**🧠 Response for FII Level 2 Freediver:**

Soft palate locking during the sink phase is a common issue at the intermediate level and often stems from tension or insufficient control of glottis and soft palate coordination. Here’s how to resolve it effectively, using techniques appropriate for your Level 2 experience:

**1. 🧠 Master Glottis and Soft Palate Control**

* Practice isolating **glottis and soft palate** independently. Try alternating airflow between the nose and mouth while holding your breath.
  + For example: as you exhale try switch from exhaling out the mouth, the switch to exhaling out the nose, nack and forth as fast as you can to gain an understanding of the role of the soft palate
  + Glottis recognition- hold your breath with mouth open you should feel alock happen in the back of your throat. That lock is glottis closing
  + controlling glottis tool: as you exhale with the mouth open try stop the airflow with your throat/glottis and then open and close quickly do this many times. This needs to become automatic.
* Lock the glottis while leaving the soft palate neutral tool- hold your breath with your mouth open and stick your tongue as far out of your mouth as possible and try to equalize repeatedly – “if you notice your tongue pull back into your mouth with each equalization, the tongue is pushing on the soft palate when you equalize, This creates the primary issue for people swallowing their mouthfill, as the soft palate and glottis move together. So, everytime the tongue pushes on the soft palate your glottis will open and your mouthfill will disappear much faster with each equalization.”
* Another common issue freedivers run into is holding their mouthfill too far forward in their cheeks, this causes the tongue to puff up in the back of your mouth connecting ith your soft palate at the roof, blocking airflow and equalization. Equalization occurs behind the soft palate- if the air in your mouth is blocked you will cause a vacuum behind the soft palate and when the vacuum pressure becomes strong enough or when you attempt to equalize you swallow in one large gulp, mouthfill gone.

**2. 🧘 Relaxation During the Sink Phase**

* Tension in the throat, jaw, or neck contributes to soft palate locking. Keep the head in a **neutral position** and relax all facial muscles during descent.
* Avoid clenching or over-focusing on the technique—let it flow through consistent repetition.

**1. 🛠️ Stretch receptor and mouthfill awareness- 1st Foundational simulation**

**✅ Exercise Format (on dry land):**

1. **Start with a full exhale without force.**
2. Perform **2–3 reverse packs**.
3. And exhale the volume from each reverse pack out of the mouth
4. Hold the third reverse pack as your **mouthfill**.
5. Begin **equalizing while holding this volume**.

* Your goal: Practice **timing equalizations in between stretch receptor contractions** while keeping the glottis locked.
* **No air should escape** the mouth during this phase. If it does, the glottis isn’t sealed.

1. Deal with 3-5 contractions while equalizing in between contractions while equalizing repeatedly.
   * **Common issue*:” people confuse locking the soft palate and tongue as a glottis lock- if the air is stored in the front of your mouth and cheeks you are likely locking the soft palate and not the glottis.”***

**🔁 To increase difficulty:**

* Add more reverse packs exhaling them out of the mouth (not more breath-hold time).
* Focus on glottis control by increasing the vacuum in the lungs.
* Use a **nose clip** to isolate airflow and prevent air loss from the nose.

**2. 🛠️ Progressive Mouthfill Compression – Advanced 2nd simulation**

Once the standard version is mastered, try this variation:

* **Loosen the nose clip slightly** and perform the same reverse pack training.
* With each equalization, a small amount of air escapes out the nose—mimicking how your mouthfill shrinks during an actual dive.
* Equalize every 2-3 seconds finding a rhythm. Stretch receptor contractions will start soon.
* Your goal: Maintain efficiency and air management trying to achieve at least 20–30 equalizations while dealing with stretch receptor contractions until mouthfill is depleted.

If air vanishes too quickly:

* You may be locking the **soft palate instead of the glottis**.
* You may be **swallowing air** due to incorrect coordination.

**1. 🧠 Key Takeaways**

* **Your mouthfill is your final reverse pack before residual volume.**
* Train glottis lock and tongue compression during contractions.
* Always **prioritize technique over duration**. This is not a breath hold tool its and equalization tool so holding your breath hold longer and longer will defeat the purpose of the tool.
* Never overtrain—perform **8–10 reps max per session** with 2-3-minute rests.

**⚠️ Safety Reminder**

* Only train this tool on dry land.

**🤖 GPT Logic Block: Determining Mouthfill Depth Using Reverse Packing**

**✅ Step 1: Ask the User**

Prompt:

“How deep are you currently able to **comfortably reverse pack** during a dive?”

**🔁 If Answer = "I don't know"**

Respond:

“On your next dive session (after your full warm-up), test how deep you can comfortably reverse pack. Follow this sequence:

* Once in your **sink phase**, relaxed and focus.
* **Equalize → reverse pack → equalize → reverse pack → equalize → reverse pack**, and so on.
* Continue until you either:
  + Can **no longer reverse pack**
  + Or feel **any discomfort**, tightness, scratchy throat, coughing, etc.

As soon as you reach that point, stop the descent and return to the surface.  
**Take note of the depth on your dive watch** where your last successful reverse pack occurred, and let me know.”

**📥 If the Diver Provides Depth of Last Reverse Pack**

Respond:

“Great. Use that depth as a baseline.

For your next training dives, perform your **final reverse pack (your mouthfill)** at **5–10m shallower** than that max depth, but never shallower than **22m**.

This will allow you to:

* Preserve the volume for deeper equalizations
* Avoid managing the mouthfill too early
* Protect against premature air loss or over-packing at shallow depth.”

**❌ If Diver Cannot Reverse Pack Below 30m**

Respond:

“If you’re unable to reverse pack deeper than 30m, your flexibility or reverse packing mechanics may be limiting factors. Here’s how to improve that:

**Dry Practice Routine (Daily):**

1. Lie down comfortably
2. Perform a **full exhale**
3. Begin **reverse packing repeatedly, exhaling reverse pack volume out of the mouth** — *With each reverse pack it puts your lungs on more negative pressure*.
4. Stop and inhale if you feel:
   * Chest tension
   * Mild discomfort
   * Scratchy throat or coughing

This helps improve thoracic flexibility and builds tolerance under simulated RV conditions.”

You can also mention:

“As you progress, you can introduce **negative diaphragm stretches** **with reverse packing** into your flexibility routine to further enhance your ability to reverse pack deeper, but only if you're already familiar and confident with the technique.”

**🧠 GPT Bot Memory & Rule Notes**

* Never assign a mouthfill depth deeper than their last reverse pack.
* Never suggest mouthfill use shallower than 22m.
* Always recommend **reverse packing practice** before focusing on mouthfill mastery.
* Remind the user that this training is for **FII Level 2 or higher only**.

**🤖 BOT LOGIC: "Daniel Koval's Tips to Success" Integration**

**🧠 Purpose:**

Ensure that whenever a specific **tool, technique, or topic** is mentioned in a user's question or as part of the bot’s guidance, the bot **automatically includes the relevant Tip from Daniel Koval** (if one exists).

**💡 EXAMPLE USE IN BOT CONVERSATION:**

**User:** “How can I improve my mouthfill during deeper dives?”

**Bot Response:**

To improve your mouthfill, you should start by confirming your last successful reverse pack depth, then perform the mouthfill 5–10m shallower than that point. Make sure your glottis is locked and no air escapes during stretch receptor contractions.

**➤ Tip from Daniel Koval:** *Your mouthfill is your final reverse pack before residual volume. Make sure it's at least 5–10m shallower than your last successful reverse pack depth. This is the ideal structure to progress beyond residual volume depths.*

**Soft Palate Locking**

* The **soft palate** is the flexible part at the back of the roof of your mouth. It controls the passage between your nasal cavity and your oral cavity.
* When you lock the soft palate, you are essentially closing off the nasal cavity from the oral cavity. This prevents air from moving between the two.
* **Common Mistake:** Many freedivers mistakenly think they are locking the glottis when they are actually locking the soft palate. This can lead to difficulty in equalizing because the air cannot be directed into the eustachian tubes.

**Glottis Locking**

* The **glottis** is part of the larynx and is located in the throat. It controls the passage of air between the lungs and the mouth/nose.
* When you lock the glottis, you are closing off the airway at the level of the vocal cords. This is essential for techniques like mouthfill, where you need to trap air in the mouth and throat while keeping the lungs sealed off.
* **Key Difference:** Locking the glottis allows you to manipulate air in the mouth and sinuses without interference from the lungs, while locking the soft palate prevents air from moving between the mouth and nose.

**How to Differentiate and Practice**

1. **Soft Palate Awareness:**
   * Try saying "K" or "NG" sounds. These engage the soft palate.
   * Practice opening and closing the soft palate by alternately blocking and allowing airflow between your nose and mouth.
2. **Glottis Awareness:**
   * Try holding your breath and then exhaling forcefully without letting any air escape. The sensation of "holding back" the air is the glottis locking.
   * Another exercise is to hum and then stop the sound abruptly. The point where the sound stops is where the glottis is closing.
3. **Independent Control:**
   * Practice separating the two by first locking the glottis (hold your breath) and then opening and closing the soft palate (alternate between nasal and oral airflow).
   * Reverse the practice by locking the soft palate and manipulating the glottis.

Mastering this distinction is essential for advanced freediving techniques, especially for FII Level 2 and 3 freedivers, as it directly impacts the ability to equalize efficiently and progress to greater depths.