normal process of glucose disposal, and therefore useless, he said.

Random blood glucose value testing isn't much better, since it is an insensitive test. "It should be used only when nothing else is available," he said. "It is better than nothing at all."

Capillary whole blood glucose testing uses a pinprick to obtain blood that is analyzed by a portable meter. It is convenient and cost-effective, but the meter should be calibrated regularly with results obtained in a hospital laboratory to ensure its accuracy.

Most common, of course, are fasting oral glucose tolerance tests.

These tests are most accurate when the pancreas is adequately primed prior to a 3-hour glucose tolerance test. This cannot always be ensured when people skip meals or follow unusual diets, said Dr. Reece.

That's why he advises patients to eat two to three slices of bread with each meal for 3 days before the test, which involves drinking a glucose solution and having blood drawn 1 hour later.

Nicotine, caffeine, many drugs, bed rest,

## Mild GD Raises Infants' Risk of Cryptorchidism

Mild gestational diabetes significantly raises the risk of cryptorchidism in male offspring, reported Dr. Helena E. Virtanen of the University of Turku, Finland, and her associates.

Even mothers who had an abnormal result on a single oral glucose tolerance test (OGTT) but no diabetes diagnosis were at increased risk of delivering a boy with cryptorchidism, the researchers reported (J. Clin. Endocrin. Metab. 2006 Oct. 10 [Epub doi:10.1210/jc.2006-1420]).

They reviewed the pregnancy records of 1,288 singleton boys born at one hospital who had participated in previous research. The 125 boys with congenital cryptorchidism served as cases in this study, and the 1,163 boys who had normal testicular descent at birth served as controls.

Among the cases, 13 mothers (10%) had diet-treated gestational diabetes, and an additional 7 (6%) had at least one abnormal result on OGTT but no diabetes diagnosis, for an overall 16%. In contrast, among the controls, only 47 mothers (4%) had a diabetes diagnosis and an additional 54 (5%) had an abnormal OGTT result, for an overall 9%.

The significantly elevated risk for cryptorchidism remained constant after the data were adjusted for known confounders such as advanced maternal age and maternal smoking, as well as for proposed risk factors that might confound the association, such as prematurity and low birth weight.

Maternal diabetes status had no apparent effect on the rate of spontaneous testicular descent by the age of 3 months or on the rate of bilateral vs. unilateral cryptorchidism. "Considering our results, the increasing prevalence of gestational diabetes may have considerable effect on [future] male reproductive health," Dr. Virtanen and her associates noted.

-Mary Ann Moon

and exertion may also interfere with test results.

If a patient vomits Glucola, the standard glucose solution used in fasting oral glucose tolerance testing, a culinary glucose polymer, Polycose, can be used instead, said Dr. Reece.

Even more palatable for some women is the jelly bean test, standardized by Boyd and associates and found to be "incredibly consistent" with Glucola in terms of sensitivity and specificity, and positive predictive value.

However, that accuracy is ensured only if one uses the exact protocol described by Boyd or one later tested by Lamar and colleagues: 18 or 26 Brach's jelly beans, with blood drawn 1, 2, and 3 hours later (Am. J. Obstet. Gynecol. 1995;173:1889-92 and Am. J. Obstet. Gynecol. 1999;181[5 pt. 1]:1154-7).

Two relatively new methods—glycohemoglobin  $A_1$  and a fructosamine-based test—are too insensitive to be used in screening for gestational diabetes, Dr. Reece said.

A breakfast tolerance test involving a specific 600-kcal meal before the blood draw achieves a sensitivity of 75% and specificity of 95% if a 120-mg/dL value is used, and a sensitivity of 96% and specificity of 74% if a threshold is set at 100

mg/dL. It's acceptable, but "cumbersome" to adjust the thresholds, he said.

"I've never used it."

A diagnosis of gestational diabetes is generally reserved for patients who have at least two abnormal oral glucose tolerance tests. Research suggests, however, that potential adverse pregnancy outcomes can occur with just one abnormal result, reflecting impaired glucose metabolism.

Dr. Reece believes one abnormal test warrants at least dietary therapy and retesting, while two abnormal tests during pregnancy may require more aggressive interventions, including oral glucose therapy and possibly insulin.

estradiol vaginal tablets



IMPORTANT SAFETY INFORMATION

ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA.

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Three independent, case-controlled studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incident rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer-reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade.

The three case-controlled studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed, on at least a semiannual basis, to determine the need for continued therapy.

Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or reoccurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equi-estrogenic doses.

Other warnings include: induction of malignant neoplasms, gallbladder disease, effects similar to those caused by estrogen-progestogen oral contraceptives (such as thromboembolic disease, hepatic adenoma, elevated blood pressure, worsening of glucose tolerance), hypercalcemia, and rarely, trauma induced by the Vagifem® applicator.

In a placebo-controlled clinical trial, the most commonly reported adverse events included: headache (9%), abdominal pain (7%), upper respiratory tract infection (5%), genital moniliasis (5%), and back pain (7%).

The use of Vagifem® is contraindicated in women who exhibit one or more of the following: known or suspected breast carcinoma, known or suspected estrogen-dependent neoplasia, e.g., endometrial carcinoma, abnormal genital bleeding of unknown etiology, known or suspected pregnancy, porphyria, hypersensitivity to any Vagifem® constituents, active thrombophlebitis or thromboembolic disorders, or a past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast malignancy).