

Thoughts on what I look for when training someone who is anxious.

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I could also call this presentation: How do I train someone with a low amplitude fast wave EEG?

Neurofeedback for Anxiety - Let's state the obvious

- ▶ Almost all our clients present with anxiety so that alone does not help determine a training protocol.
- ▶ Anxiety is almost always a response to emotional stress, external demands have become too much for them to cope with. Are they over reacting or would any normally adjusted person have this much difficulty?

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- ▶ When people are stressed they tend to adrenalise. Adrenalin makes muscles discharge more, so the EEG will have more EMG showing up in it.
- ▶ Adrenalin turns into Noradrenalin in the brain, which produces more beta.
- ▶ The EEG of anxious people will tend to contain low amplitude fast wave - they tend to be on higher alert than normal.

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- ▶ The prevailing wisdom is to calm down this form of EEG pattern with central neurofeedback, rewarding 12-15Hz or lower, perhaps also doing Alpha theta training.

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- ▶ Anxiety presents as a feature of many disorders, or as a comorbidity, so one needs to sort through the possible issues the person has, besides anxiety.
- ▶ Also, the EEG may show other features besides EMG or a low amplitude fast wave, which will give clues to possible neurofeedback protocols.

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- ▶ People with PTSD or developmental trauma will need to be calmed, almost regardless of their presenting EEG pattern - See Sebern Fisher's work. So that's one huge group of people we see.
- ▶ Many people on the Autistic Spectrum present as highly anxious and agitated, and regardless of their EEG, we will find it helpful to calm them with neurofeedback, most often starting with right sided low frequency reward training but adding activation as time goes on.

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- ▶ People with OCD will present with strong anxiety and panic, and we tend to train frontally and right frontally, paying careful attention to the EEG excesses and deficits.
- ▶ People in chronic pain are often very anxious. Most of them are also suffering PTSD, which gives you a direction in training - calming, at least as a starting point.

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- ▶ If we narrow our focus a little, to adults who are fairly well adjusted - have steady employment and functional family situations and are overwhelmed with anxiety, and we can rule out the above issues, how do we train? These folks will tend to have low amplitude fast wave EEGs.

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- ▶ Behaviourally, they will feel anxiety most of the time, and are close to the edge of not coping with it any more, hence the referral to you.
- ▶ The EEG won't actually tell you much. With this group of people, training the low amplitude fast wave for calm works sometimes, but often does not.

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- ▶ The place to go is to look at temperament. What is this person's temperament, what is their neurological style? Are they high energy or low energy?
- ▶ Are they go-getters, always with an active brain, able to work 10-11 hours a day without any difficulty?
- ▶ Are they dreamy, lower energy?

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- ▶ Many people of lower energy, dreamy style, become driven to succeed, either by parental expectations or by their own interactions with teachers and peers.
- ▶ It is not a matter of IQ.
- ▶ Dreamy people often show characteristics of people on the ADHD inattentive end of the activation scale

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- ▶ These dreamy people make themselves anxious in order to maintain focus. If they are bright, this helps them succeed, but the price is anxiety.
- ▶ They see themselves as anxious, never as dreamy inattentive.
- ▶ At some point they hit the wall, it may be at university, or the stress of a high power job, or having a family.
- ▶ For women, it often shows up as post natal depression, or perhaps PMS.

| Question | Dreamy low energy | Active high energy |
|--|---|---|
| | Internaliser | Externaliser |
| Do you fall asleep easily at a reasonable hour of the night? | Yes, I usually fall asleep easily, if I'm not worrying | I fall asleep when I'm tired, that can be quite late. I often use alcohol to help me calm for sleep |
| Are you a worrier? That is, worry that you won't be able to do all the things you need to do | Yes, often that way | Usually not |
| Does your mind just chatter endlessly, often about nothing important? | When I think about things I often end up feeling bad about myself | Yes, my mind often goes on and on, I usually don't pay any attention to it |
| Do you enjoy staying active (eg hiking, sports) for many hours during the day | Sometimes | Usually Yes |
| Do you enjoy taking time to read or relax and not do much of anything? | Often Yes | Usually No |
| If you could sleep as much as you wanted, how many hours would you or could you sleep? | 9 hours or more | At most 8 hours |
| When things go wrong, do you tend to feel responsible for it | Mostly Yes | Usually it is the fault of others |

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- ▶ Training: For folks with a low amplitude fast wave EEG pattern the question is whether we activate or calm. If you suspect a high energy “go-getter” style, calm them
- ▶ If you suspect a low energy dreamy style, activate them.
- ▶ If you activate someone and they get sleepy, it is a sign they are low energy dreamy and need activation. If you activate someone and they stay more activated than usual after the session, then next session train for calm.

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Questions?

Thank you