

COVID-19 supplements to Approved Procedures EEG

1. DEPARTMENT/FACILITY DETAILS	
Department:	Experimental Psychology
Facility:	EEG Labs, Anna Watts, OHBA & Tinsley
Author(s):	Mark V. Roberts
Reviewer(s):	Kia Nobre
Authorised (date):	Kia Nobre (26/11/2021)
Date (Version)	25/11/2021 (Version 1.1)
Activity Summary (<i>Types of activities expected & authorised to take place</i>):	
<ol style="list-style-type: none"> 1. EEG Scanning of human participants 2. Questionnaires/interviews required for assessing the safety to scan the participant and take consent 	

2. CONTROLLING THE NUMBERS AND TYPE OF PEOPLE ENTERING THE FACILITY		
Risk/Issue	Specific Measures Adopted	Outstanding Actions
Ensuring staff/students with Covid-19 symptoms, those that are self-isolating, do not enter the facility.	<ul style="list-style-type: none"> • Staff or students with Covid-19 symptoms will not conduct research on human participants. The current guidance on symptoms from the NHS Coronavirus web page is as follows, but if symptom guidance changes, we would follow the current advice: <ul style="list-style-type: none"> ○ high temperature– this means you feel hot to touch on your chest or back (you do not need to measure your temperature). ○ new, continuous cough– this means coughing a lot for more than an hour, or 3 or more coughing episodes in 24 hours (if you usually have a cough, it may be worse than usual). 	

	<ul style="list-style-type: none"> ○ new onset loss or change to your sense of smell or taste– this means you've noticed you cannot smell or taste anything, or things smell or taste different to normal. ● Staff/students that are self-isolating will not conduct research on human participants. ● PIs will be responsible for ensuring that the importance of these measures are understood by their research group and the responsibility on individuals to comply. 	
Ensuring research participants with Covid-19 symptoms do not enter the facility.	<ul style="list-style-type: none"> ● Before the day of the visit researchers will communicate with their research participant (email/phone/letter as appropriate) that they should not travel to the facility if they experience any of the symptoms of Covid-19 or if they have been recommended to self-isolate or shield. ● Each participant will be given a supplementary information sheet prior to their visit, detailing the specific Covid-19 procedures. The template should be downloaded from the CUREC web site. ● The researchers should use the Calpendo booking system to set reminders for the day of the appointment, to check with their participant that they are asymptomatic and that no member of their household is experiencing symptoms related to coronavirus. ● The COVID-19 symptom assessment form should be used for this purpose. ● The researcher will meet the participant outside the departmental building, where they will be screened for Covid-19 symptoms. ● Only if the participant has no reported symptoms will they be admitted to the building. 	
<p>Assessing risk to vulnerable participants (those at a higher risk from Covid-19). People to consider in this category include (but not limited to):</p> <ul style="list-style-type: none"> ● Those classified by the government as extremely clinically vulnerable. ● Those classified by the government as clinically vulnerable. ● Those aged over 70. <p>And others on the following:</p> <ul style="list-style-type: none"> ● NHS information about who is at higher risk ● Information for people previously listed as required to shield 	<ul style="list-style-type: none"> ● Principal investigators will identify whether their participants have a higher risk from Covid-19. ● Those in vulnerable categories will only be included in the study if it is agreed by the researchers' Head of Department that the benefits of the research merit their inclusion. 	
Minimising the risk of overlap between different users of the facility.	<ul style="list-style-type: none"> ● The Calpendo booking system will be used for all scanning work. Researchers will keep to their booking and vacate the facility in good time before the end of their session. 	

	<ul style="list-style-type: none"> • Additional time (a minimum of 15 minutes) will be allocated (without extra charge) for each booking to minimise overlap. 	
Minimising the number of staff present.	<ul style="list-style-type: none"> • All procedures will be reviewed to establish the minimum number of staff needed to safely carry out the scan. • Students training on EEG systems or observers will only be present if it is absolutely essential for the ongoing viability of the study, as agreed by the PI. 	
Minimise the number of visits to the facility by research participants.	<ul style="list-style-type: none"> • Research participants will be screened by the researcher, by phone, before the day of the scan to avoid them travelling to the facility if there is uncertainty as to the safety to scan. Researcher will still screen the participants themselves on the day of the scan. 	
Minimise the number of additional people visiting the facility.	<ul style="list-style-type: none"> • In general, participants will not be permitted to have another person accompany them within the building. • Participant companions will be warned in advance that they will not be allowed to enter the EP building and given suggestions for where they should wait e.g. their car if driving. • Exceptions will be made when the participant is under 18, or the participant has needs that cannot be performed safely by the research team. 	

3. REDUCING THE SPREAD OF COVID-19		
Risk/Issue	Specific Measures Adopted	Outstanding Actions
Spread by airborne particles (cough, sneeze)	<ul style="list-style-type: none"> • Maximum room occupancies for all rooms in the building have been established and notices are posted on the doors. These will not be exceeded. • 2m distancing between all individuals (researchers and participants) will be maintained whenever possible. • Whenever this is not possible, a fluid resistant surgical mask will be worn by everyone in the room. This includes: <ul style="list-style-type: none"> ○ EEG control room. ○ EEG subject prep room. • On arrival, the research participant will be given a fluid resistant surgical mask to wear while they are in the building. • All instructions should be given at a 2 metre distance from the participant. 	

<p>Spread by airborne particles, recirculated by room ventilation (air conditioning)</p>	<ul style="list-style-type: none"> • Some air-conditioning units re-circulate the air within that room (see building risk assessments). If more than one person is present in a room with re-circulating air conditioning turned on then, even if 2m distancing can be achieved, a type 2, fluid resistant surgical mask will be worn. 	
<p>Incorrect use of face masks or PPE</p>	<ul style="list-style-type: none"> • All staff/students who need to wear face masks will be trained in the correct use, donning and doffing of face masks, which will be recorded (Appendix 1). • Staff providing their own face coverings will wash them daily. • Staff using disposable fluid resistant surgical masks will dispose of the masks in the clinical waste bins in the facility. • Staff using PPE will be trained in the correct donning and doffing, which will be recorded (Appendix 1). 	
<p>Spread by contact with contaminated surfaces</p>	<ul style="list-style-type: none"> • On entering the building and the EEG facility, all researchers and participants will sanitize their hands using the wall mounted units. • Researchers will wash their hands or sanitize at regular intervals. Signs will remind them of this. 	
<p>Spread by contact with contaminated objects</p>	<ul style="list-style-type: none"> • Disposable sticks/cotton buds will be used for electrode application. • Syringes, if not disposable, will be washed then wiped using 70% isopropyl alcohol. • Wherever possible pens will not be shared. If pens are shared, then they will be wiped with disposable wipes (e.g. Clinell or 70% isopropyl alcohol) before and after use. • Only one screening form will be given to the participant (not the whole clipboard of forms). • Towels will not be reused without washing. 	
<p>Movement around the building increasing risk of spread</p>	<ul style="list-style-type: none"> • Rooms used by researchers or participants will be limited, so that it is easy to identify which surfaces need cleaning. Cleaning procedures are detailed in Appendix 2. • Upon arrival, the participant will be taken directly to the designated testing room. • Participants will be advised to wait in their car, or outside the building if they are early for their scan. • Additional time will be allowed for each booking to ensure that there is no need for any participant to wait in the building for their scan (accommodating for delays). • The participant will use a designated EEG booth, and this area will not be used by anyone else without being cleaned first (see below). 	

Close contact with the participant	<ul style="list-style-type: none"> • The researcher will wear level 1 PPE for any close contact with the research participant. This includes: <ul style="list-style-type: none"> ○ Fluid resistant surgical mask. ○ Eye protection or visor. ○ Disposable plastic apron. ○ Disposable gloves. • The participant will wear a disposable gown. • Talking is kept to a minimum while applying electrodes. • Researchers will work from the back and the side of a seated participant whenever possible. • Certain EEG systems will require participants to wash their hair on site to reduce contact time during electrode application (see Appendix 4). 	
Infection control during a cardiac arrest	A modified procedure will be used which minimises close contact.	

4. ENHANCED CLEANING		
Risk/Issue	Specific Measures Adopted	Outstanding Actions
Cleaning of testing rooms and other areas occupied by the participant or researchers.	<ul style="list-style-type: none"> • After each scanning participant has left the researcher will wipe down surfaces using wipes available in the EEG control room. • This will include: <ul style="list-style-type: none"> ○ Testing Booth/Research station. ○ Wash room. ○ Toilet (if used). • The cleaning checklist (Appendix 2) will be followed and the initialled copy left in the control room for filing by the Lab Manager. • After cleaning, the researcher will wash their hands. • At the end of the day and end of the week additional cleaning is undertaken by the cleaners. 	

5. PROCEDURE IF KNOWN/SUSPECTED COVID-19 INFECTED PERSON IN BUILDING		
Risk/Issue	Specific Measures Adopted	Outstanding Actions
Person develops a coughing fit or other symptoms of Covid-19 whilst in the building.	<ul style="list-style-type: none"> • If someone developed a coughing fit whilst in the building then we will ask them to stay in the same room until the fit had subsided, and then they will leave and go home. • If anyone develops any symptoms of Covid-19 whilst in the building they will leave, go home and self-isolate. 	

	<ul style="list-style-type: none"> • If this occurs, we will do a thorough clean of the EEG room and all rooms that the person was in, following latest university guidelines. • The designated person(s) should be notified both to record this and to arrange this clean (which should be done by professional cleaners, not researchers). For contact details, see Appendix 5. 	
<p>An individual who has been involved in the study (participant, researcher) tests positive for Covid-19 and were possibly infectious while in the building.</p>	<ul style="list-style-type: none"> • We will perform a thorough clean of all rooms that the person was in, following latest university guidelines. 	

Appendix 1: Training Record

Name	Read risk assessment (Date)	PPE training (Date)

PPE training: <https://www.oxstar.ox.ac.uk/covid-19/personal-protective-equipment-ppe/ppe>

Appendix 2: Cleaning Protocol and Checklist

General guidelines

- No food and/or drink in the lab. Exception: water for the subject, glucose bar to treat hypoglycaemia, etc.
- Participant gowns are for single use. Place in laundry basket together with seat coverings after use.
- Wear disposable gloves for all cleaning procedures.

Recommended disinfectants

- 70% isopropyl with a lint free, disposable wipe (I).
- Germicidal disposable wipe (W).100pp hypochlorite or equivalent solution (This is 0.5% Chlorine concentration. This bleach solution can be prepared directly from household bleach by adding 1 volume of household bleach to 99 volumes of clean water (e.g. 100 ml of bleach to 9.9 litres of clean water).

All ancillary electrodes (EOG, ECG, etc.) and EEG caps are non-disposable. The use of re-usable electrodes during the Covid-19 pandemic is [considered safe](#), but care must be taken to clean all equipment thoroughly after use. If possible, EEG caps should not be re-used on the same day.

Reusable electrodes (This is system specific)

	Cleaning
EEG Caps	See Appendix 3
Electrodes	See Appendix 3

EEG Cleaning Checklist (Researcher)

End of scan - EEG Booth

Booth Number:	Time & Initials					
Amplifier						
Chin rest						
Chair (change covers)						
Keyboard/response box						
Table top						
Eyetracker (if used)						
Headphones (if used)						
Equipment Trolley						
Door handle (both sides)						

End of study - Control Station

Booth Number:	Time & Initials					
Researcher chair/s						
Intercom (carefully around stop button)						
PC keyboards/mice						
PC table tops						
Filing cabinet/draws						
Control room access door handle (both sides)						

Prep room/Hair washing facility

End of scan –Prep Room

Room Number:	Time & Initials					
Counter tops						
Combs/Brushes						
chairs						
Door handles (both sides)						
Hairdryer						
Cupboard door handles						
Taps						
Sinks and plastic basins						
Towel baskets						

End of scan –Toilet

Room Number:	Time & Initials					
Flush						
Seat and button						
Handwash dispenser						
Sink taps						
Door handles (both sides)						

End of Day– Laundry room

Room Number:	Time & Initials					
Washing machine						
Tumble dryer						
Door handles (both sides)						

Appendix 3: EEG system specific cleaning Protocols

3a) NeuroScan:

(i) Standard cap and ring electrodes

Caps:

1. Aldehyde-free disinfectants like Perfektan, Cavicide, Envirocide, Supersteam Ultima, etc. are preferred. Follow the respective instructions for use – minimum solution, soaking time - stated for low-level disinfection, in order to kill enveloped/lipid viruses.
2. Always rinse thoroughly after disinfection procedures, and allow to dry.

Electrodes:

1. For passive electrodes (e.g. R-Net, BrainCaps, LiveCap), other physiological sensors using passive Ag/AgCl electrodes and also active electrodes (e.g. actiCAP, actiCAP slim/snap, actiCAP Xpress, actiCAP Xpress Twist), use the Perfektan TB disinfecting agent. Please adhere to the recommended exposure time and safety precautions as stated by the manufacturer of these products.
2. Rinse equipment thoroughly after disinfection procedures and let air dry. Please note that stronger agents will speed up deterioration of products.

(ii) MRI compatible cap and electrodes (Quickcaps)

1. Soak used cap with gel in lukewarm water for 30-45minutes (5 minutes if using QuikCells instead of gel).
2. Remove cap and clean gel remnants with waterpik or under running water using a q-tip.
3. Soak cap in diluted Control III solution for 10 minutes.
4. Dip QuikCap in lukewarm water and hang to dry.

3b) Brain-Vision

Caps:

1. Aldehyde-free disinfectants like Perfektan, Cavicide, Envirocide, Supersteam Ultima, etc. are preferred. Follow the respective instructions for use – minimum solution, soaking time - stated for low-level disinfection, in order to kill enveloped/lipid viruses.
2. Always rinse thoroughly after disinfection procedures, and allow to dry.

Electrodes:

1. For passive electrodes (e.g. R-Net, BrainCaps, LiveCap), other physiological sensors using passive Ag/AgCl electrodes and also active electrodes (e.g. actiCAP, actiCAP slim/snap, actiCAP Xpress, actiCAP Xpress Twist), use the Perfektan TB disinfecting agent. Please adhere to the recommended exposure time and safety precautions as stated by the manufacturer of these products.

2. Rinse equipment thoroughly after disinfection procedures and let air dry. Please note that stronger agents will speed up deterioration of products.

3c) BioSemi

Caps:

1. Wash cap in a solution of mild shampoo and warm water, soak for ten minutes then use a toothbrush to remove any excess gel around the plastic holders.
2. Rinse in hot then towel dry.
3. Soak in 25ml of 70% isopropyl alcohol solution for 5 minutes only, then towel dry.
4. Hang up to finish drying.
5. Any excess 70% isopropyl alcohol solution can be safely disposed of down the sink in conjunction with running water.

Electrodes:

1. Soak for ten minutes in a solution of mild shampoo and warm water.
2. Rinse in hot water then towel dry.
3. Soak in a 15ml of 70% isopropyl alcohol solution for 5 minutes only, then towel dry.
4. Hang up to finish drying.
5. Any excess 70% isopropyl alcohol solution can be safely disposed of down the sink in conjunction with running water.

Appendix 4: Hair washing

This process can reduce electrode application time by 20 minutes plus by considerably lowering initial scalp impedances, thereby reducing contact time between researchers and participants.

- This applies to all low impedance systems using Ag/AgCl ring electrodes e.g. NeuroScan, BrainVision.
- This does not apply high impedance systems such as BioSemi, EGI or those systems using active electrodes e.g. Actichamps (BrainVision).

1. Participants should wash their own hair (the researcher should not be present) using baby shampoo and warm water, care should be taken to massage the scalp and rinse well afterwards.
2. The participant should towel dry their hair then comb it through to remove tangles. As was already standard procedure, combs must be disinfected between uses. Note: the use of a hairdryer is prohibited.
3. Laundry bins will be provided for participants to place towels after use so these can be washed daily
4. The room/area should then be cleaned by one of the researchers. Details are in Appendix 2.

Please note participants can be given the option to wash their hair after the experiment, this should be their choice. During this process the researcher should not be present in the room and the use of a hairdryer afterwards is prohibited. The alternative that excess gel can be removed using a clean towel, without washing the hair, is still an option.

Appendix 5: Contact details

For the Anna Watts Building and Tinsley, if extra cleaning is needed, contact the Experimental Psychology Building and Facilities Manager or the Head of Administration and Finance:

Andrew Allan

Building and Facilities Manager
Department of Experimental Psychology
Anna Watts Building, OX2 6GG
Email: andrew.allan@psy.ox.ac.uk
Tel: 01865 271360

Tracy Tompkins

Head of Administration and Finance
Department of Experimental Psychology
Anna Watts Building, OX2 6GG
Email: tracy.tompkins@psy.ox.ac.uk
Tel: 01865 271345
PA: pa@psy.ox.ac.uk, 01865 271412