



Switch off EEG artifacts

EEG artifacts make life hard for clinicians and researchers. Artifacts often significantly reduce the amount of useable data and make analyses difficult. What if there would be a button in your EEG viewer allowing you to simply switch on and off artifacts?

We offer PureEEG, a new software for fully automatic artifact removal for your EEG recordings. It removes artifacts due to electrode movements, muscle contractions, line noise and head movements, etc. in a mouse click.





PureEEG Switch off EEG artifacts



Fully automatic – No user interaction

PureEEG does not require any user interaction. You just switch it on once and then enjoy the review of your EEG cleared of artifacts. PureEEG recognizes the artifacts due to their lack of a reasonable spatial distribution. PureEEG exploits this fact for a fully automatic separation of pure EEG and artifacts.



In long-term EEGs, but also in routine EEGs, artifacts may strongly impair review and diagnoses. With PureEEG, these artifacts can simply be switched on and off by just pressing a button, similar to frequency filtering in your EEG viewer. However, frequency filters cannot distinguish artifacts from real EEG and thus also cancel out important EEG patterns. In contrast, with PureEEG the important EEG patterns are preserved¹.

[1] PureEEG: Automatic EEG artifact removal for epilepsy monitoring, Hartmann, M.M., Schindler, K., Gebbink, T.A., Gritsch, G., Kluge, T., Neurophysiologie clinique/Clinical Neurophysiology, November 2014.

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Electrode movements, muscle contractions, line noise, head movements and much more are recognized by PureEEG as artifacts in the EEG and are automatically removed. Patterns from cerebral sources, including EEG rhythms, sleep spindles, evoked potentials, epileptic seizures and spikes remain visible¹.



Improves computational analyses

EEG research today is often based on computational analyses that require artifact free data. Manual selection of artifact free epochs is time consuming and often impossible due to a vast amount of data. PureEEG allows you to automatically preprocess your data in order to obtain purified EEGs suitable for computational analyses. This saves you time and increases the amount of valid data for your research.