

# **Inquiry into Fetal Development & Activity**

Evidence from Dr Peter Saunders MA MBChB FRACS  
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- 1. Please give an outline of your background experience and the particular area of expertise that you bring to this inquiry.**

I'm a qualified medical doctor with an Australasian Fellowship in General Surgery. I'm currently chief executive of Christian Medical Fellowship, an association with over 5,000 medically qualified members throughout the UK. I have a long interest in this issue, am familiar with the peer-reviewed literature, have written on it for a medical readership and gave oral evidence to the Science and Technology Committee of the House of Commons in their 2007 Inquiry into Scientific Developments relating to the Abortion Act 1967.

- 2. Please can you explain to us what, in your opinion, is the difference between fetal awareness and fetal pain?**

Awareness involves being conscious of one's surroundings and the ability to know, feel or perceive. Pain, as defined by the International Association for the study of pain, is 'an unpleasant sensory and emotional experience associated with actual potential tissue damage, or described in terms of such damage'. It therefore has both a physical or sensory aspect as well as a cognitive and emotional aspect.

- 3. What evidence are you aware of that a fetus is capable of awareness or is conscious, when not asleep, at some point in the womb? When do you think this consciousness might begin?**

Awareness and consciousness are subjective experiences felt only by the subject in question. However, we can deduce their presence with a high degree of certainty based on the observed responses to external stimuli. The everyday experience of pregnancy including the felt behaviours and responses of the unborn baby to external stimuli, especially sound, provides strong evidence that the unborn baby in the third trimester possesses some awareness. There is also extensive literature in humans on fetal sleep and wakefulness, fetal motility, fetal memory, fetal hearing, fetal breathing and its control and fetal behaviour. Fetuses also react in a similar way to painful stimuli (for example, through withdrawal or stress hormone reaction) to older babies.

- 4. a) In your opinion, how certain can we be that a neonate experiences pain? b) To what extent can this certainty be transferred to a fetus of the same age?**

Premature but viable neonates of 23 to 25 weeks gestation will withdraw and cry when their heels are pricked to obtain a blood sample. During fetal surgery at similar gestations fetuses react in a similar way. There is no evidence to support the contention that human fetuses lack awareness or exist in some unconscious state within the womb. We work therefore

from the ethical principle that even though these babies cannot verbalise their experiences, and cannot remember them in the way that children or adults can, we should employ the 'precautionary principle' and give them the benefit of the doubt. In other words, we should ensure that pain is treated or prevented in the same way that we would for any older human being. If there is doubt about awareness or pain perception then we should err on the side of caution.

**5. Please provide an outline of the current evidence regarding fetal pain. In your opinion, when would you consider that a fetus may begin to be capable of suffering as a result of a painful stimulus?**

Pain receptors first appear around the mouth in the seventh week of gestation and by 18 weeks have appeared throughout the body. Development of nerve fibres connecting these receptors with the spinal-cord start at eight weeks gestation and connections between the spinal-cord and thalamus develop from 14 weeks and are complete at 20 weeks. Connections between the thalamus and cerebral cortex begin developing at 17 weeks and are completely developed at 26 to 30 weeks gestation. The thalamus is the main relay centre in the brain for sensory impulses going from the spinal-cord to the cortex. So, from about 16 weeks gestation pain transmission from a peripheral pain receptor to the cortex is theoretically possible and completely developed from around 26 weeks gestation. As early as 18 weeks independent stress hormones are released by a fetus injected by needle just as they are when children or adults feel pain. Painful stimuli also yield vigorous movements and breathing efforts.

It may be that fetuses can feel pain even before these nerve tracts are fully established because studies show that even hydranencephalic infants, whose cortex is severely reduced if not altogether missing, may experience pain judging by their physiological responses as long as other neurological structures are functioning. So pain perception may in fact be a thalamic rather than a cortical function meaning that pain can still be felt before thalamocortical neural connections are complete.

It is therefore quite possible that pain can be experienced by the fetus as early as 16-18 weeks.

**7. During surgeries in utero, hypothetically speaking, at what age do you think consultants will not administer fetal analgesia and muscle relaxant only?**

Administration of fetal anaesthesia has been standard practice since the advent of fetal surgery more than 25 years ago and is practised worldwide. Analgesia is recommended for endoscopic procedures, intrauterine surgery on the placenta, cord and membranes and for late termination of pregnancy. This is important not only to ensure the fetus remains quiet and still during surgical procedures but also to protect it from possible harmful effects on the developing neurological system.

**8. What is your opinion of the current guidelines on fetal awareness, the RCOG 2010 paper? In your opinion, why do you think it came to the conclusions it did, considering the evidence available at the time?**

The RCOG 2010 guidelines are based on two fundamental assumptions, neither of which was supported by the current scientific evidence available at the time. The first assumption was that the human fetus is rendered unconscious during intrauterine life by endogenous substances. Although there is some evidence that this may happen in experimental animals, such as sheep, there is no evidence that human fetuses lack awareness or exist in an unconscious state in the womb. The second assumption is that the fetus under 24 weeks does not have the neuroanatomical capacity to allow pain perception at a cortical level. However, as argued above, some neural connections are present from peripheral pain receptors to cortex as early as 18 weeks gestation, even though these are not fully developed. Also, there is significant evidence to suggest that pain perception does not require a fully functioning cerebral cortex but is more dependent on the presence of a functioning thalamus, which develops much earlier.

The RCOG appeared to draw very heavily on the testimony of two researchers, Maria Fitzgerald and Stuart Derbyshire, who argued that because neural pain pathways reaching the cerebral cortex were not fully developed, that therefore pain could not be felt before this time. However, these views are not shared by many other researchers and I would argue that in the presence of uncertainty the benefit of any doubt should be given to the fetus and that pain relief should be made available. I'm very happy to provide to the committee peer-reviewed journal references to confirm this. It does however look as though the RCOG, rather than taking a dispassionate view of the scientific evidence, has rather cherry-picked experts who would deliver prescribed conclusions.

For the RCOG to report the studies of researchers who share their own position, whilst ignoring research published by other leading researchers with contrary views, is at the very least misleading. It is also somewhat ironic that the RCOG, whose members carry out virtually all Britain's late abortions, should conclude that babies at 18 to 24 weeks gestation are in a continual state of sleep and lack the neurological apparatus necessary to feel pain. However, mothers feeling their babies kick at 16 to 20 weeks and indeed all parents who witness their progeny on a routine 18-week ultrasound scan, sucking their thumbs, scratching their noses or yawning will intuitively feel unsettled by the RCOG's conclusions.

**9. What recommendations would you make in either laws or guidelines so as to eliminate the possibility of fetal suffering during a termination procedure?**

The evidence points to probable fetal pain awareness by 18 to 20 weeks. This would have implications for late surgical and lethal injection terminations and of course intrapartum fetal destruction. Appropriate anaesthesia for surgical procedures on the fetus in the womb are already given from around 18 to 20 weeks, not just to afford pain relief to the fetus and to prevent stress reaction and possible subsequent neurological damage, but also to provide comfort to the mother. In the light of this it seems quite incongruous that the RCOG guidelines should only recommend administering analgesia before an invasive procedure

after 24 weeks. Regulations should require the administration of fetal analgesia from 16 weeks.

**10. The 2010 Fetal Awareness Guidelines were published by RCOG due to request from the government following the publication of the Science and Technology Committee's report on scientific developments related to abortion. What is your opinion of the committee's methods and the outcome?**

The Science and Technology committee's report was heavily criticised at the time and its conclusions, especially with respect to fetal pain, were further contested in a minority report produced by two members of the committee. Expert witnesses, such as Sunny Anand, were side-lined and ignored. The committee requested the RCOG to review their 1997 guidelines fetal awareness, but in doing this they drew disproportionately on the testimony of two researchers, Stuart Derbyshire and Maria Fitzgerald, whose views on fetal awareness and pain sensation concurred with the earlier guidelines. This did not have the appearance of a comprehensive and dispassionate evaluation of available evidence. It might also be argued that the RCOG, given that its members carry out most abortions Britain, had a vested interest in reaching the conclusions that it did. The report was heavily criticised at the time in an editorial in a leading paediatric journal ([Ward Platt M. Arch Dis Child Fetal Neonatal Ed \(2011\)](#)) for having an inadequate evidence base and making unwarranted conclusions. Platt called the report 'an emperor with no clothes'.

**11. Can you suggest [any more] ways in which the current systems/hierarchy can be made more effective, accountable and impartial?**

The difficult questions around fetal awareness and pain sensation require a comprehensive, dispassionate, multidisciplinary approach and it is essential, in order to avoid research or interpretational bias, that those carrying out the report do not have vested ideological or financial interests in its conclusions. As the RCOG report is accorded such respect within Parliament, it would seem advisable that it be revised again by a truly multidisciplinary team with expertise, not just in obstetrics and gynaecology, but in paediatrics, anaesthesia, surgery, neurology, neurophysiology and neurodevelopment.

**12. Are you aware that RCOG consultants now administer fentanyl prior to a feticide, although this practice does not seem, as yet, to be reflected in their policies? What do you think are the implications of this in terms of fetal pain acceptance within the scientific/medical community?**

The instincts of those involved at the 'sharp end' are to ensure pain relief for the fetus and reassurance for the mother. The RCOG should formally recognise this pragmatic wisdom, in the absence of incontrovertible evidence of fetal pain awareness beyond 20 weeks, in their guidance to members. By continuing to resist this minor change, they appear to entertain an unjustified degree of certainty given the present state of our knowledge.

**14. Would it be fair to say that the babies most likely to be aborted where fetal pain is an issue would be those diagnosed with a disability, some of which are either treatable or non-life**

**threatening, such as cleft lip or palate, club foot or Down's Syndrome?**

226 women in the UK had abortions after 24 weeks in 2016. A further 2,807 abortions were performed on fetuses aged 20 to 24 weeks making a total of 3,033. The total number of ground E abortions was 3,208 and 1,069 of these were performed after 20 weeks. (22% of ground E abortions were for Down's syndrome, included in 37% for all chromosomal abnormalities. Malformations of the nervous system accounted for 21%, cardiovascular system 9% and another 17% were performed for 'maternal factors' including heritable disorders. That leaves 16% unaccounted for).

Therefore, 3,033 abortions after 20 weeks (by which stage of maturity it is likely that the fetus can feel pain), only 226 of whom are recognised as candidates for the pain relief under present RCOG guidelines. Another 2,807 would have become eligible if the bar was set at 20 weeks.

Of the 3,033 abortions after 20 weeks, only 1,069 (35%) on the basis of ground E so it would not be accurate to say that babies most likely to be aborted after 20 weeks are those with disabilities since, in 2016, at least 65% were able-bodied babies.

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