In animal models, higher dietary choline or TMAO levels were directly linked to progressive renal tubulointerstitial fibrosis and decreased kidney function. The results suggest that dietary-induced, microbiota-dependent differences in levels of TMAO may contribute to CKD development, progression, and mortality. Further studies of these associations are needed, including the possible effects of a diet designed to limit TMAO precursors (low in red meat, egg yolk, and high-fat dairy products) on the rate of CKD progression. (Tang WHW, et al. Gut microbiota-dependent trimethylamine N-oxide (TMAO) pathway contributes to both development of renal insufficiency and mortality risk in chronic kidney disease. Circ Res 2015; 116:448–455).

Cognitive Function Linked to Mortality in Hemodialysis Patients

Cognitive impairment, especially impaired executive function, is associated with an increased risk of death among patients receiving maintenance hemodialysis, reports a study in *American Journal of Kidney Diseases*. The researchers analyzed the results of baseline and annual neurocognitive assessments in 292 patients receiving maintenance hemodialysis. The patients’ mean age was 63 years, and 90 percent had at least a high school education. Patients with dementia were excluded. Associations between cognitive function and mortality risk in chronic kidney disease. *Am J Kidney Dis*. 2003;42(4 Suppl 3):S1-S201.

For the control of serum phosphorus levels in patients with chronic kidney disease on dialysis

**AURYXIA™** (ferric citrate) IS THE FIRST AND ONLY ABSORBABLE-IRON–BASED PHOSPHATE BINDER CLINICALLY PROVEN TO MANAGE HYPERPHOSPHATEMIA

- Proven control of serum phosphorus within KDOQI guidelines (4.88 mg/dL at Week 56)’
- Demonstrated safety and tolerability profile over 52 weeks
- Each AURYXIA tablet contains 210 mg ferric iron, equivalent to 1 g ferric citrate

References:


a risk for spontaneous abortion, gestational diabetes, and fetal malformation. Rat studies have shown the transfer of iron into milk. There is possible infant exposure when AURYXIA is taken by a nursing woman.

**Pediatric:** The safety and efficacy of AURYXIA have not been established in pediatric patients.

**Adverse Events:** The most common adverse events with AURYXIA were diarrhea (21%), nausea (11%), constipation (8%), vomiting (7%), and cough (6%). Gastrointestinal adverse reactions were the most common reason for discontinuing AURYXIA (14%).

**Drug Interactions:** Doxycycline should be taken at least 1 hour before AURYXIA. Consider separation of the timing of the administration of AURYXIA with drugs where a reduction in their bioavailability would have a clinically significant effect on safety or efficacy. Please see Brief Summary on following page.

You may report side effects to Keryx at 1-844-44KERYX (844-445-3799).
Cognitive Function

Findings

Women who become living kidney donors are at increased risk of gestational hypertension and pre-eclampsia, suggests a study in the *New England Journal of Medicine*.

The retrospective cohort analysis included 85 women in Ontario who donated a kidney between 1992 and 2010 and subsequently became pregnant. The median age at donation was 29 years; the women had a total of 131 pregnancies after entering the cohort.

They were matched to 510 healthy nondonors for age, year, urban versus rural residency, income, number of pregnancies, and time to first pregnancy. The control women had a total of 788 pregnancies. The rates of hospital-diagnosed gestational hypertension or pre-eclampsia were compared for donors versus nondonors, along with other maternal and fetal outcomes.

The primary outcome of gestational hypertension or pre-eclampsia was more than twice as frequent among women who donated a kidney: 11 percent versus 5 percent of pregnancies; odds ratio 2.4. The odds ratios for the individual outcomes were 2.5 and 2.4, respectively.

Other maternal and fetal outcomes were similar between groups, including preterm birth and low birth weight. There were no cases of maternal death, stillbirth, or neonatal death among the donors.

Young women who are considering living kidney donation commonly ask about the possible effects on future pregnancies. Some studies have reported an increased risk of gestational hypertension and pre-eclampsia after donation, but these findings have been controversial.

The new study finds a significantly increased risk of gestational hypertension or pre-eclampsia in pregnancies occurring in women after living kidney donation compared with similarly healthy nondonors. The authors believe that this information should be included in clinical practice guidelines and shared in the informed consent process. They note that most women in their donor cohort had uncomplicated pregnancies after donation (Garg AX, et al. Gestational hypertension and preeclampsia in living kidney donors. N Engl J Med 2015; 372:124–133).