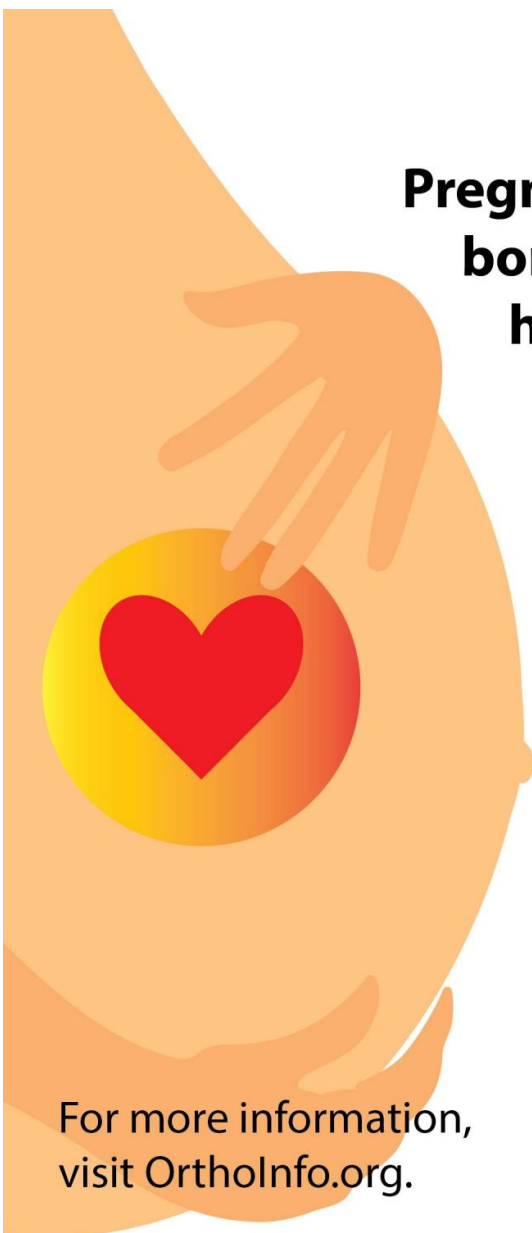


Treatment of pregnant patients with bone and joint injuries complicated, requires team of physicians

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Pregnant women with bone & joint trauma have a greater likelihood to deliver prematurely —more than **3 weeks before a baby is due.**

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Pregnant women with orthopaedic trauma have a greater likelihood to deliver prematurely -- more than three weeks before a baby is due -- in gestation weeks 24 to 33 (17 percent versus 3 percent) and 37 weeks (31 percent versus 3 percent). Credit: © American Academy of Orthopaedic Surgeons

Nearly one in 1,000 pregnant women in the United States suffer bone and joint injuries due to car crashes, domestic violence, drug or alcohol use, or osteoporosis. According to a literature review in the May 2017 issue of the *Journal of the American Academy of Orthopaedic Surgeons*, the stage of a woman's pregnancy—how her body may have changed during the course of the pregnancy—needs to be factored into the mother and fetus' orthopaedic trauma care.

Bodily changes during pregnancy affect every step of the orthopaedic trauma treatment process, including prescription of medications and surgical management. Treatment of pregnant patients with bone and joint injuries can be complicated and requires a team of specialists from multiple disciplines.

"Awareness and knowledge of maternal physiology and anatomy, radiation procedures and risks, teratogenic agents [i.e., infections, chemicals and drugs] and proper surgical techniques can significantly improve maternal outcomes without jeopardizing fetal health," says lead author Nirmal Tejwani, MD, an orthopaedic trauma surgeon with NYU Langone Orthopedics.

"When [pregnant women](#) sustain fractures, two lives must be simultaneously treated throughout the entire process," says Dr. Tejwani. Fetal monitoring before and during any surgical procedure, and a

collaborative team of well-trained specialists are essential for optimal patient outcomes. "Under fetal monitoring before and during surgery, a 22-year-old woman—who fractured her right shin bone while six weeks pregnant—underwent anesthesia and a successful fracture repair. Her fracture healed satisfactorily in three months, and she was able to later deliver a healthy baby at term."

Although the cause of orthopaedic traumas vary, pregnant women and their unborn babies are most vulnerable to injuries in motor vehicle crashes. Among those injured as drivers or passengers, up to 64 percent were not wearing [seat belts](#) at the time of the collision, which can cause harm to the mother and fetus.

"The most preventable factor is wearing a seat belt. Pregnant women typically don't wear seat belts because they feel this harms the fetus; however, they should be counseled on the importance of seat belt use in preventing maternal and fetal harm," says Dr. Tejwani.

In orthopaedic trauma care, "the health of the mother is always prioritized over the fetus," says Dr. Tejwani. "Surgery should be delayed, if possible, until after delivery of the newborn to minimize any risk of harm. Sometimes, the fetus may be delivered before fracture fixation if near term."

In one case, Dr. Tejwani and a team of physicians deemed it safer to induce delivery for a 39-year-old woman injured in a car crash as a pedestrian. She suffered a fracture-dislocation of her ankle—an unstable injury involving bone and soft tissue—and was 37 weeks pregnant. After delivery, the patient was given an epidural, and her ankle fracture was reduced and splinted. A few days later, she underwent surgery with anesthesia, was counselled about swelling in her lower body—which is usually greater among pregnant patients with ankle fractures—prescribed pain medication to be used sparingly, and was

advised to not breastfeed until after the medications were stopped.

By the numbers, pregnant patients with [orthopaedic trauma](#) when compared with non-trauma patients:

- Have a greater likelihood to deliver prematurely—more than three weeks before a baby is due—in gestation weeks 24 to 33 (17 percent versus 3 percent) and 37 weeks (31 percent versus 3 percent).
 - Have the greatest likelihood to deliver prematurely if they previously fractured their pelvis.
- Have a 15 percent higher rate of delivery by cesarean section (c-section).
 - Are more likely to undergo c-sections if they previously fractured their pelvis.
- More frequently delivered their babies on admission (34 percent versus 13 percent).

More information: Nirmal Tejwani et al, Treatment of Pregnant Patients With Orthopaedic Trauma, *Journal of the American Academy of Orthopaedic Surgeons* (2017). [DOI: 10.5435/JAAOS-D-16-00289](https://doi.org/10.5435/JAAOS-D-16-00289)

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