. *The Chatelaine, 6*(2), 60–61.

McNaughton, D. (2011). From the womb to the tomb: Obesity and maternal responsibility. *Critical Public Health, 21*(2), 179–190.

Oakley, A. (1984). *The captured womb: A history of the medical care of pregnant women*. New York: Blackwell.

Rose, N. (2007). *The politics of life itself: Biomedicine, power, and subjectivity in the twenty-first century*. Princeton: Princeton University Press.

Rose, N., & Miller, P. (1992). Political power beyond the state: Problematics of government. *The British Journal of Sociology, 43*(2), 173–205.
Shirazian, T., Faris, B. S., Fox, N. S., Friedman, F., & Rebarber, A. (2016). The lifestyle modification project: Limiting pregnancy weight gain in obese women. *The Journal of Maternal-Fetal & Neonatal Medicine, 29*(1), 80–84.
Thayer, Z., & Kuzawa, C. (2011). Biological memories of past environments: Epigenetic pathways to health disparities. *Epigenetics, 6*(7), 798–803.
Thornton, P. L., Kieffer, E. C., Salabarría-Peña, Y., Odoms-Young, A., Willis, S. K., Kim, H., et al. (2006). Weight, diet, and physical activity-related beliefs and practices among pregnant and postpartum Latino women: The role of social support. *Maternal and Child Health Journal, 10*(1), 95–104.
Vertinsky, P. (1994). *The eternally wounded woman: Women, exercise and doctors in the late nineteenth century*. Manchester: Manchester University Press.
Warin, M., Moore, V., Zivkovic, T., & Davies, M. (2011). Telescoping the origins of obesity to women's bodies: How gender inequalities are being squeezed out of Baker's hypothesis. *Annals of Human Biology, 38*(4), 453–460.
Waterland, R., & Michels, K. (2007). Epigenetic epidemiology of the developmental origins hypothesis. *Annual Review of Nutrition, 27*, 363–388.
Weir, L. (2006). *Pregnancy, risk and biopolitics: On the threshold of the living subject*. London: Routledge.
Wells, J. (2010). Maternal capital and the metabolic ghetto: An evolutionary perspective on the transgenerational basis of health inequalities. *American Journal of Human Biology, 22*, 1–17.
Wetterberg, A. (2004). My body, my choice…my responsibility: The pregnant woman as caretaker of the fetal person. *Berkeley Journal of Sociology, 48*, 26–49.
Wilson, J. (2013). How much is too much exercise when you're pregnant? *CNN Health*. Retrieved October 2013, from www.cnn.com/2013/09/20/health/pregnant-woman-weightlifter-crossfit/
Yoshizawa, R. S. (2012). The Barker hypothesis and obesity: Connections for transdisciplinarity and social justice. *Social Theory & Health, 10*, 348–367.

Shannon Jette is an associate professor in the Department of Kinesiology at the University of Maryland. Her research focuses on social, cultural, and historical aspects of knowledge production in the disciplines of kinesiology, medicine, and public health. She is particularly interested in studying physical activity as a technique or technology for shaping the body and health that is underpinned by

a vast system of knowledge—and associated classification systems and norms—that informs how we view, understand, and experience the (in)active body. She has published in such journals as *Sociology of Health & Illness*, *Health, Risk & Society*, *Sociology of Sport Journal*, and *Research Quarterly for Exercise & Sport*.