Appendix C

**Study Title**: Parosmia Questionnaire

University of Reading Study Number UREC 20/tbc

QUESTIONNAIRE

This study will help us to understand parosmia and we are very grateful for your input. Please be prepared to set aside about 15-20 mins to complete it. In the first half you will be asked some short questions about your age, gender and ethnicity (Section A), your anosmia (Section B), your parosmia (Section C), your sense of taste (Section D). In the second half, Section E, you will be asked in detail about 12 different foods, and you will have the opportunity to add you own triggers (foods, drinks, and personal or homecare products) at the end. There is a surprise question at the end!

SCREENING QUESTIONS

1. Have you lost your sense of smell in the last year
   1. Yes
   2. No
2. As far as you know, was this after a:
   1. Covid-19 infection
   2. Non-Covid infection (any other cold, flu, sinus or other upper respiratory tract infection)
   3. Neither of these
3. Are you currently experiencing smell distortion (parosmia; where things smell different to they did before) ?
   1. Yes
   2. No

SECTION A – General information

1. Gender
   1. Male
   2. Female
   3. Other
   4. Prefer not to say
2. Which country do you live in?
   1. Select from list
3. What is your ethnic background?
   1. Select from UK census list

SECTION B – about your loss of smell

1. When did you lose your sense of smell?
   1. Date
2. When you lost it, was it
   1. Very sudden before the other symptoms of infection appeared
      1. How many days before?
   2. Very sudden during the infection
   3. Very sudden after the infection
      1. How many days after the oter symptoms had disappeared?
   4. Gradual, I only noticed it had gone after I recovered from the infection
3. As far as you know, was this due to a
   1. Covid infection, diagnosed by a test or by a medical professional
   2. Covid infection, self diagnosed
   3. Non-Covid infection before December 2010
   4. Non-Covid infection after December 2019
   5. Other
   6. Don’t know
4. If you have been tested for Covid-19, what were the results?(CATA)
   1. Positive Swab test (PCR)
   2. Negative Swab test (PCR)
   3. Positive Blood test/Antibody test
   4. Negative Blood test/Antibody test
   5. Other test
   6. No test
5. If yes, what was the date of the (first) positive test?
   1. Date
   2. Skip
6. How severe was the infection? – Covid AND non-Covid infections
   1. Loss of smell was my only symptom (Covid only)
   2. My symptoms were mild - I continued to live my life more or less as normal
   3. My symptoms were moderate
   4. My symptoms were severe – I was bed bound for 5 days or more but I was not hospitalised
   5. My symptoms were very severe and I was hospitalised.

SECTION C – about your parosmia

1. When did you start experiencing smell distortions? (parosmia)
   1. date
2. AFTER losing your sense of smell and BEFORE you became parosmic, did you have any recovery of normal sense of smell?
   1. No recovery of normal sense of smell
   2. Just a few hints that your sense of smell was returning and nothing else
   3. Partial recovery of a normal sense of smell
   4. Full recovery of a normal sense of smell
3. AFTER losing your sense of smell and BEFORE you became parosmic, did you have any fluctuations in your sense of smell
   1. No fluctuations
   2. Infrequent and minor fluctuations
   3. Significant daily random fluctuations
   4. Significant daily fluctuations but sense of smell tended to get better during the day

SECTION D – about your sense of taste

1. Can you still taste sugar?
   1. I can taste sugar as normal
   2. Sugar tastes a bit weaker than normal
   3. I can’t taste sugar
2. Can you still taste salt?
   1. I can taste salt as normal
   2. Salt tastes a bit weaker than normal
   3. I can’t taste salt
3. Can you detect hot spices like chilli, ginger or pepper?
   1. Yes
   2. No
4. Did you experience nasty tastes (e.g. metallic) in your mouth around the time you experienced smell loss?
   1. Yes
   2. No
5. Did you experience burning high in the nasal passages around the time you experienced smell loss?
   1. Yes
   2. No
6. Did you experience burning in the mouth and throat around the time you experienced smell loss?
   1. Yes
   2. No

SECTION E – about the smells that trigger your parosmia

Now we are going to ask you to rate 12 different items for how they smell to you now. You can do this from memory, but if you can check them out before you answer that would be great. Just take a few gentle sniffs of the item – do not eat or drink them (until you have finished the questionnaire). For each item we will first ask you what it smells like, whether you like it.

Coffee – e.g. any form of coffee: beans, ground, instant, essence, filter, espresso, in a cup, coffee shops.

1. What does coffee smell like to you now?
   1. Coffee smells like it did before.
   2. Coffee smells distorted
      1. Please use 2-3 words to describe the distortion.
   3. I can’t smell coffee at all (branch to next item)
   4. I am not familiar with or don’t drink coffee so cannot answer this question (branch to next item)
2. Do you like the smell of coffee now?
   1. Coffee smells pleasant
   2. Coffee smells neither pleasant nor unpleasant
   3. Coffee smells unpleasant now, but I used to like it
   4. Coffee has always smelt unpleasant
   5. The smell of coffee is so bad I feel as if I want to gag/vomit/leave the room
3. How strong does coffee smell to you now?
   1. Coffee smells stronger than it did before
   2. Coffee smells normal in strength (just as before)
   3. Coffee smells weaker than normal
   4. The strength of coffee fluctuates quite significantly on a daily basis

Cooked or cooking meat – e.g. chicken, beef, mince (ground beef), meat patties

What does meat smell like to you now?

* 1. Meat smells like it did before.
  2. Meat smells distorted
     1. Please use 2-3 words to describe the distortion.
  3. I can’t smell meat at all (branch to next item)
  4. I am not familiar with or don’t eat meat so cannot answer this question (branch to next item)

1. Do you like the smell of meat now?
   1. Meat smells pleasant
   2. Meat smells neither pleasant nor unpleasant
   3. Meat smells unpleasant now, but I used to like it
   4. Meat has always smelt unpleasant
   5. The smell of meat is so bad I feel as if I want to gag/vomit/leave the room
2. How strong does meat smell to you now?
   1. Meat smells stronger than it did before
   2. Meat smells normal in strength (just as before)
   3. Meat smells weaker than normal
   4. The strength of meat fluctuates quite significantly on a daily basis

Chocolate – e.g. chocolate bars, chocolate cake, cocoa powder

1. What does chocolate smell like to you now?
   1. Chocolate smells like it did before.
   2. Chocolate smells distorted
      1. Please use 2-3 words to describe the distortion.
   3. I can’t smell chocolate at all (branch to next item)
   4. I am not familiar with or don’t eat chocolate so cannot answer this question (branch to next item)
2. Do you like the smell of chocolate now?
   1. Chocolate smells pleasant
   2. Chocolate smells neither pleasant nor unpleasant
   3. Chocolate smells unpleasant now, but I used to like it
   4. Chocolate has always smelt unpleasant
   5. The smell of chocolate is so bad I feel as if I want to gag/vomit/leave the room
3. How strong does chocolate smell to you now?
   1. Chocolate smells stronger than it did before
   2. Chocolate smells normal in strength (just as before)
   3. Chocolate smells weaker than normal
   4. The strength of chocolate fluctuates quite significantly on a daily basis

Apples – e.g. a slice of fresh apples or apple juice

1. What do apples smell like to you now?
   1. Apples smell like they did before.
   2. Apples smell distorted
      1. Please use 2-3 words to describe the distortion.
   3. I can’t smell apples at all (branch to next item)
   4. I am not familiar with or don’t eat apples so cannot answer this question (branch to next item)
2. Do you like the smell of apples now?
   1. Apples smell pleasant
   2. Apples smell neither pleasant nor unpleasant
   3. Apples smell unpleasant now, but I used to like them
   4. Apples have always smelt unpleasant
   5. The smell of apples is so bad I feel as if I want to gag/vomit/leave the room
3. How strong do apples smell to you now?
   1. Apples smell stronger than they did before
   2. Apples smell normal in strength (just as before)
   3. Apples smell weaker than normal
   4. The strength of apples fluctuates quite significantly on a daily basis

Bacon – e.g. smoked or unsmoked, grilled, fried

1. What does bacon smell like to you now?
   1. Bacon smells like it did before.
   2. Bacon smells distorted
      1. Please use 2-3 words to describe the distortion.
   3. I can’t smell bacon at all (branch to next item)
   4. I am not familiar with or don’t eat bacon so cannot answer this question (branch to next item)
2. Do you like the smell of bacon now?
   1. Bacon smells pleasant
   2. Bacon smells neither pleasant nor unpleasant
   3. Bacon smells unpleasant now, but I used to like it
   4. Bacon has always smelt unpleasant
   5. The smell of bacon is so bad I feel as if I want to gag/vomit/leave the room
3. How strong does bacon smell to you now?
   1. Bacon smells stronger than it did before
   2. Bacon smells normal in strength (just as before)
   3. Bacon smells weaker than normal
   4. The strength of bacon fluctuates quite significantly on a daily basis

Cucumber – e.g. sliced, grated or chopped

1. What does cucumber smell like to you now?
   1. Cucumber smells like it did before.
   2. Cucumber smells distorted
      1. Please use 2-3 words to describe the distortion.
   3. I can’t smell cucumber at all (branch to next item)
   4. I am not familiar with or don’t eat cucumber so cannot answer this question (branch to next item)
2. Do you like the smell of cucumber now?
   1. Cucumber smells pleasant
   2. Cucumber smells neither pleasant nor unpleasant
   3. Cucumber smells unpleasant now, but I used to like it
   4. Cucumber has always smelt unpleasant
   5. The smell of cucumber is so bad I feel as if I want to gag/vomit/leave the room
3. How strong does cucumber smell to you now?
   1. Cucumber smells stronger than it did before
   2. Cucumber smells normal in strength (just as before)
   3. Cucumber smells weaker than normal
   4. The strength of cucumber fluctuates quite significantly on a daily basis

Butter – e.g. butter, margarine, spread

1. What does butter smell like to you now?
   1. Butter smells like it did before.
   2. Butter smells distorted
      1. Please use 2-3 words to describe the distortion.
   3. I can’t smell butter at all (branch to next item)
   4. I am not familiar with or don’t eat butter so cannot answer this question (branch to next item)
2. Do you like the smell of butter now?
   1. Butter smells pleasant
   2. Butter smells neither pleasant nor unpleasant
   3. Butter smells unpleasant now, but I used to like it
   4. Butter has always smelt unpleasant
   5. The smell of butter is so bad I feel as if I want to gag/vomit/leave the room
3. How strong does butter smell to you now?
   1. Butter smells stronger than it did before
   2. Butter smells normal in strength (just as before)
   3. Butter smells weaker than normal
   4. The strength of butter fluctuates quite significantly on a daily basis

Peppers/bell pepper – Preferably green peppers, but orange, yellow and red peppers are OK. NOT chilli pepper or ground pepper spice

1. What do peppers smell like to you now?
   1. Peppers smell like they did before.
   2. Peppers smell distorted
      1. Please use 2-3 words to describe the distortion.
   3. I can’t smell peppers at all (branch to next item)
   4. I am not familiar with or don’t eat peppers so cannot answer this question (branch to next item)
2. Do you like the smell of peppers now?
   1. Peppers smell pleasant
   2. Peppers smell neither pleasant nor unpleasant
   3. Peppers smell unpleasant now, but I used to like them
   4. Peppers have always smelt unpleasant
   5. The smell of peppers is so bad I feel as if I want to gag/vomit/leave the room
3. How strong do peppers smell to you now?
   1. Peppers smell stronger than they did before
   2. Peppers smell normal in strength (just as before)
   3. Peppers smell weaker than normal
   4. The strength of peppers fluctuates quite significantly on a daily basis

Melon – Any variety of melon (or watermelon)

1. What does melon smell like to you now?
   1. Melon smells like it did before.
   2. Melon smells distorted
      1. Please use 2-3 words to describe the distortion.
   3. I can’t smell melon at all (branch to next item)
   4. I am not familiar with or don’t eat melon so cannot answer this question (branch to next item)
2. Do you like the smell of melon now?
   1. Melon smells pleasant
   2. Melon smells neither pleasant nor unpleasant
   3. Melon smells unpleasant now, but I used to like it
   4. Melon has always smelt unpleasant
   5. The smell of melon is so bad I feel as if I want to gag/vomit/leave the room
3. How strong does melon smell to you now?
   1. Melon smells stronger than it did before
   2. Melon smells normal in strength (just as before)
   3. Melon smells weaker than normal
   4. The strength of melon fluctuates quite significantly on a daily basis

Onion – e.g. brown onion, chives, leeks, spring onion, raw or cooked

1. What do onions smell like to you now?
   1. Onions smell like they did before.
   2. Onions smell distorted
      1. Please use 2-3 words to describe the distortion.
   3. I can’t smell onions at all (branch to next item)
   4. I am not familiar with or don’t eat onions so cannot answer this question (branch to next item)
2. Do you like the smell of onions now?
   1. Onions smell pleasant
   2. Onions smell neither pleasant nor unpleasant
   3. Onions smell unpleasant now, but I used to like them
   4. Onions have always smelt unpleasant
   5. The smell of onions is so bad I feel as if I want to gag/vomit/leave the room
3. How strong do onions smell to you now?
   1. Onions smell stronger than they did before
   2. Onions smell normal in strength (just as before)
   3. Onions smell weaker than normal
   4. The strength of onions fluctuates quite significantly on a daily basis

Eggs – e.g. boiled, fried, poached, scrambled

1. What do eggs smell like to you now?
   1. Eggs smell like they did before.
   2. Eggs smell distorted
      1. Please use 2-3 words to describe the distortion.
   3. I can’t smell eggs at all (branch to next item)
   4. I am not familiar with or don’t eat eggs so cannot answer this question (branch to next item)
2. Do you like the smell of eggs now?
   1. Eggs smell pleasant
   2. Eggs smell neither pleasant nor unpleasant
   3. Eggs smell unpleasant now, but I used to like them
   4. Eggs have always smelt unpleasant
   5. The smell of eggs is so bad I feel as if I want to gag/vomit/leave the room
3. How strong do eggs smell to you now?
   1. Eggs smell stronger than they did before
   2. Eggs smell normal in strength (just as before)
   3. Eggs smell weaker than normal
   4. The strength of eggs fluctuates quite significantly on a daily basis

Fried smells – e.g. french fries, chips/crisps, roast potatoes (but not meat)

1. What do fried foods smell like to you now?
   1. Fried foods smell like they did before.
   2. Fried foods smell distorted
      1. Please use 2-3 words to describe the distortion.
   3. I can’t smell fried foods at all (branch to next item)
   4. I am not familiar with or don’t eat fried foods so cannot answer this question (branch to next item)
2. Do you like the smell of fried foods now?
   1. Fried foods smell pleasant
   2. Fried foods smell neither pleasant nor unpleasant
   3. Fried foods smell unpleasant now, but I used to like them
   4. Fried foods have always smelt unpleasant
   5. The smell of fried foods is so bad I feel as if I want to gag/vomit/leave the room
3. How strong do fried foods smell to you now?
   1. Fried foods smell stronger than they did before
   2. Fried foods smell normal in strength (just as before)
   3. Fried foods smell weaker than normal
   4. The strength of fried foods fluctuates quite significantly on a daily basis

AND FINALLY

This last topic is one that crops up frequently when talking to parosmics. We are sorry we have to ask this non-food question! But please answer this from memory. It is not necessary to do anything other than the normal, to answer this question.

Poo – “bathroom smells”, dirty nappies, faeces, (sorry to have to ask this)

1. What does poo smell like to you now?
   1. Poo smells like it did before
   2. Poo smells distorted
      1. Please use 2-3 words to describe the distortion.
   3. I can’t smell poo at all
2. Describe how poo smells to you now?
   1. Poo no longer smells unpleasant
   2. Poo smells just as unpleasant as before
3. Please list any all other items which currently have a distorted smell. They can be any smell including food, drink, perfume, aromatherapy oils, cosmetics, personal-care products, sanitisers, cleaning products, home-care products, outdoor smells etc.
   1. Open comment
4. Please list the smells that came back first that were NOT distorted or unpleasant (up to 4 smells)
   1. Open Comment
5. Any other comments
   1. Open comment