

B-WELL-Mom Air Quality Monitoring Instructions

Introduction

Thank you for your participation in our air quality monitoring! You will provide our scientists and healthcare providers with valuable information about exposure to air pollutants during pregnancy. The clinic staff should have provided you with one set of air quality monitors and a carrier to wear them. If the air monitors were started in the clinic, we would like you to begin wearing the monitors immediately. If the air monitors were not started in the clinic, we would like you to begin wearing the monitors later today or tomorrow morning. Please keep the box in a safe place: you will need to use it to return the monitors. The return shipping is already paid. If you have any questions, please don't hesitate to call your clinic coordinator.

You will be provided with 1 set of monitors (1 MicroPEM, 1 CairClip, and 2 Ogawa badges). You will wear the monitors first for 48 hours and then place the monitors in your home for the next 48 hours. Here are pictures of each of the monitors.



MicroPEM with cover



CairClip Monitor ready to be charged



The Ogawa badge for personal monitoring has a blue dot with a "P" that stands for personal and the Ogawa badge for indoor monitoring has a yellow dot and an "I" that stands for indoor. The Ogawa badges should always be sealed in the bags until they are being used.

Personal Monitoring

Please use the following guidelines for wearing the personal monitors.

- Wear the monitors as long as possible during the waking hours of the 48-hour personal monitoring period.
- Always wear the monitor outside the outer layer of your clothing.
- Be sure that the mesh pouch containing the monitors always faces out, away from your body
- Never wear the monitors in the shower or out in the rain.
- Take the monitors off when participating in vigorous exercise (e.g., running).
- Take the monitors off at bedtime and leave them in the pouch on a nightstand or chair in the bedroom.
- One of the monitors, the CairClip, will need to be taken out of the pouch and charged at night.
- Do not alter the monitors and keep out of reach of children and pets.
- Do not hold the monitors in your hands expect when you need to recharge the battery or take on/off the monitors.
- For women who have a study tablet, if you have consented to local mobility please bring your tablet with you at all times so we can measure your approximate location during the personal monitoring session for 48 hours.

The monitors are placed in a mesh pouch and can be worn multiple ways, around the neck on a lanyard, or the clip on the back of the mesh pouch can be attached to your belt or to a purse or bag worn over your shoulder. When wearing the pouch on the lanyard, you will use 2 clips to attach the lanyard to the pouch. Use the strap pulls on the sides of the lanyard to adjust the length so that it is comfortable. Remember to wear the pouch so that the white mesh portion is facing out. You have the option of wearing the monitors using any of these methods. It is important, however, that you wear the monitors throughout the day.

DAY 1

1. If the air monitors were started in the clinic, please begin wearing the monitors immediately, and proceed to page 5 for important instructions regarding the maintenance of the monitors.
2. If the air monitors were not started in the clinic, please begin wearing the monitors shortly after you get home from your clinic visit or the following morning. You will need to follow the step-by-step instructions to turn the monitors “on” and then put them in your small mesh carrier. If you decide to begin wearing the monitors the following morning, please do this as soon as possible after you wake up.

MicroPEM™ Monitor Start Instructions

Link to Youtube video instructions: <http://youtu.be/iU4uyPjcdL8>

1

Remove the MicroPEM™ from the shipping foam tray. The **Red LED** will blink occasionally. Remove the covering from the top opening.

**2**

Press and hold button #1.

The Green LED will light up and then begin to blink.

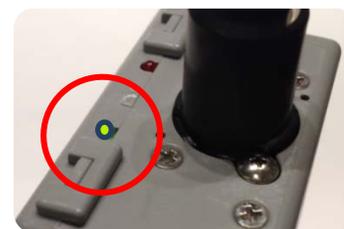
Once it starts blinking, let go of the button.

**3**

Make sure the **Green LED** continues to blink every 10 seconds.

Listen to the MicroPEM™ to make sure the pump is running.

You should hear a slight humming sound.

**4**

Once the MicroPEM™ has started, place the device into the mesh bag.

The top opening must face outward to prevent obstruction.



CairClip Start Instructions & Maintenance

Link to Youtube video instructions: http://youtu.be/_6DaVSymHpg

1

Remove the CairClip from the tray.



2

Confirm device condition:

- The red dongle is in place.
- Full battery indicator (3 or 4 bars).
- Center green light is blinking.
- Proper time on display.
- If not fully charged, please charge the monitor before you start monitoring (see Step #5 below).



3

Remove the red dongle and replace it with the green dongle to start monitoring.

Check the display. The display should show sample readings, if operating properly.



4

Slide the device into the mesh portion of pouch, with the display facing downward.

Make sure the CairClip is below the elastic edging, to prevent it from falling out.

Please do not hold the CairClip monitor in your hands any more than is necessary because directly applying heat will cause incorrect measurements.



Ogawa Badge Start Instructions

Link to Youtube video instructions: <http://youtu.be/BiuRjT3G8AI>

1

Remove the Ziploc bag with the Ogawa badge with a blue colored dot that has a letter "P" from the shipping box.



2

Unroll the exterior bag to remove badge. The badge will be sealed in another smaller Ziploc bag. Remove the badge from this bag as well. Store the bags in the shipping foam tray.

3

Place the badge into the mesh portion of the pouch.



4

Wear the monitors according to the instructions provided by the clinic coordinator for 48 hours. The instructions are also available on a Youtube video located here: <http://youtu.be/1QO83shPRMQ>

3. Once you have started all your monitors, please complete the "Start Air" Form on either the tablet or on paper.
4. At the end of Day 1, remember to charge the CairClip following the directions below.

Before going to bed or when the battery indicator is low (1 bar left), remove the green dongle and insert the USB charging cable.

Connect the other end of the cable to the power adapter.

Plug in and charge the device until the battery indicator is full (about 3-4 hours to get to 3 or 4 bars).



DAY 2:

1. Disconnect the CairClip from the charger and replace the green dongle.
2. Please wear the Personal Monitor just as you did on Day 1.
3. At the end of Day 2, remember to charge the CairClip once again.

Indoor Monitoring

Please place the monitors on a table in a common living area (e.g., your living room).

- Once the monitors are “turned on” (see instructions below), place them in the mesh bag and set the bag on top of a table or other piece of furniture so it is about 2-3 feet off the ground. The bag should be in a room that is most used (a living room or a family room, for example).
- Make sure the monitors are not near any observable pollution sources such as ashtrays, gas appliances, space heaters, air purifiers, printers, etc.
- Make sure that air from heating or air conditioning systems does not blow directly on the monitors.
- The monitors should be at least 1 foot away from the wall, heating/cooling vents, and windows/doors.
- Do not change the monitor’s position and keep it out of reach of children and pets.
- The monitors need to stay at that location for 48 hours.
- The CairClip will need to be taken out of the pouch and charged at night.

DAY 3

You will now be switching to Indoor Monitoring. Please follow the step-by-step instructions below on how to switch the Ogawa badge from “P” to “I.”

Switching the Ogawa Badge

Link to Youtube video instructions: http://youtu.be/R3ACi_8LNR4

1

Remove the Ogawa badge with the blue dot from the personal pouch.

2

Place the badge back in to the Ziploc bag, making sure the zipper is tightly closed.

3

Place the Ziploc bag with the used badge into the large seal bag, roll the tie over until it reaches the top of the badge and fold the sides of the ties over the bag. Put the sealed bag back into the shipping box.

4

Remove the Ziploc bag with the Ogawa badge with a yellow colored dot that has a letter "I" from the shipping box. This is for the indoor monitoring.

5

Unroll exterior bag to open and remove badge. Badge will be sealed in another smaller Ziploc bag, remove badge from this bag as well. Store the bags in the shipping box foam tray.

6

Place the badge into mesh portion of pouch. Set the pouch in a main living area. You can set it up to stand alone or use the foam tray for support.



1. At night, remember to charge the CairClip prior to going to bed, but leave it near the indoor monitors.

DAY 4:

1. Disconnect the CairClip from the charger and replace the green dongle.
2. Put the monitor in the mesh bag and let it run for another 24 hours in the same location as Day 3.
3. At the completion of Day 4, please complete the "Return Air Device" form on either paper or on the tablet.
4. Please follow the step-by-step instructions that are provided below on how to turn off the monitors.

MicroPEM™ Stop Instructions

1

After 4 days of personal and indoor monitoring,
Remove the MicroPEM™ from the pouch.



2

Press and hold button #2. While still holding button #2,
press and hold #1.

The **Red LED** will light up, then switch to the **Green LED**.

Once both lights are off, let go of the buttons.



3

Listen to the MicroPEM™ to make sure the pump is not
running.

The **Red LED** should blink every 10 seconds.

4

Once the MicroPEM™ has stopped, place the new covering over the top opening of the device.

Put the device back into its slot in the foam tray.



CairClip Stop Instructions

1

After the 4 days of monitoring is completed,
Remove the CairClip from the pouch.

2

Replace the green dongle with the red dongle.

3

Place device back in foam tray, including the
charging cable, adapter, and green dongle.

Cover with the foam protector.



1

Remove the badge from the pouch.

2

Place the badge back in to the separate Ziploc bag, making
sure the zipper is tightly closed.

3

Place the Ziploc bag with the used badge into the separate large seal bag, roll the
tie over until it reaches the top of the badge and fold the sides of the ties over the
bag. Put the sealed bag back in the shipping box.

4

At the end of air monitoring, follow the Shipping the Monitors Instructions provided by
clinical staff and Packing List which is enclosed in the box. A Youtube video which
reviews these procedures is located here: <http://youtu.be/Gv02ZfhDvQw> or you can
return the box to your study coordinator at the clinic.



Other Instructions

The information provided in “Frequently Asked Questions” includes some common questions and answers about the study. The instructions titled “Troubleshooting” include some additional information if you have other questions that aren’t addressed elsewhere.

- [Frequently Asked Questions \(FAQ\)](#)
- [Troubleshooting](#)