THE PRIMARY CARE COMPANION
FOR CNS DISORDERS

Supplementary Material

Article Title: Triggers and Characteristics of Brain Zaps According to the Findings of an Internet Questionnaire

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List of Supplementary Material for the article

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Appendix 1. Brain Zaps Questionnaire

THE COLLECTION OF DATA HAS ENDED.

MY DEEPEST APPRECIATION TO ALL WHO PROVIDED THEIR EXPERIENCES AND INSIGHT.

ALEXANDER PAPP MD

* Required

Screening Questions

1. Are you at least 18 years old? *

   Mark only one oval.

   - ◯ Yes
   - ◯ No

2. Have you ever experienced "zap" or "shiver" type sensations? *

   Mark only one oval.

   - ◯ Yes
   - ◯ No

3. Have they been overwhelmingly localized to, or orginating from, you head or brain *

   Mark only one oval.

   - ◯ Yes
   - ◯ No

4. Have they been related to taking any of the medications below? *

(Answer "Yes" even if you took these medications for something other than depression, e.g. anxiety, insomnia, pain relief, OCD etc)

Mark only one oval.

- ◯ Yes
- ◯ No

List of qualifying medications:

(US approved brand names are for the US only. Other countries may have different brand names for the same medication)

US Approved:

- •Anafranil (clomipramine)
- •Aplenzin (bupropion HBr)
- •Asendin (amoxapine)
- •Aventyl (nortriptyline)
- •Brintellix (vortioxetine)
- •Celexa (citalopram)
- •Cymbalta (duloxetine)
- •Desyrel (trazodone)
- •Elavil (amitriptyline)
- •Effexor (venlafaxine)
- •Effexor XR (venlafaxine)
- •Emsam (selegiline)
- •Etrafon (perphenazine/amitriptyline)
- •Fetzima (levomilnacipran)
- •Lexapro (escitalopram)
- •Ludiomil (maprotiline)
- •Luvox (fluvoxamine)
- •Marplan (isocarboxazid)
- •Nardil (phenelzine)
- •Norpramin (desipramine)
- •Pamelor (nortriptyline)
- •Parnate (tranylcypromine)
- •Paxil (paroxetine HCl)
- •Paxil CR (paroxetine HCl)
- •Pexeva (paroxetine maleate)
- •Pristiq (desvenlafaxine)
- •Prozac (fluoxetine)
- •Remeron (mirtazapine)
- •Savella (milnacipran)
- •Sarafem (fluoxetine)
- •Serzone (nefazodone)
- •Sinequan (doxepin)
- •Surmontil (trimipramine)
- •Symbyax (olanzapine/fluoxetine)
- •Tofranil (imipramine)
- •Triavil (perphenazine/amitriptyline)
- •Trintellix (vortioxetine)
- •Viibryd (vilazodone)
- •Vivactil (protriptyline)
- •Wellbutrin (bupropion HCl)
- •Wellbutrin SR/XL (bupropion HCl)
- •Zoloft (sertraline)
- •Zyban (bupropion HCl)

NON-US approved:

- •Edronax (reboxetine)
- •Elamol (tofenacin)
- •Gamanil (lofepramine)
- •Manerix (moclobemide)
- •Norval (mianserin)
- •Prothiaden (dosulepin)
- •Valdoxan (agomelatine)

If you answered "Yes" to ALL FOUR QUESTIONS, please proceed with filling out this questionnaire, otherwise do not.

The following questions are only to identify the form, not you. Use the same information if you are filling out the form more than one time.

5. Give yourself a nickname *

6. Birth day *

(The day of your birth in a month. E.g. if you were born on December 4th, select 4. The reason for this question is to tell apart people who give themselves the same nicknames, so Joe5 will be different from Joe24)

Mark only one oval.

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7. Your age today (in years) *

Mark only one oval.

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- [ ] 88
- [ ] 89
- [ ] 90
- [ ] 90+

Section 1: Medication-related questions

If you don't know the answer to a question, please write or choose "I don't know" as the answer, or leave the question blank except if there is a red star after the question.

8. 1.1a What is the name of the medication that was associated with the zaps? *

("An antidepressant" or "an SSRI" are acceptable answers if you don't know the actual name)

_____

9. 1.1b What was the highest dose, in milligrams (mg) in which you took the above medication?

(give just the number, leave it it blank if unknown)

_____

10. 1.2 What was the overall length of time you took this medication for before the appearance of the zaps? *

(I.e. how many days, weeks, months or years. It the brain zaps appeared after stopping the medication, then give the total time you were on the medication for.)

_____

11. 1.3: When did your first brain zap appear? (check any box that applies): *

Check all that apply.

- [ ] Within the first 2 weeks of starting to take the medication
- [ ] When the dose was increased after a period of taking it in a steady dose
- [ ] While taking it in a steady dose
- [ ] While being weaned off of it slowly
- [ ] While being weaned off of it quickly
- [ ] After sudden discontinuation and staying off
- [ ] Whenever I skip doses of the medication
- [ ] I don't remember well enough to answer this question

12. 1.4: If zaps are related to discontinuation of the medication, what was the length of time between the last dose of the medication and appearance of the first zap; or if zaps are related to skipping, what is the typical length of time between the last dose of the medication and appearance of the first zap?
(i.e. how many seconds, minutes, hours, days etc)

_____

13. 1.5: If zaps are related to discontinuation of the medication, did you restart the same medication with hope of eliminating the brain zaps?

Mark only one oval.

- ◯ Yes
- ◯ No

14. (Only if Q1.5 was "Yes") - 1.5a: Did it help?

Mark only one oval.

- ◯ Yes
- ◯ No

15. 1.6: Did you start taking a different prescription medication with hope of eliminating the brain zaps?

Mark only one oval.

- ◯ Yes
- ◯ No

16. (Only if Q1.6 was "Yes") - 1.6a: What was the name of that prescription medication?

_____

17. (Only if Q1.6 was "Yes") - 1.6b: Did it help?

Mark only one oval.

- ◯ Yes
- ◯ No

18. 1.7: What is the total duration of time that you have had brain zaps for? *

(This is the length of time between you first noted brain zaps, and last time they occurred, including the present time if they are still occurring.)

_____

19. 1.8: Please tell us how you answered questions 1 – 7? (select the single best answer) *

Mark only one oval.

- ◯ by consulting written records
- ◯ by memory which you consider very accurate
- ◯ by memory which you consider about 50% accurate
- ◯ by memory which you consider less than 50% accurate
- ◯ Other: _____

Section 2: Descriptions

Now think about the time your brain zaps were the worst, including the current time if they are currently the worst, and answer the following questions.

If you don't know the answer to a question, choose "I don't know" as the answer, or leave the question blank except if there is a red star after the question.

20. 2.1: Are you still having brain zaps? *

Mark only one oval.

- ◯ Yes
- ◯ No

21. (Only if Q2.1 was "Yes") - 2.1a I am having brain zaps and

Mark only one oval.

- ◯ they are as bad as ever.
- ◯ they have gotten a little bit better since they started.
- ◯ they have gotten much better since they started.
- ◯ they have gotten worse since they started.

22. 2.2a How long do/did individual zaps last on average?
(E.g. "less than a second", 1 second, 5 seconds, etc)

23. 2.2b How long are/were the longest one(s) ever experienced?
(E.g. "less than a second", 1 second, 5 seconds, etc)

24. 2.2c How long are/were the shortest one(s) ever experienced?
(E.g. "less than a second", 1 second, 5 seconds, etc)

25. 2.3a What is/was the length of time between two brain zaps on average?
(e.g. "X seconds/minutes/hours/days")

26. 2.3b What was the longest length of time between two brain zaps?
(e.g. "X seconds/minutes/hours/days")

27. 2.3a What was the shortest length of time between two brain zaps?
(e.g. "X seconds/minutes/hours/days")

28. 2.4 Where would you localize your brain zaps?

29. 2.5 How would you describe your brain zaps?

30. 2.6 Specifically, has any the following been an integral part of a brain zap? (check any box that applies, leave it blank if none):

(Check the boxes ONLY if the experience occurs while you are having a brain zap, AND it occurs for the majority of time you have a brain zap. Do not count situations when you experience these outside the time of you having a brain zap, even if you think the it is a side effect of the medication)

Check all that apply.

- [ ] A sudden, short electric jolt inside my head, not painful
- [ ] A sudden, short electric jolt inside my head, painful
- [ ] I feel that my brain shuts down for a moment then restarts.
- [ ] Momentary change in vision
- [ ] Momentary lapse in concentration
- [ ] Momentary lapse of motor coordination, e.g.feeling clumsy
- [ ] Momentary lapse of balance
- [ ] Euphoria or orgasm-like feeling for a moment
- [ ] I don't just feel but also hear the brain zaps

31. 2.7 Have you noticed anything that has triggered the brain zaps:

Mark only one oval.

- ◯ Yes
- ◯ No

32. (Only if Q2.7 was "Yes") - 2.7a What has been the most likely trigger?

33. (Only if Q2.7 was "Yes") - 2.7b What has been the second most likely trigger?

34. (Only if Q2.7 was "Yes") - 2.7c List any other likely triggers

35. 2.8 : Specifically, has any of the following been a trigger (check any box that applies, leave the question blank if none does):

Check all that apply.

- [ ] Moving your eyes from side to side when head is not moving
- [ ] Moving your eyes to the left but not to the right when head is not moving
- [ ] Moving your eyes to the right but not to the left when head is not moving
- [ ] Moving your eyes up or down when head is not moving
- [ ] Moving your head from side to side
- [ ] Lying down from a sitting or standing position
- [ ] Standing up from a sitting or lying position

Section 3: Impact

Now think about the time your brain zaps were the worst, including the current time if they are currently the worst, and answer the following questions.

If you don't know the answer to a question, choose "I don't know" as the answer, or leave the question blank except if there is a red star after the question.

36. 3.1: How would you rate the effect of brain zaps on your quality of life (check the one box that applies)

Mark only one oval.

- ◯ No effect at all
- ◯ Some negative effect but I can/could live with it
- ◯ Significant negative effect, it interferes/interfered with important aspects of my life
- ◯ Overwhelming negative effect, I can barely function because of them
- ◯ A positive effect, I enjoy/enjoyed them

37. 3.2: Did you report your symptoms to a physician?

(Reporting it to a non-physician health care provider counts as No. The reason for this is that we are specifically interested finding out about how physicians are relating to being told about brain zaps.)

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ I don't remember

If you answered No, skip to question 3.4

38. (Only if Q3.2 is "Yes") - 3.2a I reported my symptoms to (check any box that applies)

Check all that apply.

- ☐ The physician who prescibed the medication
- ☐ Another physician
- ☐ Several different physicians

39. 3.3: Was the physician very interested in finding out more about your complaint?

Mark only one oval.

- ◯ Yes
- ◯ No

40. 3.3: Did this physician recommend any treatment?

Mark only one oval.

- ◯ Yes
- ◯ No

41. (only if Q3.3 is "Yes") - 3.3a What was/were the recommended treatment(s)? (please give names only, not doses)

_____

42. (only if Q3.3 is "Yes") - 3.3b Was the treatment helpful? (check the one box that applies)

Mark only one oval.

- ◯ Yes, completely
- ◯ Yes, partially
- ◯ Not at all
- ◯ It made the zaps worse

43. 3.4: Did you treat yourself by any non-medical method? (It can be something you ingest, an activity you do, etc)

Mark only one oval.

- ◯ Yes
- ◯ No

44. (Only if Q3.4 is "Yes") - 3.4a Which one(s)?

_____

_____

_____

_____

_____

45. (only if Q3.4 is "Yes") - 3.4b Was the treatment helpful? (check the one box that applies)

Mark only one oval.

- ◯ Yes, completely
- ◯ Yes, partially
- ◯ Not at all
- ◯ It made the zaps worse

Finish

Thank you for filling out this questionnaire.

We would be very interested in your comments or suggestions. Please use the section below to give us your feedback, if you like.

46. Comments or Suggestions

47. How did you find this site?

Mark only one oval.

- ◯ Internet search for "brain zaps"
- ◯ Linked from another site

48. If linked from another site, which one?

Agree to submit your answers by checking the box below. If you wish to exit the questionnaire without saving your answers just close the window of the browser.

49. *

Check all that apply.

- ☐ I agree to submit my answers to the Zap Questionnaire.

Appendix 2. Zap Questionnaire

If the patient's complaints follow discontinuation or dose reduction of an antidepressant, and withdrawal effects from agents traditionally considered to be "addictive" are ruled out, then present this questionnaire.

Are you experiencing the following:	YES	NO
Short electrical sensations in your head/brain		
Swooshing, rattling, popping or crackling sounds in your head/brain		
Momentary "skipping" or "blinking" of consciousness		
If "yes" to any of the above, does any of the following trigger/worsen them:	YES	NO
Moving eyes from side to side		
Moving head in any direction		
Stress or anxiety		
Exhaustion or insomnia		