

Brain SPECT Imaging in PTSD and EMDR

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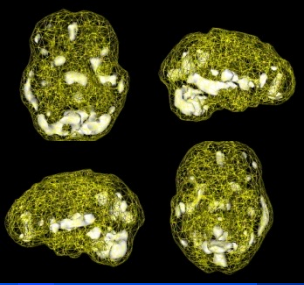
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Amen Clinics, Inc.

Newport Beach & Fairfield, CA and Tacoma, WA

Washington, DC coming early 2004

www.brainplace.com



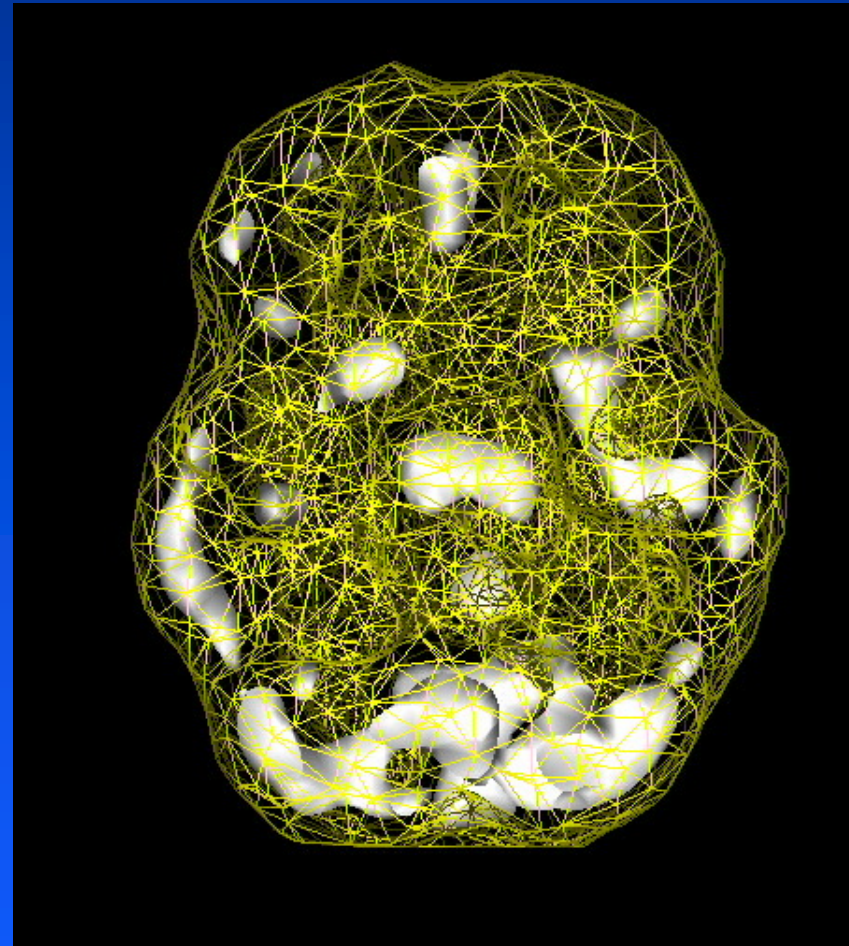
Amen Clinic, SPECT and EMDR

- **Mid 90s Dr. J. Lendl introduces us to EMDR, starts to work in our clinic**
- **Personal experience with EMDR**
- **1997 we start doing before and after studies, EMDR calms brain function**
- **2001 K. Lansing with support from Dr. Shapiro design a SPECT/EMDR study**

SPECT and PTSD

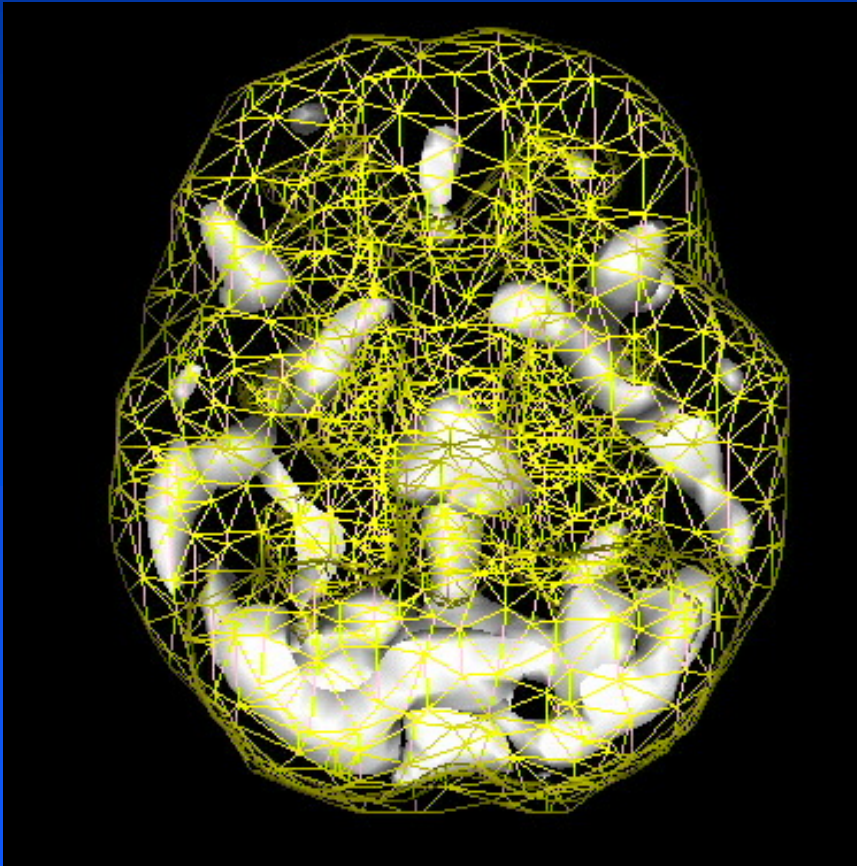
Diamond Pattern (LT)

- **Increased anterior cingulate**
- **Increased basal ganglia**
- **Increased thalamus (limbic)**
- **Increased right lateral temporal lobe**

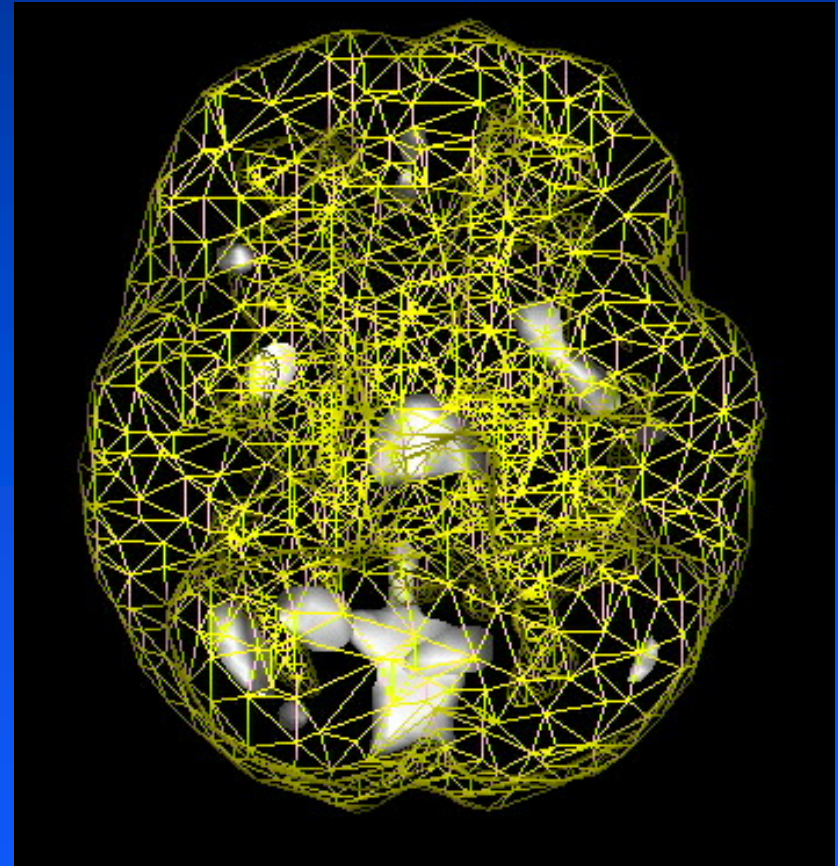


EMDR – KC

One Session



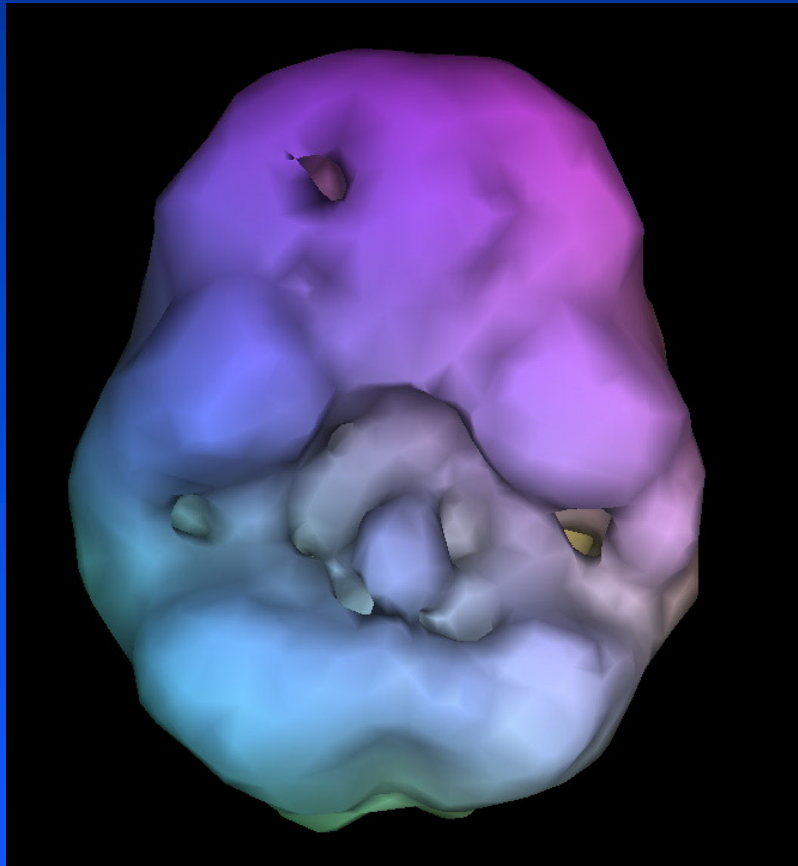
before



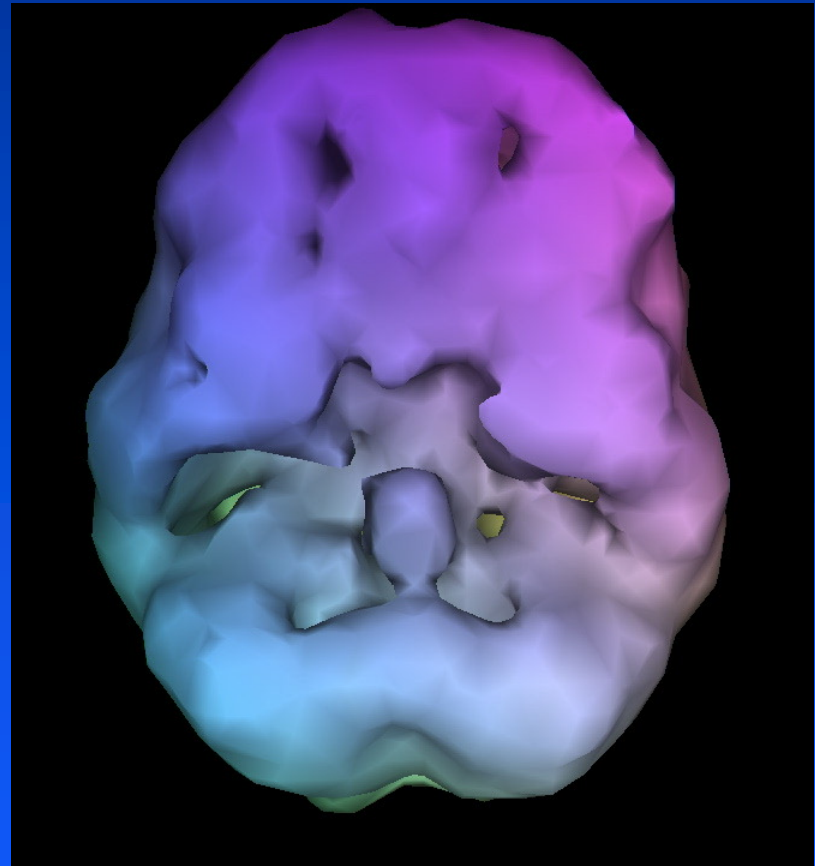
after

EMDR – KC

One Session

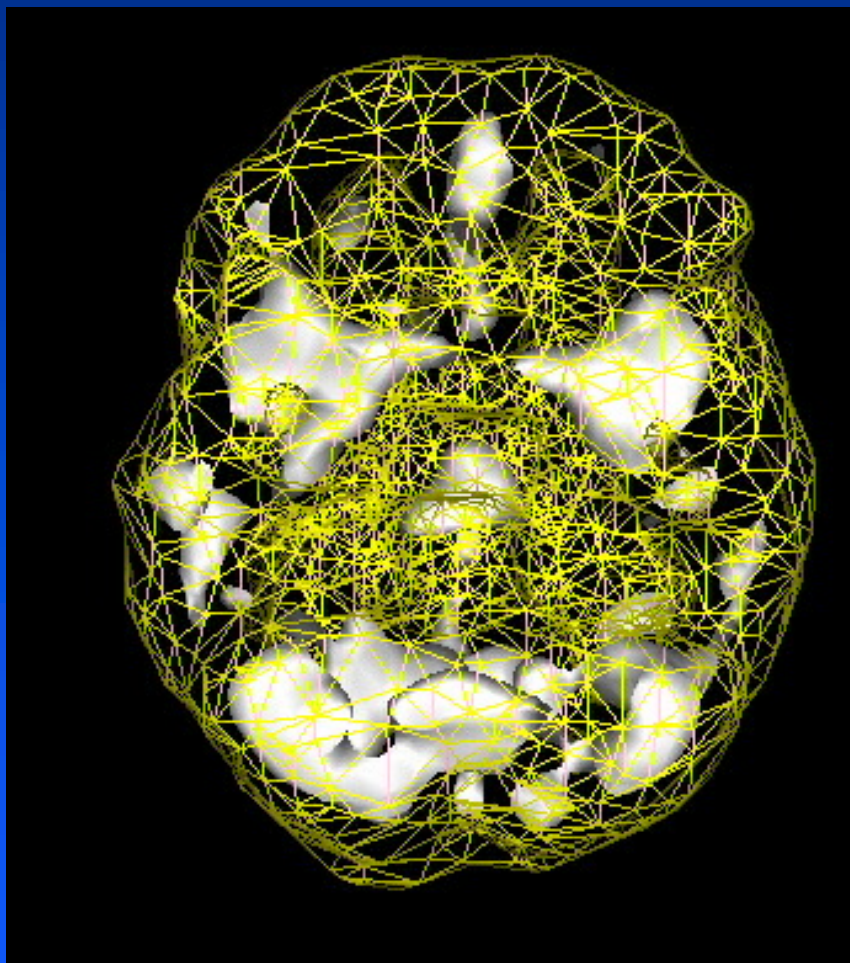


before

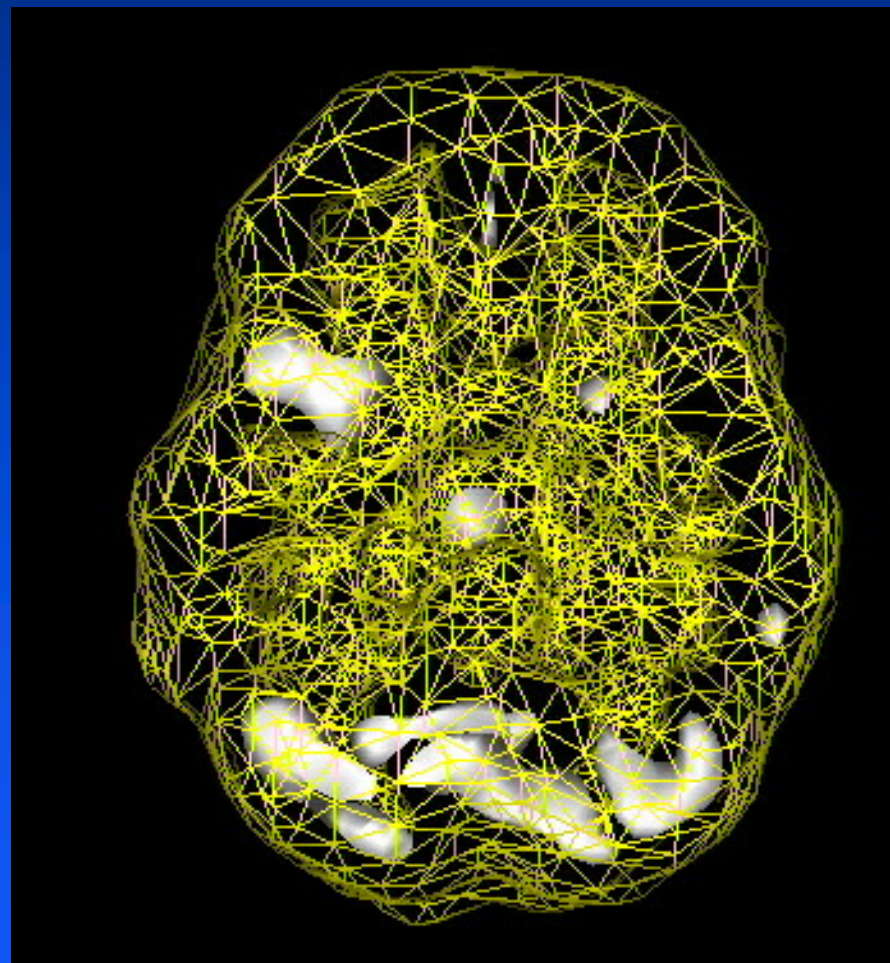


after

EMDR -- MH

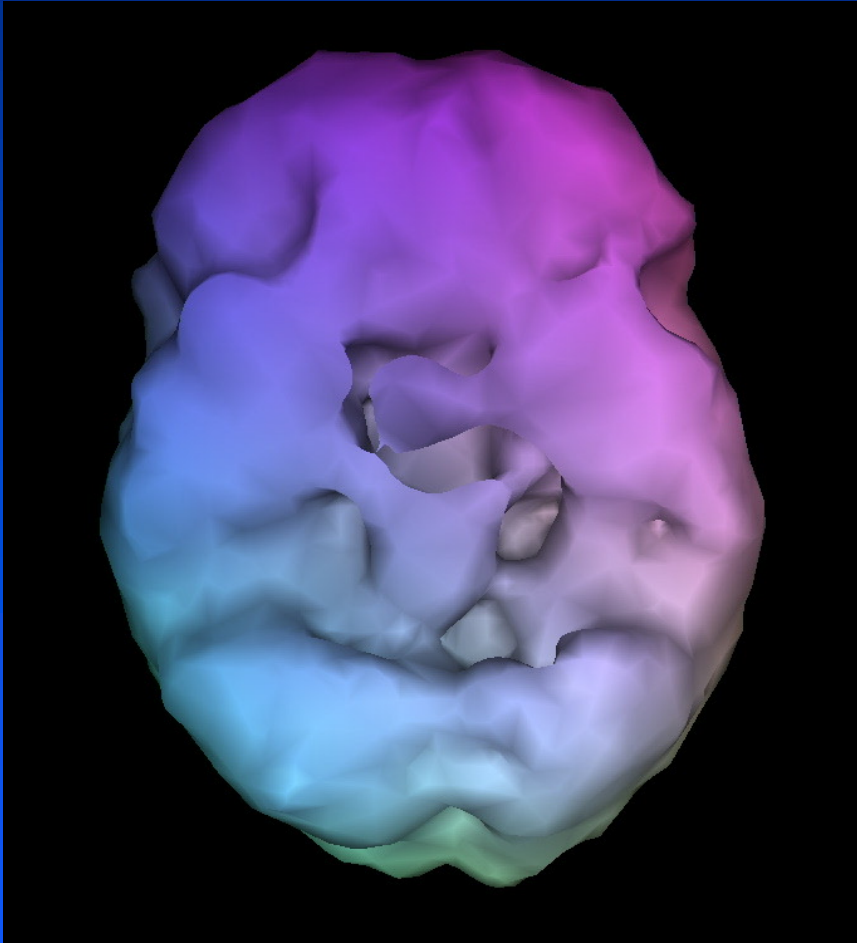


before

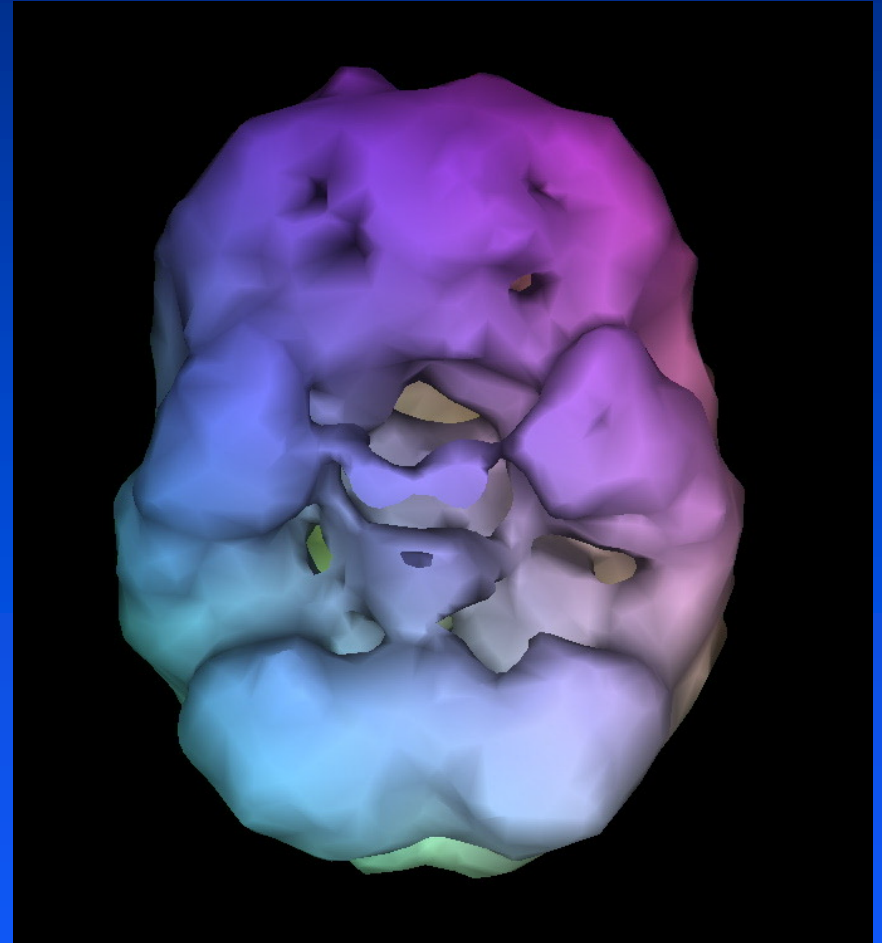


after

EMDR -- MH



before



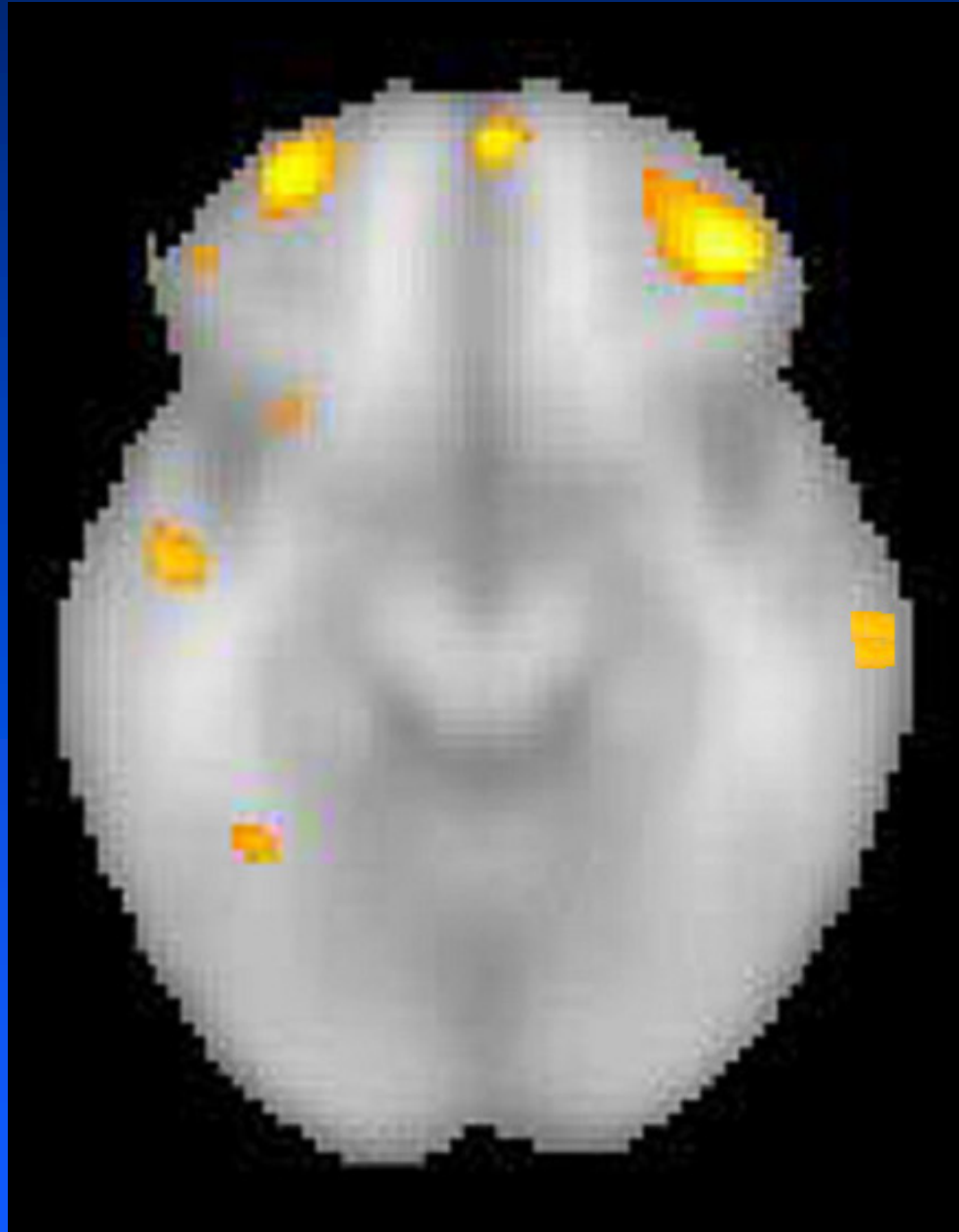
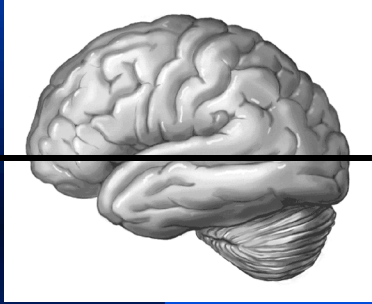
after

SPECT and PTSD

Amen Clinic 2003 Study

- **19 patients with PTSD by DSM-IV**
- **Compared to 19 age, sex matched normals**
- **Baseline study**
- **Analysis – SPM**
- **Results – marked increased prefrontal and left and right temporal lobe activity**

**SPECT/
PTSD
p 0.005**

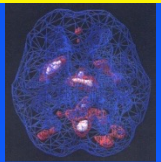
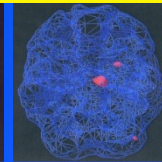
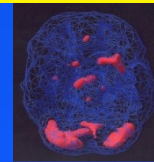
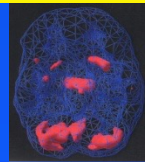
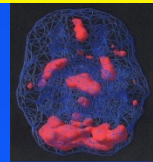
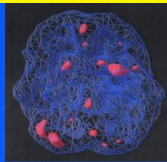
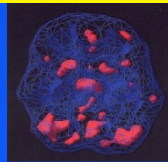
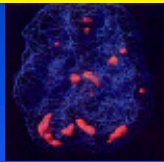
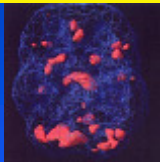
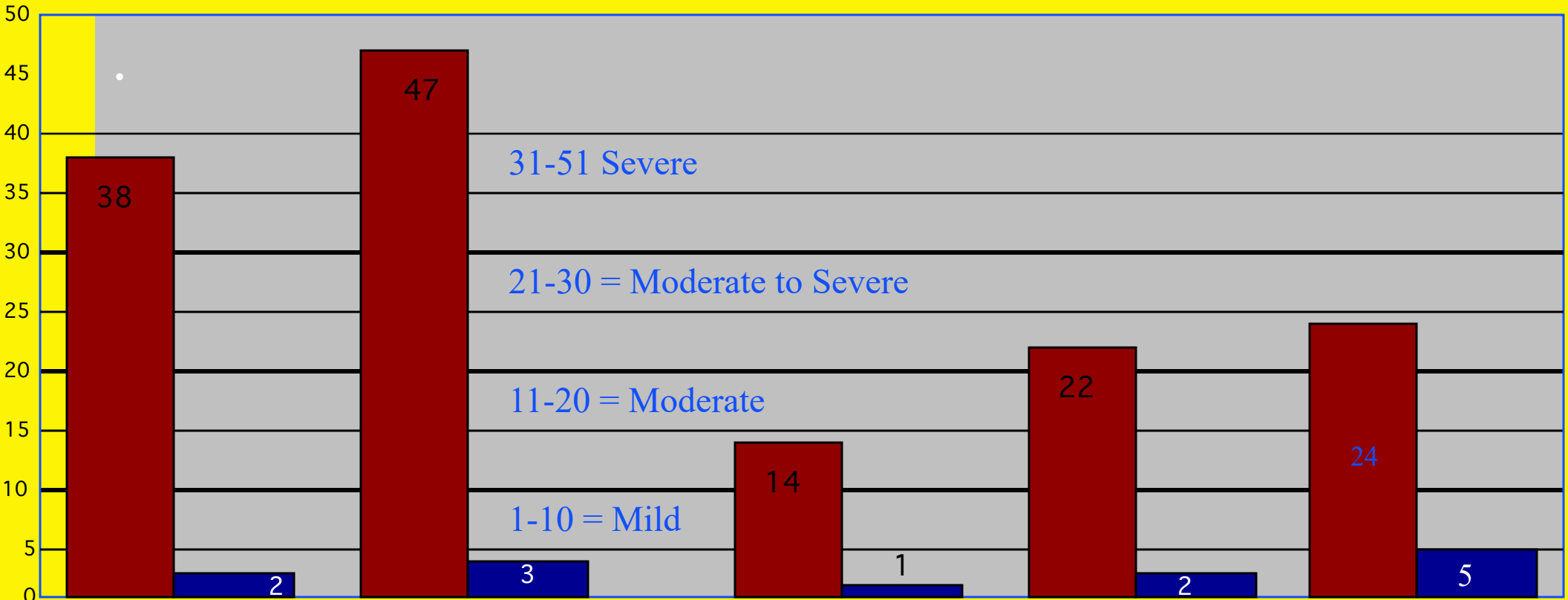


SPECT and EMDR

Amen Clinic 2001 - 2003 Study

- **6 patients with PTSD by DSM-IV**
- **3 States**
 - **Concentration**
 - **First EMDR session**
 - **After Treatment**

CLIENT'S FOA SELF REPORT OF PTSD SYMPTOMS



Subject #1

Subject #2

Subject #3

Subject #4

Subject #5

Pre EMDR

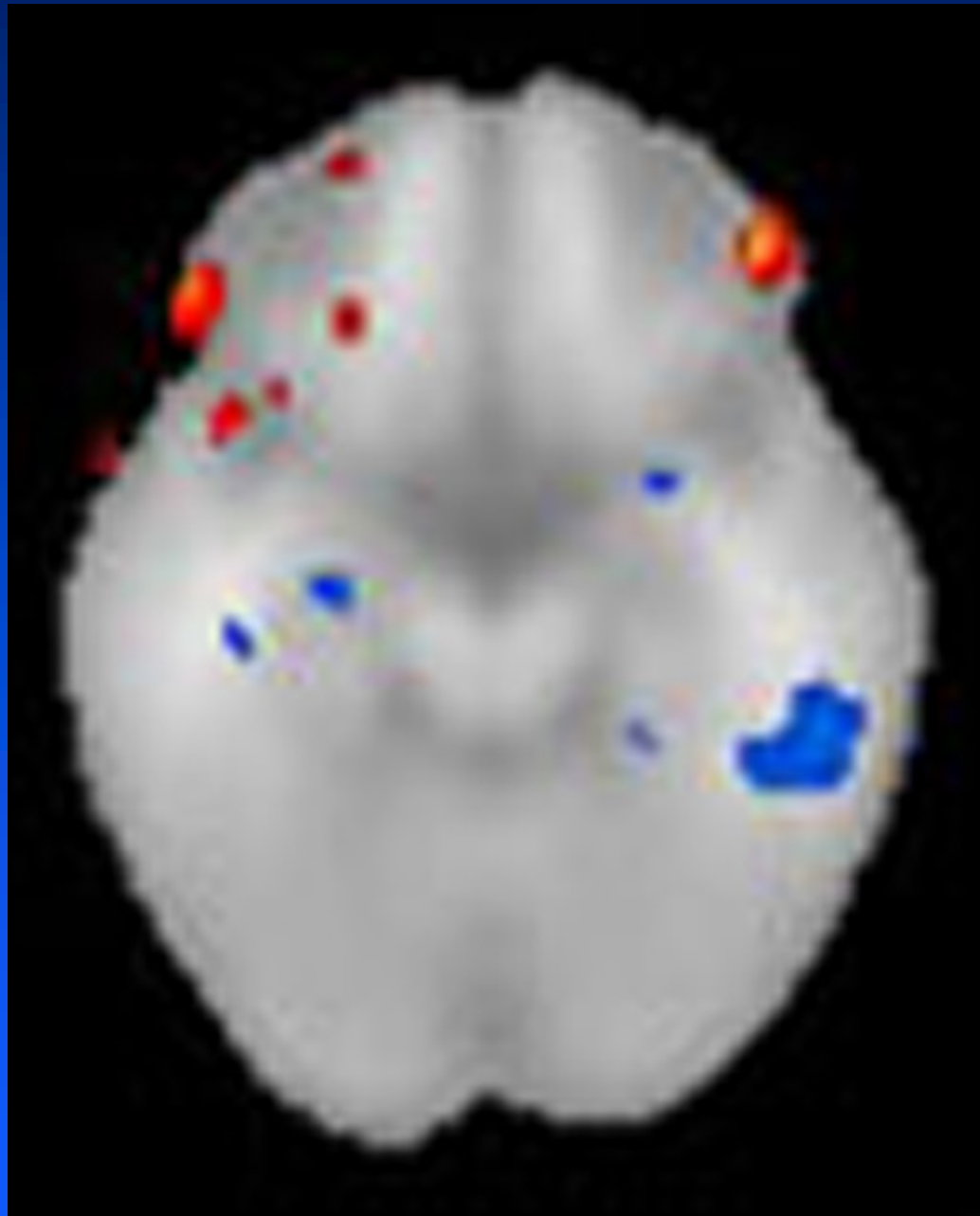
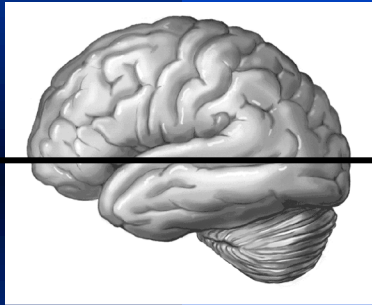
Post EMDR

SPECT and EMDR

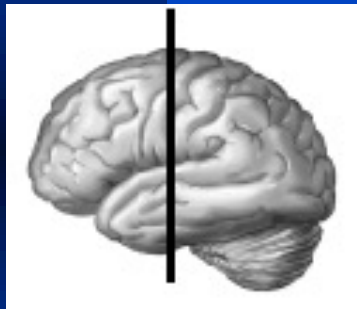
Amen Clinic 2001 - 2003 Study Results

- **Initial EMDR session (s) increases overall brain activity, especially in the prefrontal areas, but decreases right temporal lobe activity**
- **After Rx with EMDR increased prefrontal activity, especially on left and significant decreased right temporal lobe activity**

**SPECT/
During
EMDR
p 0.005**



**SPECT/
Post Rx
EMDR
p 0.005**



Does PTSD Reset the Brain?

- Yes
- More likely in vulnerable patients
- Vulnerability seen with pre-existing brain and emotional problems, brain injuries, ADD, etc.

Does EMDR Help?

- Yes, in our study
- Clinically, marked decrease in symptoms
- Seen on brain SPECT imaging, especially calming in right lateral temporal lobe and increases in PFC

Conclusions

- EMDR seems to change brain function
- EMDR has a calming effect on the right temporal lobe
- Looking before you intervene helps you be more effective and target treatment