

# MB12/Folinic Acid Nasal Spray and Brain Pattern Changes: Possible Implications for AD(H)D Treatment

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QEEG data was collected from a 23 year old with DSM IV Attention Deficit Disorder (ADD) prior to and after treatment of intranasal Methylcobalamin (MB12) and Folinic Acid.

During QEEG setup, the subject showed signs of fatigue including sighing about every 45 seconds for duration of approximately 20 minutes.

## Baseline

The baseline QEEG showed an excessive amount of frontal lobe Theta activity (3.5-7.5 Hz) both visually and in computer generated summary analysis. This rhythm was asynchronous with the seemingly normal occipital Alpha activity (7.5-12hz), a common pattern in AD(H)D.

The subject also displayed rapid ocular “twittering” movements during the much of the baseline QEEG.

## Administration

The MB12/Folinic Nasal Spray was administered in the dose of 1250 mcg of MB12 and 300 mcg Folinic Acid in each nostril.

## Post Administration

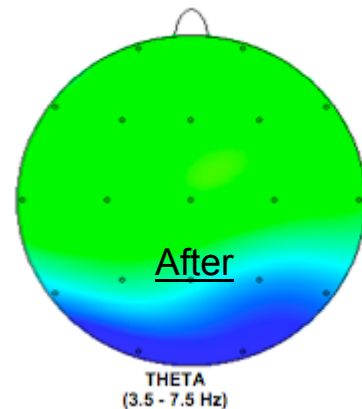
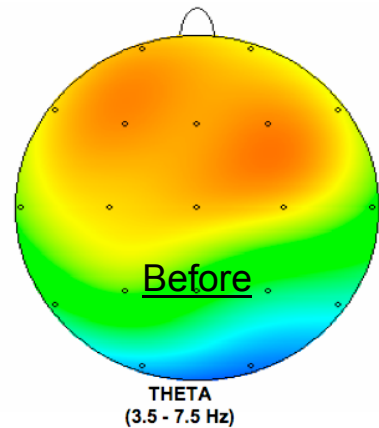
The first post reading was taken immediately after the spray and showed a dramatic reduction in frontal Theta activity and a reduction in occipital Theta activity. The occipital Alpha waves were initially higher in amplitude. His ocular twittering was greatly reduced. His subjective report was he was significantly more calm but not particularly more alert.

## 50 Minutes and 1 Hr. and 15 mins Post Administration

The readings continued to show less Theta activity than baseline and seemingly more synchronized across the brain. There was more alpha activity across the brain and the “background” alpha waves were lowered in amplitude, possibly indicating better access to the CNS. His eyes were progressively more still. His sighing was reduced by 400%. His subjective report was feeling calmer and more alert.

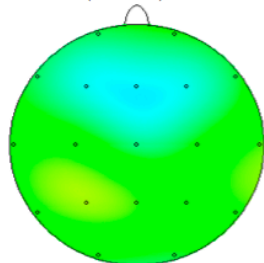
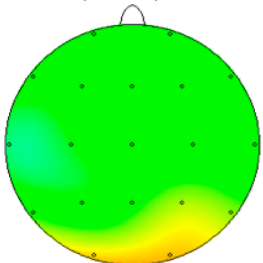
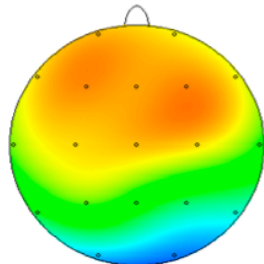
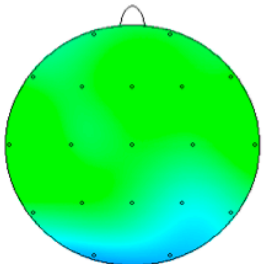
In summary, MB12/Folinic Nasal Spray improved synchronous brain activity in this subject with ADD. Today, there is no peer reviewed literature that suggests a connection of oxidative stress or MB12 to AD(H)D, but there is a great deal of literature that makes the connection to symptoms of AD(H)D including ocular function, memory challenges, fatigue, headaches, and gut issues.

A ten minute video showing the nuances of the QEEG, subjective observations and an evaluation by Jack Johnstone Ph.D. is available at: [www.recoveryvideos.com](http://www.recoveryvideos.com)

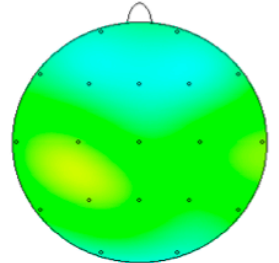
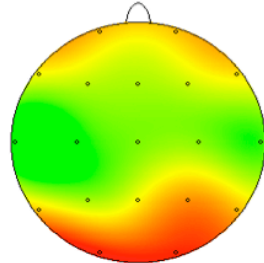
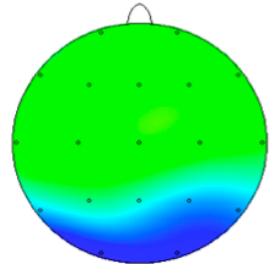
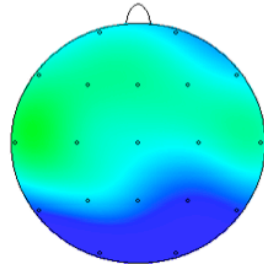


# Summary Base Line and Three Post Reports

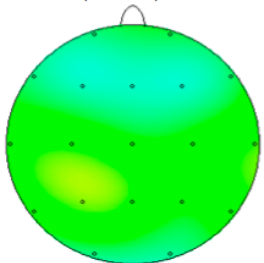
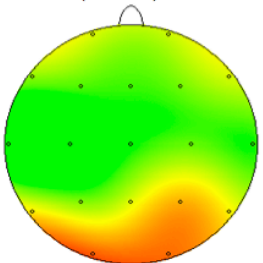
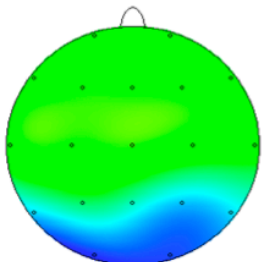
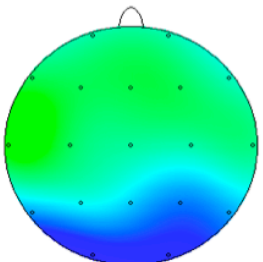
## Baseline: RELATIVE POWER Z-SCORE TOPOGRAPHS



## POST 1 (Immediately After Administration): RELATIVE POWER Z-SCORE TOPOGRAPHS



## POST 2 (50 minutes After Administration): RELATIVE POWER Z-SCORE TOPOGRAPHS



## POST 3 (> 1 Hr. After Administration): RELATIVE POWER Z-SCORE TOPOGRAPHS

