

# Speech a new marker for depression treatment response

August 13 2012

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(Medical Xpress) -- Speech can measure the severity of depression as well as a patient's response to treatment, a new collaborative study between the University of Melbourne and the Center for Psychological Consultation in Wisconsin, USA has revealed.

The study, the largest of its kind in the world and published in the journal *Biological Psychiatry*, found that improvement in patients diagnosed with depression and undergoing [treatment](#) can be monitored over the phone by looking at changes in their speech.

Dr Adam Vogel, Head of the Speech Neuroscience Unit at the University of Melbourne, said that speech is a strong marker of brain health, and changes in how we sound reflects how well our brain is working.

“The speech of people with depression changes when they respond to treatment, becoming faster and with shorter pauses. Those with more severe depression produce longer pauses and have slower speaking rates,” he said.

The randomized controlled trial of 105 patients looked at vocal acoustic properties such as timing, pitch and intonation to see if they could provide reliable biomarkers to depression severity and responses to treatment.

Patients were required to call an automated telephone system and leave

samples of their speech, such as saying how they felt, reading a passage of text and reciting the alphabet.

“This offers greater treatment flexibility as we can now check on our patients remotely, looking at their [speech](#) patterns even from remote or rural areas,” said Dr James Mundt, Senior Research Scientist at the Center for Psychological Consultation in Wisconsin, USA.

“We know that depressed [patients](#) have difficulties expressing themselves, so if we can improve how we assess [depression](#), then we can improve how we treat it.”

Provided by University of Melbourne

Citation: Speech a new marker for depression treatment response (2012, August 13) retrieved 24 April 2024 from <https://medicalxpress.com/news/2012-08-speech-marker-depression-treatment-response.html>

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