

SOUTHWESTERN NEWS

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RESEARCH SHOWS EPSOM SALTS PREVENT SEIZURES IN PREGNANT WOMEN

DALLAS — August 9, 1995 — Magnesium sulfate — commonly known as Epsom salts — is the most effective treatment for preventing seizures during labor in women with pregnancy-induced high blood pressure, researchers at UT Southwestern Medical Center at Dallas say.

Drs. Michael J. Lucas, Kenneth J. Leveno and F. Gary Cunningham reported in the July 27 edition of the *New England Journal of Medicine* on a study of more than 2,100 women diagnosed with pre-eclampsia — a condition causing hypertension or high blood pressure during pregnancy — who entered Parkland Memorial Hospital, the primary teaching hospital for UT Southwestern, to give birth.

Lucas is an associate professor, and Leveno is a professor, both in obstetrics and gynecology. Cunningham is chairman of obstetrics and gynecology and the Jack A. Pritchard Professor in Obstetrics and Gynecology.

Approximately half of the women, chosen at random, were given magnesium sulfate. The other half received phenytoin, an anti-convulsant also used occasionally to prevent seizures during labor.

None of the 1,049 women given magnesium sulfate experienced convulsions during labor or delivery. Ten of 1,089 women randomized in the phenytoin group had convulsions. The babies of mothers given magnesium sulfate did equally well as the mothers who received the anti-convulsant.

Women receiving magnesium sulfate were given intramuscular injections of 10 grams of the drug, followed by 5 grams intramuscularly every four hours. Women with symptoms of severe pre-eclampsia, which include extremely high levels of blood pressure, protein in the urine, blood enzyme changes and other symptoms attributed to the disease were given an additional 4 grams of magnesium sulfate intravenously.

Women who received phenytoin were given 1,000 milligrams over a one-hour period in an intravenous drip, followed by 500 milligrams taken orally 10 hours after the treatment was

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started.

An editorial accompanying the journal article said that studies such as UT Southwestern's have important implications for reducing deaths and complications in mothers and babies.

The magnesium sulfate treatment used to prevent seizures in high-risk pregnant women was developed at UT Southwestern 40 years ago by Dr. Jack Pritchard, professor emeritus and former chairman of obstetrics and gynecology and retired head of the obstetrics and gynecology service at Parkland. Pritchard's magnesium sulfate regimen has become the most common treatment in this country for preventing seizures during labor.

Even so, UT Southwestern high-risk pregnancy specialists have been criticized in some quarters for their use of magnesium sulfate. "Some physicians in certain other specialties said it can't work because it's not an anti-convulsant," said Lucas, first author on the *New England Journal of Medicine* article.

Last month the International Eclampsia Trial Collaborative Group also reported positive results from a study comparing magnesium sulfate to two different anti-convulsant medications for preventing recurring seizures in women who have already developed eclampsia. Magnesium sulfate proved twice as effective as either of the other drugs.

Both Lucas and Pritchard are pleased that the latest study provides further confirmation of the effectiveness of magnesium sulfate.

"The treatment of pre-eclampsia and eclampsia with magnesium sulfate has been ongoing for many years without being comparatively tested," said Lucas. "It is remarkable that a trial of this sort has not been attempted until today.

"Many active medical centers already have lost most of their government support for clinical trials while others are just beginning to be seriously affected. The tightening of economic controls under managed care will make this kind of research even more difficult to conduct in the future, and American health care will suffer.

"Continuing evaluation of what we do in medicine is elemental. This kind of clinical research is neither an idealized or trivial pursuit. We owe it to our patients to be constantly evaluating the way we care for them."

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