A review of dairy food intake for improving health for black women in the US during pregnancy, fetal development, and lactation

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Abstract: Pregnancy and lactation are special life stages that require regular nutritional and medical attention to help protect the health of the mother and promote the growth and development of the offspring. Despite an increased focus on maternal and fetal health over the last several decades, the rates of pregnancy-related morbidity and mortality are increasing in the United States (US). On average, Black women who are pregnant or lactating face greater health disparities and birth complications than other racial/ethnic groups in the US. The issues contributing to these disparities are multi-faceted and include sociocultural, economic, medical, and dietary factors. For example, Black women face greater rates of food insecurity, worse access to healthcare, and lower nutrient status when compared to White women. A growing body of research suggests that consuming a healthier dietary pattern is one of the most potent modifiable risk factors associated with improved fertility and reducing pregnancy-related complications. Recent publications have also shed light on the role of dairy foods in improving diet quality and nutrient status among Black women and for impacting maternal and fetal health outcomes, such as preeclampsia, spontaneous abortion, preterm birth, and fetal growth. To support healthy pregnancy and lactation, the current national dietary guidelines recommend the consumption of 3 servings of dairy foods per day. However, the vast majority of Black women in the US are falling short of these recommendations and are not meeting nutrient requirements for calcium and vitamin D. Therefore, strategies that target misconceptions surrounding lactose intolerance and focus on the health value of adequate dairy intake among Black women of child-bearing age may benefit both prenatal and postpartum health. This review presents the current evidence on health disparities faced by pregnant and lactating Black women in the US, and the role of dairy foods in supporting healthy pregnancy, fetal development, and lactation outcomes in this population.

Keywords: Black ■ African American ■ Dairy intake ■ Pregnancy ■ Lactation ■ Fetal development ■ Gestational diabetes ■ Preeclampsia ■ Placental dysfunction

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INTRODUCTION

Pregnancy and lactation are special life stages, marked by the creation and nourishment of new life. In 2021, there were over 3.6 million births in the United States (US),[1] and approximately 80% of US mothers initiated breastfeeding.[2] However, in 2021, birth rates hit record lows for younger mothers (18–24 years), and increased in older mothers (35–44 years),[1] which may be problematic for both maternal and infant health, as older mothers tend to have higher rates of pregnancy and birth complications. In 2021, rates of preterm births also rose to nearly 10.5%, which is the highest reported in over a decade.[1] On average, Black women who are pregnant or lactating face greater health disparities and birth complications than most other racial/ethnic groups in the US. For instance, rates of preterm births (<37 weeks) were approximately 36% higher for Black than White Americans, and very early preterm births (<34 weeks) were 53% higher in Black Americans than White Americans.[1] Statistics also show that prior to the COVID-19 pandemic, maternal and infant mortality rates were more than 2-fold higher among Black Americans (37.3 maternal deaths and 10.75 infant deaths per 1000 live births), than among White Americans (14.9 maternal deaths and 4.63 infant deaths per 1000 live births).[3] By 2020, these numbers had increased to nearly 3-fold for Black mothers compared to White mothers.[4] With regard to lactation, fewer Black mother-infant dyads breastfeed than White mother-infant dyads (74% vs. 85%, respectively), and Black mothers also tend to discontinue breastfeeding earlier than other racial/ethnic groups.[5] Suboptimal breastfeeding in the Black population is estimated to contribute to over 3-fold increased risk for necrotizing enterocolitis, and over a 2-fold increased risk for infant mortality compared to White populations in the US.[6] These maternal health and breastfeeding disparities contribute to significant health inequities among Black children – many of which last can a lifetime.[7,8]

Despite the known systemic inequities that impact Black Americans, such as racism, lower socioeconomic status, and lower access to insurance and healthcare, these risk factors alone do not fully account for the disparities in maternal and infant health outcomes between Black women and other racial/ethnic groups. Maternal nutrition, which also directly impacts fetal nutrition through the pla-

centa and infant nutrition through the breastmilk, is also a major risk factor influencing reproductive health and birth outcomes. Importantly, better nutrition has the potential to counteract many of the negative biological risk factors that impact health such as elevated stress hormones, inflammation, and allostatic load. Indeed, given that mothers have increased nutritional requirements during pregnancy and lactation,[9] a healthy dietary pattern is critical for limiting pregnancy and birth complications, most notably outcomes such as preeclampsia, spontaneous abortion, preterm birth, and abnormal fetal growth. Specifically, dairy foods such as milk, yogurt, and cheese, have received attention in recent years for their potential beneficial impacts on maternal and offspring health during pregnancy and lactation.[10-13] Dairy foods are able to contribute a unique package of essential nutrients to the diet that are required for optimal reproductive health, many of which are inadequately consumed by Black mothers during pregnancy and lactation. In addition, fermented dairy foods, such as yogurt, may also contain live and active cultures and additional probiotics and bioactive compounds that can improve reproductive health and success.[14] Therefore, this review presents the current evidence on the role of dairy food intake on reproductive and health disparities faced by Black mothers and their offspring during pregnancy and lactation.

FERTILITY AND FECUNDITY

Approximately 1 in 4 women in the US have difficulty getting pregnant, with the primary causes for these difficulties being shared by both partners, such as having overweight or obesity, being of older age, and/or having issues with reproductive organs and hormone levels.[15] Many of these reproductive issues disproportionately impact Black populations.[16,17] Both fertility and fecundity can be significantly influenced by dietary patterns. Several studies have highlighted the essential roles of dairy nutrients such as vitamin D, selenium, zinc in both male and female fertility.[18-23] Researchers which compared the diets of mothers who had spontaneous abortion and mothers who had not, found significant differences in their daily intake of food groups and nutrients, with higher dairy intake (>2 servings/day) associated with significantly lower cases of spontaneous abortion, and lower intake (<2 servings/day) associated with higher incidence.[24] The greatest discrepancies between cases and controls for nutrient intakes, showed higher rates of spontaneous abortion occurring in the group which consumed significantly less dairy nutrients such as vitamin B6, vitamin B12, folate, and zinc. However, a 2019 systematic review of 17 studies (6 prospective cohorts, 3 retrospective cohorts, 3 interventions) examining the effects of maternal dairy consumption on preterm birth and spontaneous abortion found insufficient evidence to make any firm conclusions regarding the impacts of dairy foods on these outcomes.[10] Research on maternal dairy intake and in vitro fertilization (IVF) outcomes indicate neutral to beneficial effects of higher dairy intake (>3.0 servings/day) compared to lower intake (<1.34 servings/day) on live births, with greater success found in mothers aged 35 years and older.[25] Overall, the associations between consumption of dairy products and fertility outcomes show inconsistent trends in the literature and may require additional nuance as these relationships often depend not only on the amount of dairy foods consumed, but also on the type of dairy product being consumed.[26]

NUTRITIONAL REQUIREMENTS DURING PREGNANCY AND LACTATION

The demands of pregnancy and lactation create greater nutritional requirements for mothers to fully nourish themselves and support the growth and development of their offspring. The 2020–2025 Dietary Guidelines for Americans (DGA) also emphasize that mothers should maintain a healthy dietary pattern and healthy weight throughout pregnancy and lactation to improve the health of themselves and their offspring through later life stages.[27] In essence, preventing maternal malnutrition is critical to improving maternal and child health, and to do this, pregnant and lactating mothers should be meeting their additional dietary needs through higher intake of nutrient-rich foods and beverages (fruits, vegetables, whole grains, milk and dairy foods), rather than with energy-dense foods and beverages (e.g., fast foods, desserts, and sugar-sweetened beverages).[28] While dietary requirements do not change much during the first trimester, expecting mothers should generally take in an additional ~350–450 calories per day in the 2nd and 3rd trimesters, as well as pay special consideration to choline, vitamin D, folate, calcium, iodine, iron, potassium, and omega-3 fatty acids - specifically docosahexaenoic acid (DHA), to support fetal growth and development and to prepare the body for breastfeeding.[9,27] Lactation is also a nutritionally and energetically demanding life stage, requiring an additional 330–400 calories per day, preferably coming from a variety of nutrient- and bioactive-rich food sources that can help supply all of the necessary raw materials for healthy breast milk production and composition.[29]

Vegetarian and vegan diets have increased in popularity in recent years, yet poor planning of these diets may increase the risk of nutritional deficiencies for protein, iron, vitamin D, calcium, iodine, omega-3 s, and vitamin B_{12},

Table 1. 2020–2025 Dietary Guidelines for Americans: daily dairy recommendations for pregnancy and lactation.

Calorie level	1800	2000	2200	2400	2600	2800
Dairy (cup eq)	3	3	3	3	3	3

The calorie levels shown in this table include estimates for women during the first trimester of pregnancy, when calorie needs generally do not increase compared to pre-pregnancy needs, plus the additional calories needed for the later trimesters of pregnancy and during lactation.

all of which are critically important during pregnancy.[30] Maternal intake of dietary supplements to replace these nutrients may not mitigate the serious risks to fetal body and brain development.[31] Dietary patterns that limit nutrient intake from animal food sources can be safe during pregnancy and lactation, but generally require careful planning and a dependency on nutritional supplements to ensure both adequate and balanced nutrient intake. On the other hand, with the exception of iron and omega-3 fatty acids, which can both be found in non-dairy animal products, meeting the DGA recommended daily intake of dairy foods of 3 servings day for pregnant and lactating women (Table 1) is one of the best ways to help ensure adequate intake of nearly all of the nutrients of concern for pregnant and lactating women.[27]

It is estimated that 90% of pregnant and lactating mothers in the US fall short of dairy food intake recommendations, with average intake levels around 1.85 servings per day.[32] Cross-sectional data from a nationally representative sample of pregnant US women also indicates that a large percentage of this population falls short of recommendations for vitamins D, C, A, B_6, K, and E, as well as folate, choline, iron, calcium, potassium, magnesium, and zinc.[33] However, a recent National Health and Nutrition Examination Survey (NHANES) analysis revealed that pregnant women who consume $\geq$3 servings of dairy per day were more likely have higher intakes of vitamin A, vitamin D, riboflavin, calcium, iodine, magnesium, potassium, and zinc compared to those with lower intake.[34] Studies focused on pregnant Black women in the US have demonstrated even more suboptimal dietary quality in this population compared to the national average, with approximately half of those surveyed scoring in the lowest level of diet quality,[35] and nearly all failing to meet intake recommendations for vitamin D, iron, and choline.[36] Overall, strategies which focus on the management of lactose intolerance, improving nutrient-rich food intake - especially from dairy foods, and reducing energy-dense food intake among Black women of child-bearing age, could help dramatically improve the health and well-being of this population and its future generations.

MATERNAL HEALTH

Pregnancy and lactation have major impacts on the mother's physiology, significantly changing her body composition and altering the activities of her major organs and body systems. Furthermore, approximately 7–10 days after conception, mothers and their offspring co-develop a whole new placental organ together to support the offspring *in vivo*, and then around 9 months later the mother's body subsequently activates and coordinates multiple components of the reproductive system to turn on lactation to support the offspring *ex vivo*. These activities all come with massive cardiometabolic and immune costs that may negatively impact maternal health in the short-term (e.g., pregnancy-related cardiac disease, gestational diabetes, gestational hypertension) and long after the mother has transitioned out of these reproductive life stages. While pregnancy-related health risks exist for all expecting mothers, the burden of cardiac diseases, pulmonary embolisms, and hypertensive disorders during pregnancy are greater for Black women than White women in the US.[37] For example, pregnancy-related hypertensive disorders impact Black populations to a greater degree than White populations (21% vs. 16%, respectively),[38] as does preeclampsia, peripartum cardiomyopathy, heart failure, renal failure, and arrhythmias.[39] Gestational diabetes affects up to 14% of pregnancies in the US, with similar risk among racial/ethnic groups, yet, Black women are more than twice as likely to develop type 2 diabetes after having gestational diabetes than White women.[40] Black women also experience more than a 3-fold increase in pregnancy related mortality than White women in the US, and this increases to over 4-fold for mothers over 30 years of age.[37]

For three decades, researchers have hypothesized that the collective set of stressors that disproportionately impact Black mothers in the US, such as systemic racism, lower socioeconomic status, and worse access to insurance and healthcare, may contribute to a phenomenon known as 'weathering.'[41] The Weathering Hypothesis suggests that the negative biological impacts of these stressors and inequities accumulate over time, increasing the mother's allostatic load and impairing her reproductive health.[42] The physiological impacts of chronic stressors such as discrimination and lower socioeconomic status are thought to result in increased systemic inflammation and an accelerated aging process that increase the risks of life-threatening pregnancy-related medical conditions such as preeclampsia and embolisms.[43] It has been estimated that 80% of

pregnancy-related deaths in the US are preventable.[44] A growing body of research shows that healthy dietary patterns that include the DGA recommended 3 servings of dairy foods per day can help expecting mothers maintain a healthy weight and meet their requirements for essential nutrients, both of which are linked to lower risk for inflammation, pregnancy-related complications, and mortality.[27,45,46]

In addition to the numerous systemic factors that disproportionately impact maternal health among Black women in the US, this population also suffers from lower diet quality and a greater number of nutrient deficiencies than White women.[47-49] This combined set of factors suggest that due to the uniquely poor health status of many pregnant Black mothers, this population may benefit more from dietary interventions that improve nutrient intake than other racial/ethnic groups in the US. Dietary modifications which include higher intake of nutrient-rich dairy foods in the forms of milk, yogurt, kefir, and cheese have been shown to improve maternal nutrient status and mitigate pregnancy complications.[50-52] For Black women, these types of maternal dietary modifications have also been associated with reduced inflammation and hypertension,[50] which are underlying conditions for several deadly maternal health disorders.[53] Overall, the body of research on dairy intake and maternal health has been primarily focused on White women and limited to observational studies, many of which have only assessed dairy foods within the context of a healthy dietary pattern. These studies have consistently shown that including dairy foods in the dietary patterns of pregnant mothers is linked to better maternal health outcomes, especially for healthy gestational weight gain[54] and lower risk for gestational diabetes.[52] Higher probiotic yogurt intake has been shown to improve both metabolic and immune outcomes during pregnancy,[14] whereas higher intake of dairy nutrients such as calcium and magnesium have been associated with lower risk for pregnancy-related hypertensive disorders.[51] While the research on dairy intake and maternal health outcomes is promising, much more is needed on Black women in the US to better inform this population and their healthcare practitioners on the importance of meeting dairy food and nutrient intake recommendations.

PLACENTAL DYSFUNCTION

The placenta is the primary endocrine, metabolic, and respiratory organ used to support pregnancy, and it also acts as a nutrient sensor between maternal nutritional status and fetal requirements.[55] Placental dysfunction is therefore a major risk factor for impaired fetal development as well as neonatal morbidity and mortality.[56] Unhealthy dietary patterns and maternal obesity have both been associated with multiple placental pathologies such as inflammation, decreased placental efficiency, and increased maternal vascular malperfusion.[57,58] Most of the scientific research on placental health has focused on White women and overlooked disparities between White and Black populations, although recent evidence suggests that Black mothers who had preterm infants have higher levels of stress and chronic placental inflammation than their White peers.[59] These physiological differences may help explain some of the health disparities that occur in fetal development, birth complications, and neonatal health outcomes between White and Black populations.[60] Currently, the research on maternal dietary patterns and placental health is limited, especially for Black mothers. The research on dairy intake and placental health in humans is virtually non-existent, making it difficult to draw conclusions on these relationships. Future research on the role of diet and nutrition on the function of this vitally important reproductive organ is gravely needed for all racial/ethnic groups.

FETAL DEVELOPMENT AND BIRTH OUTCOMES

During the first few months of pregnancy, the offspring goes through several developmental stages, beginning as a zygote, and then developing into a blastocyst, an embryo, and eventually a fetus.

Maternal dietary quality plays a critical role at every stage of this development. Unfortunately, there is limited human research on the role maternal diets on these earlier developmental stages, largely because it is considered too invasive to take these measurements *in vivo* in humans. Rather, most of the research elucidating the importance of maternal diets in humans focuses on the later stages of fetal development and relies on basic quantitative measures such as fetal growth rates, birth weight, and gestational-size-for age.[61] A growing body of research also elucidates the role of maternal nutrition on early life neurodevelopment, but the bulk of this evidence has not been captured in systematic reviews or meta-analyses focused on dairy intake.[62]

At least three systematic reviews have demonstrated protective effects of maternal dairy intake and fetal growth outcomes. A 2020 systematic review of 14 studies, found that higher dairy intake during pregnancy was associated with greater infant birth weight and length, and lower risk for a small-for-gestational age baby, when compared to lower intake.[63] These results were found for both Western-style diets and also for vegetarian-style diets. Additionally, a 2022 systematic review of 42 studies, which included multiple meta-analyses, found that higher dairy intake, up

to 7 servings per day, had protective effects against small-for-gestational age births.[64] These findings are in alignment with a much older systematic review from 2012 that included 8 studies and demonstrated positive associations between maternal milk consumption and fetal growth, although this older study found that only moderate dairy intake was needed to improve fetal growth.[11] While none of these systematic reviews focused specifically on Black mothers or their offspring, a single study from these reviews indicated that higher maternal dairy intake among Black adolescent mothers in the US was associated with beneficial effects on fetal growth.[65] Dairy-derived calcium and vitamin D may, at least in part, explain the mechanisms underlying maternal dairy consumption and fetal growth outcomes, as sufficient maternal intake of these nutrients may help promote fetal growth of bone tissue, and normal development of musculature, heart, and nerve development.[66,67]

Preterm birth is defined as birth <37 weeks of gestation and is influenced by several socioeconomic, genetic, nutritional, and age-related factors,[68-70] and increases several health risks to the offspring as the last several weeks of pregnancy are critical for the full development of the brain, lungs, and liver.[71] Severely preterm births (<32 weeks of gestation) significantly increase the risk for low-birth weight, disease, disability, and death. About 10% of infants are born preterm in the US, but this number is increased to nearly 15% for Black populations.[71] Research on Black women in the US shows that higher stress levels are linked to preterm birth, possibly through alterations to immune function that may predispose expecting mothers to infection, inflammation, preeclampsia, and/or placental dysfunction.[59,68,72,73] In agreement with the findings on fetal development, higher maternal dairy intake is also associated with better health outcomes related to birth weight and size-for-gestational age for both term and preterm births.[10,11,63,64] A systematic review on the impacts of maternal probiotic yogurt intake on pregnancy outcomes is also suggestive that higher probiotic yogurt intake is associated with a decrease risk for preterm birth.[14]

Lastly, maternal consumption of dairy products during pregnancy has been associated with higher DHA and a higher omega-3 to omega-6 polyunsaturated fatty acid ratio *in utero*, which may help promote proper fetal physical development and neurodevelopment.[74] Certain benefits of dairy intake during pregnancy may also not be noticeable for several years after birth, as recent research has shown that higher maternal dairy intake, especially for milk intake, was associated with significantly lower levels of emotional problems among their 5-year-old children,[12] whereas higher maternal intake of yogurt and cheese was associated with lower risk for infantile allergic disorders.[13]

Overall, the research is limited but promising regarding the benefits of maternal dairy intake on fetal development, birth outcomes, and early life health and well-being. Further research is necessary to determine the potential benefits of different dairy types (milk, cheese, yogurt) and subtypes (whole-fat vs. low-fat, fermented, vitamin D fortified) on these critical reproductive and developmental outcomes. Further research is also necessary that is specific to Black mother-infant dyads since there is a large gap in the literature related to the impacts of dairy food intake on these highly vulnerable and physiologically linked life stages.

LACTATION AND BREASTFEEDING

Exclusive breastfeeding is recommended for the first 6 months of life for optimal infant health and development.[27] After 6 months, the combination of breastfeeding with appropriate complementary foods is recommended until at least 2 years of age.[5] For those infants who are not provided with human milk, dairy-based infant formulas are the most commonly recommended options for infant feeding since they have been formulated to mimic several of the nutritional aspects and some of the bioactive aspects of human milk. However, infant formulas are not able to provide many of the immunological or complex biopsychosocial benefits that are conveyed through breastfeeding.[75] Fermented dairy foods such as yogurt and cheese are recommended as soon as complementary foods are started, while cow's milk is not recommended until 1 year of age due to its potential for allergenicity, and its nutrient-density which may be difficult for the infant digestive tract to handle.[27] The majority of infants produce adequate levels of the lactase enzyme which is used to break down the milk sugar lactose, so lactose intolerance symptoms are not a common issue at this young age. However, lactase levels may begin to decrease in lactase non-persistent individuals during weaning and may continue to progressively decline through adulthood.[76] Despite their inherent ability to digest lactose, it is possible that some infants are sensitive to dairy products and may do better with formulas that are lactose-free, dairy-free, or contain dairy proteins that have been hydrolyzed to reduce their potential for allergenicity. Maternal dietary patterns may also impact the flavors and compounds in breastmilk, potentially leading to various sensitivities and symptoms in their infants. Therefore, many clinicians and lactation specialists recommend the removal of dairy and other foods such as coffee, chili, chocolate, onions, garlic, eggs from the mother's diet to reduce symptoms of infant colic. This decision should be handled with care, as the exclusion of dairy foods can put

the health of the mother and breastfeeding infant at risk for multiple nutrient deficiencies.[30] Several studies have reported that significant negative health effects can occur when inappropriately replacing nutrient-rich dairy foods with nutrient-poor plant-based alternatives.[77-79]

In the US, it is estimated that only 25% of infants are exclusively breastfed for the first 6 months of life.[80] For Black infants this number drops to 17%. On average, Black mother-infant dyads experience lower rates of breastfeeding initiation and continuation than any other major racial/ethnic group in the US.[80,81] A recent prospective cohort study of Black mothers found that only 13% of Black mothers exclusively breastfed at 6-weeks, compared to 58% of White mothers, and only 28% of Black mothers participated in any breastfeeding at 6 months, compared to 65% of White mothers.[82] Black mothers are also inadequately consuming multiple essential nutrients at a higher rate than other racial/ethnic group, suggesting that Black infants are not only receiving less breastmilk than infants from other racial/ethnic groups, but also potentially receiving lower levels of nutrients in their breastmilk when they do get breastfed. These disparities are major barriers to achieving health equity for both current and future generations and will require potent intervention strategies targeted at improving maternal nutrition and increasing rates of breastfeeding among Black mothers.

EVIDENCE-BASED RECOMMENDATIONS FOR IMPROVING PATIENT HEALTH – For Pregnancy, Fetal Development, and Lactation

- Black mothers have some of the highest rates of health disparities and mortality rates, and some of the lowest intakes of dairy foods and dairy nutrients of all racial/ethnic groups in the US. It is recommended that Black mothers consume 3 servings of dairy products per day to help reduce the number of health disparities and mortality rates attributed to poor nutrition.
- Regular intake of dairy nutrients such as vitamin B6, vitamin B12, vitamin D, calcium, selenium, magnesium, and zinc may improve fertility and help reduce the risk for pregnancy-related complications.
- Dairy foods provide vitamin A, vitamin D, vitamin B12, choline, and iodine – making them an ideal food source for mothers to support brain health and neurocognitive development of their children.
- Dairy foods provide mothers with multiple bioactive compounds, such as phospholipids, sialic acid, cholesterol, and gangliosides, which are known to support maternal health, and fetal growth and development.
- Black females of child-bearing age have the lowest average intake of dairy foods compared to other racial/ethnic groups, while their intake of lower-nutrient plant-based alternatives is increasing. Exclusive intake of nutrient-poor plant-based alternatives may carry serious nutrition and health risks to both mothers and their children.

CONCLUSIONS

Pregnancy and lactation are life-stages that evolved for the purpose of nourishing the next generation. These are extremely vulnerable life stages for women that drastically alter the activities of several of their major bodily systems and put them at risk for pregnancy-related diseases. These life stages require additional calories and nutrients to support the health of the mother and proper growth and development of the offspring. Since most women in the US are not meeting one or more dietary recommendations, the dietary goals of pregnant and lactating women should not only be to 'eat more foods', but to also 'eat better foods.' This is especially true for Black women of child-bearing age, since this population tends to have lower adherence to DGA recommendations for dairy intake and healthy dietary patterns than most other racial/ethnic groups in the US and suffers some of worst health disparities in pregnancy-related disease and mortality. In addition to higher fast food and sugar-sweetened beverage intake, many Black women in the US are falling short of DGA recommendations due to poor management of lactose intolerance, and other restrictive dietary patterns that limit or exclude animal-based foods. Therefore, strategies that target misconceptions around lactose intolerance and the potential unintended nutritional consequences of dairy-free diets could both help to improve the nutrition and health of Black women and their developing offspring during the prenatal and postpartum periods.

Among women with low-dairy consumption, a growing body of research suggests that increasing consumption to the DGA recommended levels of 3 servings per day may potentially improve fertility, improve maternal nutrient status, reduce the risk for multiple pregnancy-related complications, improve fetal development and later life well-being, and assist with various aspects of lacta-

tion. Future research and education efforts aimed at understanding the role of dairy food intake on these reproductive and developmental health issues among Black populations could contribute significant value towards informing public health efforts and achieving health equity for these vulnerable populations during their most vulnerable life stages. Furthermore, research on the impacts of dairy intake on postpartum health and well-being is virtually nonexistent in the literature, however, since the mother's body is continuing to undergo massive metabolic shifts post pregnancy and lactation, greater research on this vulnerable life stage could prove beneficial for improving both the physical and mental health of mother-infant dyads of all racial/ethnic groups. In the end, dietary patterns are just one of many factors impacting fertility, pregnancy, fetal development, lactation, and postpartum health, nonetheless, the evidence is promising that higher dairy food and dairy nutrient intake can play major role in helping to nourish Black women of child-bearing age and the future generations they may bring into the world.

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