

Benefits of Doula Support in the Scientific Literature

Doulas are trained childbirth professionals who provide non-medical physical, emotional, and informational support to pregnant people and their families before, during, and after childbirth.

Consistent evidence shows that **doula support is associated with improved birth outcomes and a better labor and birth experience**, including fewer cesarean deliveries, greater likelihood and duration of breastfeeding, improved mother-baby bonding, and reduced rates of postpartum depression. Additionally, studies of community-based doula programs indicate that such support may be a good strategy for addressing disparities in birth outcomes, and for those that include prenatal home visits, have found positive impacts on preterm and low birthweight.

Here are the benefits of doula support identified in the literature:

Fewer Cesarean deliveries^{1–15}

- A meta-analysis of 24 trials showed that women with continuous, one-to-one support were 25% less likely to have a C-section (RR 0.75, 95% CI 0.64 to 0.88).¹
- A randomized study of 412 nulliparous, laboring women found that 8% of those supported by a doula delivered by C-section, compared to 13% of those observed and 18% of those who received routine care (p=0.06).³
- A randomized controlled trial of 420 nulliparous women laboring with the support of their male partner found that 13.4% of those who also had a doula were delivered by C-section, versus 25.0% of those without a doula (p=0.002). Among those whose labor was induced, 12.5% who also had a doula were delivered by C-section, versus 58.8% of those without a doula (p=0.007).⁵
- A randomized controlled trial of 531 primigravid women found that 3.1% of those with doula support had a C-section, versus 16.8% of those in an epidural group, 11.6% of those in a narcotic pain relief group, and 26.1% of those in a chart review group, who received routine hospital care (p<0.001).⁴
- A randomized study in Mexico of 100 nulliparous women in active labor who had received no childbirth preparation found that, of those assigned to a childbirth educator trained as a doula, 2% delivered by C-section, compared with 24% of those receiving standard care (p=0.003).⁶
- An analysis of 1,079 Medicaid recipients in a Minnesota doula program that included pre- and postpartum home visits found that participants had 41% lower odds of C-section relative to all Medicaid-funded births nationally (OR 0.59, p<.001).⁷
- A randomized controlled trial of 555 nulliparous women found that among those who required labor induction, 20% who had the support of a doula delivered by C-section, compared to 63.6% of those without (p=0.04).⁸
- A randomized controlled trial of 127 first-time mothers found that women with the continuous support of an untrained woman were less likely to deliver by C-section (19% versus 27%, p<0.001).⁹
- A randomized controlled trial of 150 women in Iran found that 6% of those with doula support delivered by C-section, versus 8% of those in an acupressure group, and 40% of those who received routine hospital care (p<0.001).¹⁰
- A retrospective cohort study of 1238 women in a Community Birth Program in Canada, which included doula support before and during labor, found that program participants were 24% less likely to deliver by Cesarean than those who received routine care (RR 0.76, 95% CI 0.68 to 0.84).¹¹
- A retrospective analysis of 2,400 women who gave birth in the US between 2011 and 2012 found that those with doula support had a 59% reduction in odds of C-section overall (AOR 0.41, 95% CI 0.18 to 0.96), and an 83%

reduction in odds of non-indicated C-section (AOR 0.17, 95% CI 0.07 to 0.36), compared to women without doula support.¹²

- A quasi-experimental study of 220 participants (125 in experimental group with doula services and 95 in no-doula comparison group) in Northern Taiwan found decreased rates C-section (13.0% vs. 43.2%) and increased rates of normal spontaneous delivery (87.0% vs. 56.8%) in the doula group relative to the control group.¹³
- A retrospective cohort study of 298 pairs of women matched on age, race/ethnicity, state, socioeconomic status, and hospital type (teaching or non-teaching) using Medicaid medical claims from California, Florida, and a northeastern state (USA) from January 1, 2014, and December 31, 2020, found that women who received doula care had 52.9% lower odds of cesarean delivery (OR: 0.471 95% CI: 0.29–0.79).²
- A retrospective cohort study of 8,989 individuals who enrolled in a comprehensive digital health platform found that the completion of at least two virtual appointments with a doula was associated with a 20% reduction in odds of cesarean birth among all users (AOR 0.80, 95% CI, 0.65-0.99) and a 65% reduction among Black users (AOR 0.32, 95% CI, 0.17-0.72), compared to individuals who did not meet with a doula.¹⁴
- A retrospective cohort study using Medicaid claims data from a national health insurer in the U.S. (722 matched pairs) found that women who received doula support had a 47% lower risk of cesarean delivery compared to those who did not have a doula (aRR=0.53, 95%CI, 0.43-0.66).¹⁵

Fewer preterm births or low birthweight infants in programs involving prenatal home visits^{7,15–19}

- A retrospective analysis of 1,935 Medicaid recipients in a Minnesota community-based doula program found participants had 22% lower odds of preterm birth compared to all Medicaid-funded births in the West North Central and East North Central US (AOR 0.77, 95% CI 0.61 to 0.96).¹⁶
- A retrospective analysis of 489 women in a Healthy Start doula program found a preterm-birth rate of 6.3%, as compared with a rate of 12.4% in the project area ($p < 0.001$), and a low-birthweight rate of 6.5%, as compared with a rate of 11.1% in the project area ($p = 0.001$).¹⁷
- An analysis of 1,079 Medicaid recipients in a Minnesota doula program found a preterm-birth rate of 6.1%, as compared with the national rate for Medicaid-funded births of 7.3% ($p < 0.001$).⁷
- A matched-control study of 603 women in a Brooklyn, New York, doula program compared participants to three controls each and found that participants had lower odds of having a preterm birth (5.6% vs 11.9%, $p < 0.0001$) or a low-birthweight baby (5.8% vs 9.7%, $p = 0.0031$).¹⁸
- A retrospective cohort study conducted at the University of Pittsburgh Medical Center found that for every 100 patients who received doula care, there were 3 to 4 fewer preterm births, compared to those who did not receive doula services (aRD -4.0, 95%CI -6.2 to -1.8).¹⁹
- A retrospective cohort study using Medicaid claims data from a national health insurer in the U.S. (722 matched pairs) found that women who received doula support had a 29% lower risk of preterm birth compared to those who did not have a doula (aRR=0.71, 95%CI, 0.51-0.98).¹⁵

Greater likelihood, earlier initiation, and increased duration of breastfeeding^{11,19–26}

- A retrospective cohort study of 1238 women in a Community Birth Program in Canada, which included doula support before and during labor, found that program participants were 2 times more likely to exclusively breastfeed at discharge than those who received routine care (RR 2.10, 95% CI 1.85 to 2.39).¹¹

- A randomized controlled trial of 189 nulliparous women found that those who received doula support were more likely to breastfeed exclusively at 6 weeks postpartum relative to the control group (51 vs 29%, $p=0.01$).²¹
- A randomized controlled trial of 724 nulliparous women in Mexico found that women with doula support were 64% more likely to breastfeed exclusively than women without support (RR 1.64, 95% CI 1.01-2.64).²²
- A prospective cohort study of 141 low-income primipara women found that 58.3% of those with doula support (including birth and postpartum support) initiated breastfeeding within 72 hours, versus 45.2% of those without (AOR 2.69, 95% CI 1.07 to 6.78). At 6 weeks postpartum, 67.6% of those in the doula group were still breastfeeding, versus 53.8% of those in the control group. Among women with a prenatal stressor such as high blood pressure or clinical depression, 88.9% of the doula group were still breastfeeding at 6 weeks, versus 40.0% of the control group (AOR 23.76, 95% CI 3.49 to 161.73).²³
- A retrospective evaluation of 11,471 urban women of diverse cultures found that 46% of those with doula support (via a hospital-based doula program) initiated breastfeeding within one hour of delivery, versus 23% of those without doula support (ARR 1.12, 95% CI 1.08 to 1.16). Over the seven years studied, as the program became established at the hospital, rates rose from 11% to 40% for women with a doula and from 5% to 19% for those without a doula.²⁴
- A retrospective analysis of 1,069 Medicaid recipients in a Minnesota doula program that included pre- and postpartum visits found that 97.9% initiated breastfeeding, compared to 80.8% of Medicaid recipients in that state.²⁵
- A randomized controlled trial of 586 nulliparous women found that 51% of those supported by a doula initiated breastfeeding within the first hour after delivery, compared to 35% of those without doula support ($p<0.05$).²⁶
- A retrospective analysis of 120 doula-supported births in Jefferson County, Alabama, found that doulas were associated with a ten-fold increase in breastfeeding initiation (OR 10.5, 95% CI 5.4–23.2).²⁰
- A retrospective cohort study conducted at the University of Pittsburgh Medical Center found that patients who received doula support were 20% more likely to be exclusively breastfeeding at discharge compared to those without doula care (aRR 1.22, CI 1.07-1.38).¹⁹

Reduced rates of postpartum depression^{2,27,28}

- A randomized controlled trial of 189 women found that six weeks after delivery, those with continuous support had a mean score on the Pitt Depression Inventory that was less than half that of women without support (10.4 versus 23.27, $p=0.0001$).²⁷
- A randomized controlled trial of 63 nulliparous women found that at 3 months postpartum, those with doula support had significantly less depression on the Pitt Depression Inventory than those in the control group (13.63 versus 18.29).²⁸
- A retrospective cohort study of 298 pairs of women matched on age, race/ethnicity, state, socioeconomic status, and hospital type (teaching or non-teaching) using Medicaid medical claims from California, Florida, and a northeastern state (USA) from January 1, 2014, and December 31, 2020, found that women who received doula care had 57.5% lower odds of postpartum depression/postpartum anxiety (OR: 0.425 95%, CI: 0.22–0.82).²

Better mother-baby bonding and improved infant care^{9,29–32}

- A randomized controlled trial of 40 first-time, intervention-free, vaginal births found that women

with the continuous support of an untrained woman stroked ($p < 0.001$), talked to ($p < 0.002$), and smiled at ($p < 0.009$) their babies more frequently than those who gave birth alone.⁹

- A randomized controlled trial of 104 first-time mothers with uncomplicated deliveries found that those with doula support scored significantly higher in mother-infant interaction two months postpartum than those without ($P < 0.05$).²⁹
- A comparison study of 33 first-time mothers found that those with doula support during childbirth became less rejecting ($t = 3.52$, $P < 0.001$) and helpless ($t = 2.12$, $P < 0.042$) in their working models of caregiving after birth, while mothers who had used Lamaze birth preparation became more rejecting and helpless. Those in the doula group also rated their infants as less fussy than did those in the Lamaze group ($t = 2.35$, $P < 0.025$).³⁰
- A randomized controlled trial of 248 women who received doula support through a community doula program found that program participants showed more encouragement and guidance of their infants at 4 months than those who received routine care ($p < 0.01$). Women with doula support were also more likely to promptly respond to their infants' distress ($p < 0.05$).³¹
- A randomized controlled trial of 312 individuals demonstrated that women who received home visits from a doula had nearly 10 times greater odds of attending childbirth classes ($p < 0.01$), 1.6 times greater odds of putting infants on their backs to sleep ($p < 0.05$), and 3 times greater odds of using car seats at three weeks ($p < 0.05$).³²

Reduced need for anesthesia or analgesia^{1,3-5,23,33}

- A meta-analysis of 15 trials showed that women with continuous, one-to-one support were 10% less likely to receive intrapartum analgesia (RR 0.90, 95% CI 0.84 to 0.96).¹
- A randomized study of 412 nulliparous, laboring women found that 7.8% of those supported by a doula required anesthesia, compared to 22.6% of those observed and 55.3% of those who received routine care ($p < 0.001$).³
- A randomized controlled trial of 420 nulliparous women laboring with the support of their male partner found that 64.7% of those who also had a doula required epidural analgesia, versus 76.0% of those without a doula ($p = 0.008$).⁵
- A randomized controlled trial of 531 primigravid women found that 6.3% of those with doula support required an epidural, versus 87.7% of those in an epidural group, 26.8% of those in a narcotic pain relief group, and 64.0% of those in a chart review group, who received routine hospital care ($p < 0.001$).⁴
- A prospective cohort study of 141 low-income primiparae found that 67.7% of those with doula support were below the median exposure to labor analgesia of 5.7 hours, versus 42.3% of those without (AOR 2.96, 95% CI 1.16 to 7.53).²³
- A randomized study of 314 nulliparous women in three hospitals found that 54.4% of those with doula support had an epidural, versus 66.1% of those without ($p < 0.05$).³³

Shorter labors^{1,3,9,10,23,34}

- A meta-analysis of 13 trials showed that women with continuous, one-on-one support had shorter labors by an average of 41 minutes (MD -0.69 hours, 95% CI -1.04 to -0.34).¹
- A randomized study of 412 nulliparous, laboring women found that those with doula support had an average labor of 7.4 hours, compared to 8.4 hours among those observed and 9.4 among those receiving routine care ($p = 0.001$).³
- A randomized controlled trial of 40 first-time, intervention-free, vaginal births found that

women with the continuous support of an untrained woman had an average labor length of 8.7 hours compared to 19.3 hours among those who received routine care ($p < 0.001$).⁹

- A prospective cohort study of 141 low-income primiparae found that 66.7% of those with doula support had a Stage 2 labor (pushing) of less than an hour, versus 46.7% of those without (AOR 3.07, 95% CI 1.19 to 7.0).²³
- A randomized controlled trial of 598 nulliparous women found that those supported by a friend trained as a doula had a mean labor length of 10.4 hours, versus 11.7 hours among those without doula support.³⁴
- A randomized controlled trial in Iran of 150 women found that those with doula support had shorter labors by an average of 124 minutes during the first stage of labor, and an average 69.5 minutes during the second stage of labor, compared to those who received routine care ($p < 0.001$).¹⁰

Fewer vacuum or forceps births (more spontaneous vaginal births)^{1,3,4,23}

- A meta-analysis of 19 trials showed that women with continuous, one-on-one support were 10% less likely to have an instrumental vaginal birth than those without (RR 0.90, 95% CI 0.85 to 0.96).¹
- A randomized study of 412 nulliparous, laboring women found that those with doula support were 23% more likely to have a spontaneous vaginal birth compared to those who received routine care (RR 1.23, 95% CI 1.10 to 1.38).³
- A randomized controlled trial of 531 primigravid women found that 12.2% of those with doula support had an instrumental birth, versus 24.8% of those in an epidural group, 17.2% of those in a narcotic pain relief group, and 29.3% of those in a chart review group.⁴
- A prospective cohort study of 141 low-income primiparae found that, among women who delivered vaginally, those with doula support had an almost 5-fold increased odds of a spontaneous vaginal delivery compared to those without (AOR 4.68, 95% CI 1.14 to 19.28).²³

Less need for Pitocin^{4,6}

- A randomized control trial of 531 primigravid women found that 25.2% of those with doula support required Pitocin, versus 45.8% of those in an epidural group, 42.8% of those in a narcotic pain relief group, and 65.8% of those in a chart review group, who received routine hospital care ($p < 0.001$).⁴
- A randomized study in Mexico of 100 nulliparous women in active labor who had received no childbirth preparation found that of those assigned to a childbirth educator trained as a doula, 42% received Pitocin, compared with 96% of those receiving standard care ($p < 0.001$).⁶

Higher APGAR scores^{1,10,23,34}

- A meta-analysis of 14 trials showed that women with continuous, one-on-one support were 38% less likely to have a baby with a low five-minute APGAR score than those without (RR 0.62, 95% CI 0.46 to 0.85).¹
- A prospective cohort study of 141 low-income primiparae found that 56.8% of those with doula support had a baby with a one-minute APGAR score of 9 or greater, versus 35.0% of those without doula support.²³
- A randomized controlled trial of 586 nulliparous women found that 99.7% of those supported by a doula had a baby with a five-minute APGAR score higher than 6, compared to 97% of those without

doula support ($p < 0.006$).³⁴

- A randomized controlled trial in Iran of 150 women found that 86% and 98% of those with doula support had a baby with a one-minute and five-minute APGAR score of 8 or higher, compared to 40% and 78% of those who received routine care ($p < 0.001$).¹⁰

More positive feelings about the birth^{1,21,26,33}

- A meta-analysis of 11 trials showed that women with continuous, one-on-one support were 31% less likely to report negative feeling about their birth experience than those without (RR 0.69, 95% CI 0.59 to 0.79).¹
- A randomized controlled trial of 189 nulliparous women found that those with doula support were more likely to report that they coped well during labor than those without (59 vs 24%, $p = 0.0001$).²¹
- A randomized controlled trial of 600 nulliparous women found that those with doula support were more likely to report a better overall rating of their birth experience than those without (very good: 59% v 26%, good: 33% v 56%, average/poor/very poor: 8% v 18%, $p < 0.001$).²⁶
- A randomized controlled trial of continuous labor support for middle-class couples: effect on cesarean delivery rates
- A randomized study of 314 nulliparous women in three hospitals found that 82.5% of those with doula support reported a good birth experience, versus 67.4% of those without.³³

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