### What is Repetitive Transcranial Magnetic Stimulation (rTMS)?



Diagram of simulated rTMS delivery

#### rTMS

- is a method of delivering brain stimulation without the seizures or risks associated with electroconvulsive therapy (ECT or "shock therapy").
- does not have the potential side effects and risks of drug therapy.
- may offer a viable alternative to ECT.

#### How does it work?

- rTMS generates a magnetic field that penetrates the scalp to produce very small electrical currents in the brain.
- These electrical currents stimulate areas of the brain that may be involved in depression or other mood disorders.

#### Uses

A large number of studies with rTMS have been conducted on a variety of neurological and psychiatric conditions, but few have been confirmed and most show very modest effects, if any. Some conditions that have been responsive to TMS-based therapy are:

- stroke
- major depression
- migraine
- epilepsy

#### Procedure

- rTMS is an outpatient procedure that is noninvasive, meaning that it does not involve surgery and no anesthesia is required.
- Patients are awake and alert as an electromagnetic coil is placed over the head. The coil is encased in plastic.



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#### **Procedure (continued)**

- Patients typically notice only a loud clicking noise. Earplugs are provided.
- Routine rTMS is usually only mildly uncomfortable, but in some cases, when applied over certain parts of the scalp, can be painful. The pain is often relieved with acetaminophen or ibuprofen. Painfulness improves over time or goes away.
- rTMS treatment may produce movement or tingling of the arm, leg, face or scalp. You may also experience a temporary feeling of numbness in the face.
- The power of the magnetic field generated varies from person to person, and also from one brain region to the next.
- Each session lasts about 25 minutes.
- Patients typically receive five sessions per week for 3 to 6 weeks

# Want more information or have further questions?

Please contact your Mental Health Provider or the VA rTMS study team



#### VA Cooperative Study #556 "The Effectiveness of rTMS in Depressed VA Patients"

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If you want to make sure this is a valid VA study, you may contact the VA Central Institutional Review Board (IRB) toll free at 1-877-254-3130 VA Cooperative Study #556

"The Effectiveness of rTMS in Depressed VA Patients"

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