

New Research Findings on the Nature and Management of Labor Pain

From Peer-reviewed Papers Published as a Supplement to *American Journal of Obstetrics and Gynecology*, May 2002

A series of Systematic Reviews assessing the safety and effectiveness of methods for labor pain relief were commissioned by the Maternity Center Association (MCA). MCA is a national not-for-profit organization that has worked to improve maternity care for childbearing women and their families since 1918.

New Research Findings:

- Epidural analgesia (used by most laboring women in the U.S.) is associated with various side effects, and many interventions are used to monitor, prevent or treat them. Side effects include hypotension, sedation, fever, immobility, difficulty with effective pushing, and difficulty with urination. Electronic fetal monitoring, intravenous infusions, and frequent blood pressure monitoring are routinely used with epidural. Interventions that are more likely with epidural include Pitocin (a drug) to strengthen contractions, vacuum extraction or forceps to get babies out, and evaluation of newborns for infection.
- A series of adjustments in labor epidural technique do not seem to have eliminated undesirable side effects. Although it is widely believed that side effects have been eliminated, a systematic look at the best research about five modifications in technique finds no convincing evidence that the changes have had the desired effects.
- Many women who receive “walking” epidurals never walk at all during labor, even when encouraged to do so. Although women are led to believe that they will be able to walk and will be interested in doing so, this expectation is unmet for many.
- “Spontaneous delivery” is less likely with epidurals. Women with epidurals are about 25% less likely to be able to push their babies on their own power and without vacuum extraction, forceps, or cesarean section.
- Maternal fever and newborn evaluation for infection are more likely with epidurals. About 10% of women with epidurals develop epidural-related fever. Newborns of these mothers are more likely to be taken away from parents for infection evaluation and/or treatment. Preliminary research suggests that these infants are also more likely to experience seizures.
- There are considerable doubts about the safety and effectiveness of Demerol, a widely used opioid (narcotic), and there is no evidence that any other opioid is preferable for labor pain relief. A systematic look at the best research casts doubts on the safety and effectiveness of opioids (narcotics), yet they are widely used in U.S. hospitals. Due to their limited effectiveness, many women who receive opioids during labor in some settings also use epidural analgesia.

- Although many women might benefit from nitrous oxide to help relieve labor, it is rarely available in U.S. hospitals. Research suggests that nitrous oxide provides adequate labor pain relief for most women who use it, does not interfere with labor physiology, and appears to be safe for mothers and babies. Although widely used in Canada, the U.K. and Scandinavia, it is rarely available in U.S. maternity units.
- Some drug-free measures help relieve labor pain and are safe when used appropriately. These include the continuous support of a labor companion, baths, and (for low-back pain) sterile water injections. Although such measures can offer benefits to all laboring women, regardless of medication decisions, they do not appear to be widely available or promoted in U.S. hospitals.
- Women's childbirth satisfaction is highly related to caregiver attitudes and beliefs, but not to pain issues. Women's satisfaction with childbirth is strongly associated with having good support from caregivers, having a high-quality relationship with caregivers, being involved with decision-making about care, and women's expectations. Pain, pain relief, and other factors are much less important.

Resources:

- The Maternity Center Association's *Maternity Wise*[™] website (www.maternitywise.org) has a detailed section that presents information based on results of the commissioned reviews to help women make informed decisions in preparation for giving birth (www.maternitywise.org/mw/topics/pain/). Separate pages review key labor pain issues, describe various options and the best evidence about these options, offer tips and tools for decision-making, and identify additional resources.
- The "Especially for Professionals" section of the *Maternity Wise* website (www.maternitywise.org/prof/) has labor pain resources for professionals, including material from the Maternity Center Association's labor pain initiative that was not included in the special journal issue.