Private pilot: altimeter setting 29.89 Hg vs. 29.92 Hg

The difference between an altimeter setting of 29.89 Hg and 29.92 Hg, while seemingly small, can have a noticeable impact on indicated altitude for a private pilot.

Key Points:

- **Altimeters work on the principle of atmospheric pressure:** The lower the pressure, the higher the indicated altitude.
- **The standard altimeter setting is 29.92 Hg**.
- **A setting lower than 29.92 Hg indicates lower pressure**, which can lead to a higher indicated altitude than your actual altitude above sea level.
- **Conversely, a setting higher than 29.92 Hg indicates higher pressure**, which can result in a lower indicated altitude than your actual altitude.

"High to Low, Look Out Below!"

This phrase serves as a crucial reminder for pilots. If you fly from an area with a higher altimeter setting to an area with a lower altimeter setting without adjusting your altimeter, your indicated altitude will be higher than your true altitude, meaning you will be closer to the ground than your instruments suggest.

Impact of a 0.03 inch Hg difference:

- Every 0.01 inch Hg change in altimeter setting equates to approximately 10 feet of altitude difference.
- Therefore, a 0.03 inch Hg difference (29.92 - 29.89 = 0.03) translates to roughly **30 feet of altitude difference**.
- **Setting 29.89 instead of 29.92:** If the correct altimeter setting is 29.92 and you set it to 29.89 (a lower setting), your altimeter will indicate an altitude approximately 30 feet lower than your actual altitude, increasing the risk of terrain contact.
- **Setting 29.92 instead of 29.89:** If the correct altimeter setting is 29.89 and you set it to 29.92 (a higher setting), your altimeter will indicate an altitude

approximately 30 feet higher than your actual altitude, potentially leading you to fly higher than intended.

In essence, even small differences in altimeter settings can have real consequences for a pilot, highlighting the importance of regularly updating altimeter settings during flight.