



**Title**      **Transcranial Magnetic Stimulation for Depression**

**Agency**    **VATAP, VA Technology Assessment Program**

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**Reference**    VA Technology Assessment Program Brief Overview. January, 2010.  
www.va.gov/vatap

### **Aim**

To determine the effectiveness of transcranial magnetic stimulation (TMS) to inform its appropriate use in the Veteran population.

### **Conclusions and results**

Four independent reviews pertaining to depression and 6 related reviews (eg, TMS for schizophrenia, its safety and cost) met the inclusion criteria. While on the surface, TMS may appear to be an attractive alternative to electroconvulsive therapy, the inconsistent effectiveness information and uncertainty regarding optimal technical parameters prevent making firm conclusions about its effectiveness.

### **Recommendations**

Better treatments for depression are needed, as is research on patient preferences and acceptability of TMS versus alternatives.

### **Methods**

The Technology Assessment Program (TAP) first catalogued available reviews, and then updated them with eligible studies that would change review conclusions. Searches of MEDLINE and the Cochrane Library using the terms “magnetic stimulation” and “depression”, along with publication types (systematic review, meta-analysis) were performed to identify reviews published in English from 2000 to 2009 that synthesized research in adult human patients. Searches for subsequently published review-eligible studies were conducted in November 2009, and all searches were updated in January 2010.

### **Further research/reviews required**

Thirty-eight clinical trials are in progress regarding the use of TMS to treat depression and nondepression conditions, which will hopefully address unanswered questions surrounding its clinical use.