

UC Irvine

UC Irvine Previously Published Works

Title

AUDITORY GATING AND COMPONENTS OF THE EEG POWER SPECTRUM IN NORMAL SUBJECTS

Permalink

<https://escholarship.org/uc/item/3c2170w5>

Journal

SCHIZOPHRENIA RESEARCH, 15(1-2)

ISSN

0920-9964

Authors

HETRICK, WP
OZGUR, BM
JIN, Y
[et al.](#)

Publication Date

1995

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

AUDITORY GATING AND COMPONENTS OF THE EEG POWER SPECTRUM IN NORMAL SUBJECTS

W.P. Hetrick*, B.M. Ozgur, Y. Jin, S. Potkin,
W.E. Bunney Jr., C.A. Sandman

Department of Psychiatry and Human Behavior, University of California, Irvine, 2501 Harbor Blvd., Costa Mesa, CA 92626, USA

The auditory, “conditioning-testing” paradigm has become a standard electroencephalographic (EEG) method of characterizing sensory gating abnormalities. Numerous reports have described a failure among schizophrenic patients to suppress responsiveness of the auditory P50 component of the evoked potential to the “testing” stimuli. Other research has shown that the frequency of the resting EEG activity of schizophrenic patients significantly differs from that of normal controls as characterized by decreased alpha and increased delta and theta power. However, the possible contribution of the background EEG to P50 gating indices has not been investigated. In the present paper, measures of P50 gating and EEG were concurrently collected from 37 normal subjects under two conditions: stimulus and non-stimulus (background EEG). In the stimulus condition, the conditioning-testing paradigm was used to test sensory gating by recording brain evoked responses to 128 paired clicks. The ERP amplitudes to the conditioning (S1) and testing (S2) stimuli were measured and the gating ratio calculated (S2/S1). During the non-stimulus condition, 128 epochs of resting EEG were collected and the relative power of four frequency band-widths (delta, theta, alpha, and beta)