VestibularFirst

VESTIBULAR HEADBAND

BY VESTIBULAR FIRST

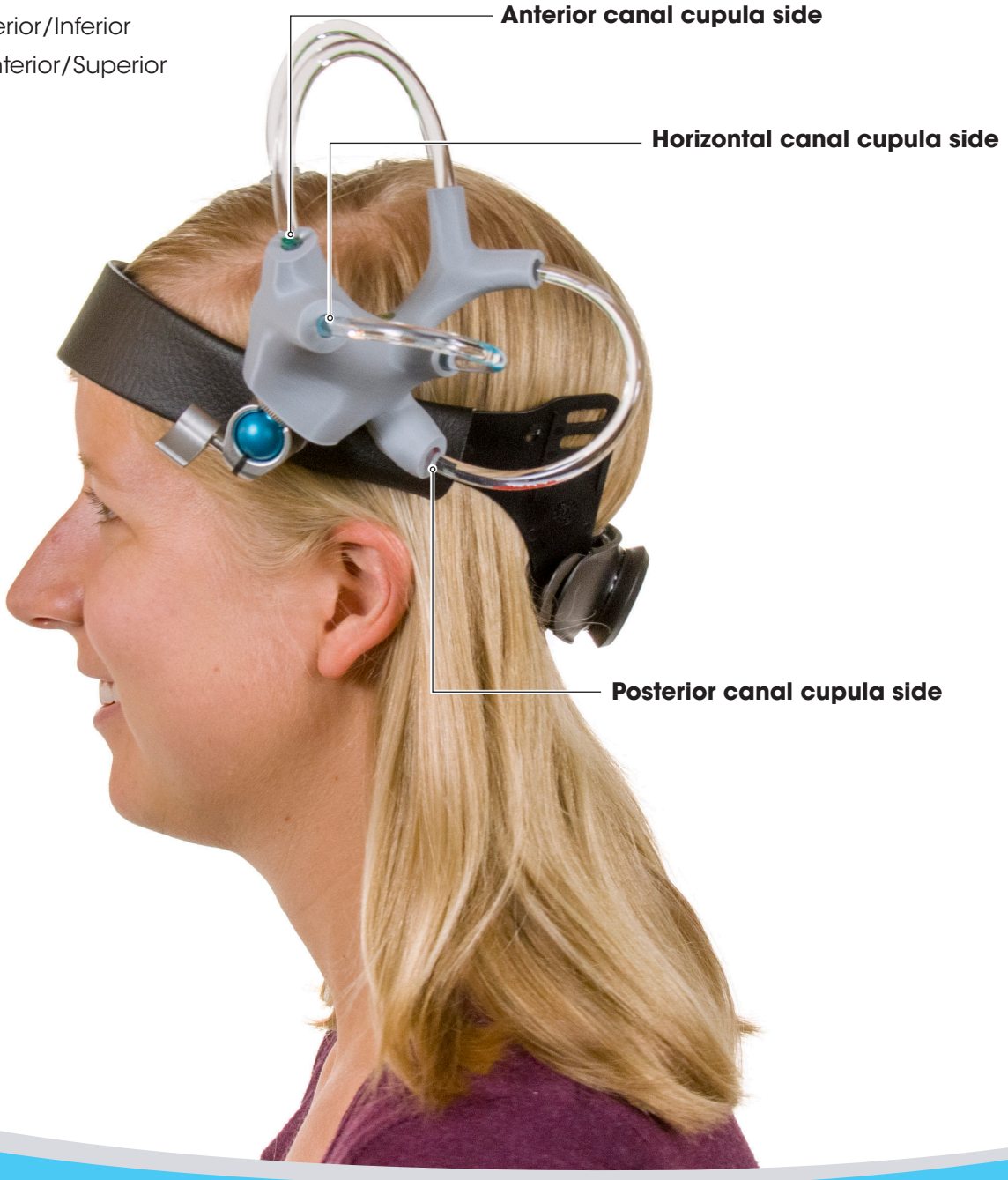
The vestibular headband has several handy features. You can see that there are two anatomically accurate small fluid-filled models, which are similar to our larger model. We worked with top international researchers to ensure an accurate fall rate of the stones, which represent the otoconia. This accuracy is especially important when educating others on the value of proper duration of time in each positional test and during corrective treatment maneuvers.

Before using the headband, let's get familiar with the parts:

1. **Cupula** - True to the anatomy, crystals cannot pass through the cupula in this model and are blocked once they arrive at that point. On the other end of the canal, the crystals are not blocked by any anatomy, and so they "disappear" through this end to demonstrate when a clinician has "cleared" the canal with otoconia dropping into the vestibule side.

2. **Canals** - In addition, each canal in the vestibular model is arranged along the X-Y-Z planes when aligned to an upright body position. Each canal is identifiable by its own unique color.

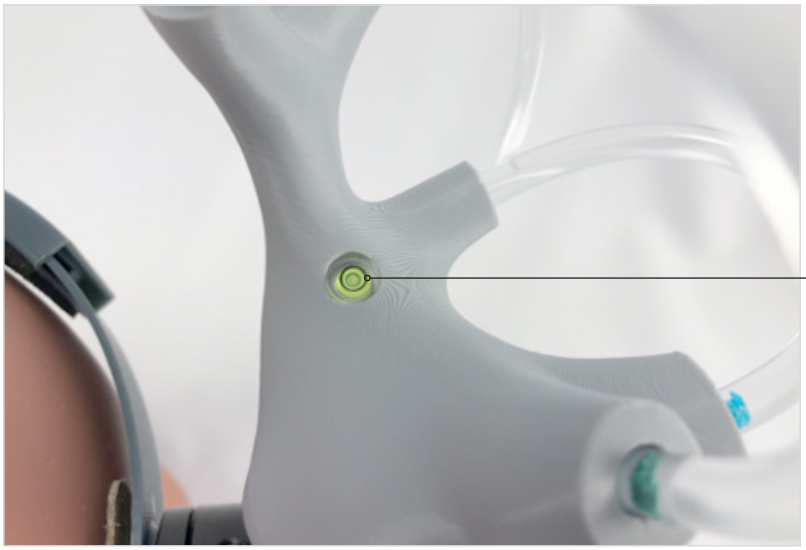
   - **Blue** – Horizontal/Lateral
   - **Red** – Posterior/Inferior
   - **Green** – Anterior/Superior



3. **Ball joint and knob** - Another key feature of the vestibular headband is that each of the two fluid models is mounted to a fully adjustable ball joint. These ball joints allow us to perfectly align the model with anatomical accuracy using the built-in directional arrow and bubble level.

4. **Directional arrow** - The directional arrow located on the bottom of each model indicates the correct forward-facing position of the vestibular apparatus model.

5. **Bubble level** - The bubble level indicates the correct orientation of the vestibular apparatus to gravity. No matter the size or shape of the wearer's head, you can easily adjust the models to the proper anatomical position before initiating instruction on positional testing and treatment.



6. **Adjustment knob** - One final feature to note is the adjustment knob, which is used to secure the headband to the wearer. Using technology found in construction hard hats, the headband can be smoothly adjusted to each individual wearer's head. After you place it on your practice partner, with the knob in back and the fluid models upright, you can efficiently tighten the knob by turning it clockwise for a convenient and secure fit. The entire headband is very easy to clean, since all parts are made from plastic or vinyl. The vinyl wrapped around the headband also makes it very comfortable to wear.

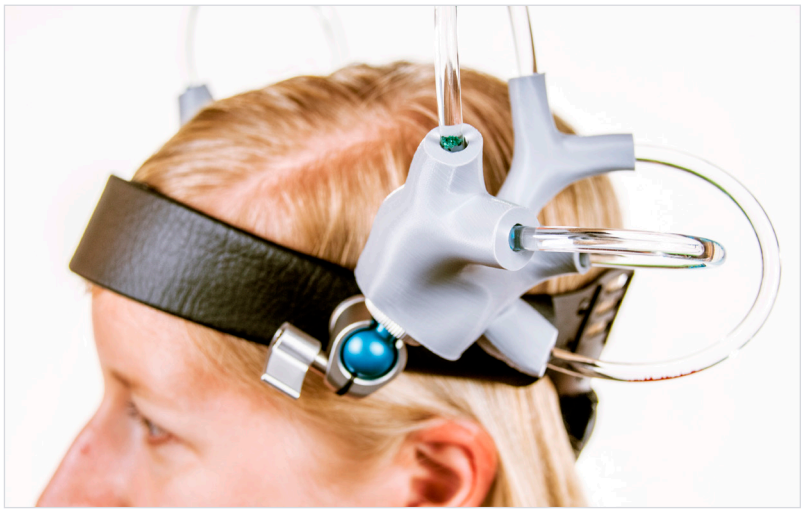
Now, let's put it all together.

Step by step instructions on how you can place the headband on a partner's head:

1. First, place the headband on your seated partner's head. Turn the adjustment knob clockwise to secure the headband.
2. Rotate the ball head knob at the base of one of the vestibular apparatus models counterclockwise to loosen it.
3. Then rotate the model so the directional arrow is pointed forward, matching the direction of the wearer's head.
4. Next adjust the angle of the model until the small air bubble is centered in the printed circle on the bubble level. This will ensure that the apparatus is properly positioned in relation to gravity and true vestibular anatomy.
5. Tighten the ball head knob by twisting it clockwise. Please note that if you don't have a good hand position to tighten the knob, you can pull up on the knob and rotate it to a better finger position. Once released, you will be able to adjust it more.
6. Repeat step #2 for the other vestibular apparatus.

Now you're ready to practice positioning your partner into a testing or treatment position. Let's try the Dix-Hallpike and a modified Epley maneuver as an example.

1. First, have your partner sit in the starting position for the Dix-Hallpike, which is long sitting with legs out in front on the treatment table.
2. Next, turn your partner's head 45 degrees to one side (for this example, we'll have the head go right) and have them lie down while bringing their head into about 30 degrees of extension.
3. Watch the movement of the stones inside the vestibular apparatus, noting the time it takes for them to shift position. Hold the testing position for at least 1 minute.
4. To move into treatment, turn your partner's head 90 degrees to the left, away from the affected side, maintaining about 30 degrees of extension throughout the head turn. Watch the movement of the stones inside the vestibular apparatus, noting the time it takes them to shift position. Hold this position for 1 minute at least.



5. Next, ask your partner to roll onto their left side. Keep their head rotated to the left so that the nose ends up pointed down toward the floor, with their chin tucked into flexion toward their collar bone. Watch the movement of the stones inside of the vestibular apparatus as they slide down past the line of side (as if they are moving into the vestibule). Note the time it takes the stones to shift position. Hold this position for 1 minute at least.
6. Ask your partner to come into sitting, keeping their chin tucked toward their chest for at least 20-30 seconds. Watch the movement of the stones inside of the vestibular apparatus, paying special attention to any crystals that still remain in the canal.

You can repeat this with any assessment, such as the side lying test, supine roll test, or deep head hang test. You can also repeat this with any treatment maneuver, such as the Semont/ Liberatory maneuver, the BBQ roll, Gufoni, Appiani, Kim, Li, or Casani, just to name a few. If you still have questions, please feel free to contact us at support@vestibularfirst.com or at 215-667-8990. We are always happy to help in any way we can. Thanks for your support!