

Fetal pain, analgesia, and anesthesia in the context of abortion

Overall summary and conclusions

Based on the best available scientific evidence, a human fetus does not have the functional capacity to experience pain until after the beginning of the third trimester of pregnancy, and it is unlikely that pain can be experienced until birth.¹ Requirements to offer fetal anesthesia, which provide no benefit to the fetus or the pregnant person, increase the risk of complications and delay access to care.² Laws requiring individuals seeking later abortion to be informed of the potential existence of fetal pain should be modified to be consistent with scientific evidence, and any discussion of fetal capacity to experience pain should also include a discussion of the fetus' sensation during the birth process and post-birth medical interventions and not focus exclusively on ending a pregnancy.

Interpreting the science

Scientific evidence about experience of fetal pain has commonly been misinterpreted by abortion rights opponents to suggest the existence of fetal pain. Detailed reviews of the scientific evidence by teams of leading clinicians and researchers do not support such interpretations.^{1,2}

- Brain circuitry responsible for relaying some types of sensory information may begin developing around 24 weeks' gestation. However, the presence of the "wiring" does not necessarily mean that the circuits required for pain sensation are actually functional. Assuming a relationship between the two is not supported by scientific evidence.
- Studies suggest that the neural pathways associated with pain perception are not fully developed until well into the third trimester.³⁻⁵ There is increasing evidence that the fetus never experiences a state of true wakefulness in utero and is kept in a continuous state of sleep-like unconsciousness or sedation by the presence of its chemical environment.⁶ This state can suppress higher cortical activation in the presence of intrusive external stimuli. Although abortion rights opponents claim that studies finding increased stress hormones in the fetus in response to noxious stimuli mean that the fetus feels pain, this is untrue. Those same hormones may also be triggered by stress during non-painful situations, and one recent study found no increase in stress hormones in the fetus after exposure to noxious stimuli.⁷ Such studies, therefore, do not support the existence of fetal pain.
- Abortion rights opponents claim that limb withdrawal from a tactile stimulus is evidence of pain perception. However, limb withdrawal occurs even in full-term fetuses in response to non-painful tactile sensations, including light touch. Thus, the appearance of limb withdrawal on ultrasound represents a reflex rather than a response to pain.¹

Abortion rights opponents and others have recommended the use of anesthesia to prevent fetal pain, should it exist. However, there are no known safe and effective methods of providing pain control

directly to a fetus. Rather, advocating for medical intervention to control an experience (fetal pain) for which no evidence exists is in and of itself a non-evidence based intervention and risks the health of the pregnant person by promoting unproven, untested, and clinically experimental medicine.²

- The only study that experimented with injecting pain medication directly into human fetuses within the uterus measured changes in fetal stress hormones, so it is unknown whether the injection reduced pain. The study failed to examine the possible risks to the pregnant person's health, such as uncontrolled bleeding. One other experimental method, which consists of injecting pain medication into the amniotic fluid surrounding the fetus in the uterus, has been tried only in sheep, not in humans.
- The option of administering general anesthesia to the pregnant person or increasing the dose of pain medicine increases the medical risk of the abortion without known benefit to the fetus.²

Responses to anticipated questions

If preterm babies receive analgesia during procedures, why shouldn't fetuses automatically receive analgesia during abortions?

For babies born prematurely (neonates), the risks and benefits of medical intervention are weighed only for the neonate itself, as it is separate from its mother. In contrast, for the fetus, risks and benefits to the pregnant person carrying the fetus and undergoing the abortion must be weighed. Providing experimental fetal analgesia/anesthesia may compromise the health and safety of the pregnant person. These risks are unjustified given the lack of sound scientific evidence confirming the capacity of the fetus to feel pain while in utero. There are important neurological and biochemical differences between fetal and neonatal life, which is why scientists do not extrapolate from observations made in newborn preterm infants to the fetus still in the uterus. Analgesia is not always recommended in the event of potential painful events. For example, we do not use analgesia during the birth process when the baby's head is compressed to pass through the cervix.

If fetuses receive analgesia or anesthesia during other surgical procedures in the uterus, why shouldn't they get similar treatment during an abortion?

These are two very different scenarios. For fetal surgery, the pregnant person undergoes sedation, which is transferred to the fetus. The analgesia/anesthesia given to the fetus is not used primarily to prevent the experience of pain by the fetus. Rather, it is used to relax the uterus to prevent premature contractions, to immobilize the fetus, to prevent possible adverse surgical outcomes, and to prevent possible long-term neurodevelopmental changes in pain response behaviors. None of these objectives is applicable to an abortion. Similarly, analgesia or anesthesia is not administered directly to the fetus during the birth process.



I can understand why we shouldn't require fetal analgesia/anesthesia for all abortions, but why shouldn't we allow the pregnant person to choose whether to use fetal analgesia/anesthesia during an abortion?

- Patient autonomy is critically important. However, there is no known safe and effective fetal analgesia/anesthesia to offer in the context of abortion.
- Additionally, patients should be advised that such measures are unnecessary, because science does not support that fetuses even have the neural circuitry necessary to process painful stimuli before the third trimester, which is well after when the vast majority of abortions in the United States are performed.
- The goal of quality patient care is to inform individuals of the most up-to-date scientific information. Requiring that they be offered care that is not needed nor demonstrated as safe violates that goal.

How does offering fetal analgesia/anesthesia for abortion increase the risks to the pregnant person?

- Abortion is a very safe procedure,⁹ but the risks of abortion may increase when general anesthesia is used.
- Procedures used to administer medications directly to the fetus can cause bleeding and infection in the pregnant person.
- Most abortion providers do not have the capacity to offer the experimental procedures promoted by abortion rights opponents. Therefore, individuals would be required to seek out different facilities to obtain their abortion care, which may delay their access to care.

Why shouldn't doctors be required to tell individuals about the potential for pain in the fetus?

Mandating that physicians tell patients misinformation violates the standards of medical care and the principles of informed consent.

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