In the news

PREMATURE BABIES FEEL PAIN

Response to pain involves a reflexive action, such as flinching, and a higher-level conscious perception. Premature babies are known to respond reflexively to painful procedures, and now research has shown that they also register pain in the brain's cortex. Essentially, they "feel true pain" says Professor Maria Fitzgerald, who led the research at University College, London, UK (*BBC News Online*, 4 April 2006).

Premature babies can be subject to multiple procedures, such as blood tests and chest drains, on a daily basis. "Nursing staff are not callous in dealing with these babies", says Professor Fitzgerald, explaining that the brains of such babies "… are so immature it was difficult to genuinely know that the pain was going to the brain" (*Daily Telegraph*, 5 April 2006).

Brain imaging techniques used for monitoring the processing of pain in adults are not applicable to newborns, so the team used near-infrared spectroscopy. Sensors were attached to the heads of 18 babies delivered between 25 and 45 weeks post conception, allowing the researchers to measure blood flow to the brain while routine procedures — heel-pricks for blood tests — were performed. The team observed that during these procedures there was a surge of blood and oxygen to the brain, showing that pain was being processed at a cortical level.

"Since pain information is transmitted … from 25 weeks, there is the potential for pain experience to influence brain development from an early age" says Professor Fitzgerald (*Guardian*, 5 April 2006).

It is hoped that the research will lead to better pain-relief protocols for premature babies. Neil McIntosh, professor of child life and health at Edinburgh University did point out, however, that whereas "… a large number of units give nothing for heel-pricks … with a painful procedure like a chest drain, virtually no one would not give analgesia" (*Guardian*).

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