

Essential Tremor Research

Primary Investigator: Rodger Elble, M.D.,

Funding Agencies:

National Institute of Neurological Disorders and Stroke (NINDS); the Spastic Paralysis Research Foundation of Kiwanis International, Illinois-Eastern Iowa District; the American Parkinson Disease Association.

Tremor is an involuntary oscillation of a body part. Patients with "essential tremor" shake when they try to move or maintain a steady posture, but they have no other disturbance of neurologic function.

Mild tremor in older people is often erroneously attributed to aging, and this condition is frequently misdiagnosed as Parkinson disease.

At least 50 percent of patients with essential tremor are disabled in the performance of fine motor tasks. A better understanding of the etiology of this condition is needed.

The fundamental clinical abnormality in essential tremor is rhythmic synchronous firing of the motor nerves, which produces tremulous muscle contraction.

The source and cause of the tremulous oscillation in the nervous system are unknown. Many cases are inherited; finding the responsible gene may prove crucial for effective treatment of this disease.

For the past 20 years, Dr. Elble's laboratory has developed sensitive electrophysiologic tests for distinguishing mild essential tremor from normal "physiologic" tremor. With these diagnostic tools, the lab researchers studied several large families with hereditary essential tremor and identified more affected family members than was possible with a routine neurological examination.

This work is being conducted in collaboration with Drs. Lev Goldfarb and Mark Hallett at the National Institutes of Health. Data from their studies implicate genes on chromosomes 3, 6 and 22. After identifying the specific genes, the team will begin

searching the nervous system for structures that express these genes, providing some indication of possible sites of tremorogenesis.

Measuring physical activity practice and attitudes among rural and urban internal medicine clinic patients

Primary Investigator: Laura Rogers, MD., M.P.H.

Funding agency: Central Research Committee

Programs for encouraging physical activity (PA) are particularly important for patients with a chronic disease such as hypertension, diabetes, or cardiovascular disease.

The design of such programs requires knowledge about the PA practices and attitudes among chronic disease patients.

To acquire such knowledge, patient activity levels are being measured by a survey of patients with chronic disease (administered in the SIU clinic) and a step-counter (worn by the participant for one week). Because patient "readiness" for engaging in regular PA and confidence in ability to engage in regular PA are important predictors of activity level, patient attitudes also are being measured. Zip code information will allow investigators to classify participants as "rural" or "urban" based on 2000 census bureau information.

This study is the first to carry out such an in-depth comparison of whether geography affects PA practice and attitudes.

The information obtained in this study will help physicians better understand the PA habits and attitudes of chronic disease patients, allowing them to more effectively counsel their patients about exercise. The information will be essential to helping chronic disease patients lead a more active lifestyle.

Promotion and Support of Breast-feeding Practice in a Resident Clinic Setting

Primary Investigator: Victoria Nichols-Johnson, M.D.

Funding agency: SIU Department of Obstetrics and Gynecology

The long term goal of this study is to have the breastfeeding rate among patients who receive care at the OB/GYN resident clinic meet the Department of Health and Human Services Healthy People 2010 objective of 75 percent of mothers breastfeeding their infants in the early postpartum period.

Using a patient questionnaire, Dr. Nichols-Johnson and her staff found that only 37 percent of patients initiate breastfeeding in the early postpartum period, even though almost all are aware that breast milk provides the healthiest nutrition for their infants.

They also found that 84.6 percent of staff members providing care in the resident clinic strongly agreed that the mother's physician plays an important role in initiating the topic of breastfeeding.

From those results, Dr. Nichols-Johnson suggests developing a mentor program that would pair a patient with a successfully breastfeeding mother to offer support.

The team also recommends identifying high-risk patients at the first prenatal visit to be targeted for more intense intervention. A Breastfeeding Promotion Team of physicians, nurses, and dieticians also could be vital to increasing the breastfeeding rate.

For more information about these projects, contact the Office of Research and Faculty Affairs at 217-545-7936.