Inhaled Anesthesia Tips

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Avoid Distressing Awareness

- Check your equipment (e.g. Vaporizer is full and well seated).
- Use EEG monitor to guide pharmacodynamic endpoint (sufficient hypnotic effect).
- Target alpha/theta spindles and delta waves on EEG trace or red train tracks in delta and alpha frequency bands on the spectrogram (depending on which monitor is being used).
- Do not rely exclusively on processed EEG index.
- Use **exhaled** age-adjusted MAC to guide sufficient hypnotic dosing (effect-site concentration).
- Set an **audible alert (alarm) for low end tidal volatile anesthetic concentration** to ensure that inhaled anesthetic is being delivered, as intended.
- Consider targeting brief deep anesthesia (e.g. periods of EEG suppression) for intense stimuli (e.g. intubation, incision)
- Provide adequate analgesia.
- Avoid excessive NM-blockade (e.g. maintain 2 twitches on TOF).
- Reverse NM-blockade prior to discontinuing volatile anesthetic at the end of the case.
- Ensure sufficient analgesia (e.g. sufentanil, fentanyl, methadone, hydromorphone, ketorolac, ketamine) is on board at emergence.

Avoid Excessive Hypnosis

- Use EEG monitor to guide pharmacodynamic endpoint (note excessive hypnotic effect, e.g. EEG suppression).
- Target alpha/theta spindles and delta waves on EEG trace or red train tracks in delta and alpha frequency bands on the spectrogram (depending on which monitor is being used).
- Do not rely exclusively on processed EEG index.
- Use age-adjusted MAC to avoid excessive hypnotic dosing (effect-site concentration).
- Consider decreasing volatile anesthetic concentration rate in the face of EEG suppression.

Avoid Prolonged Emergence

- Use EEG monitor to guide down-titration of volatile anesthetic towards the end of the case while maintaining sufficient hypnotic effect.
- Do not rely exclusively on processed EEG index.
- Use age-adjusted MAC to guide safe down-titration of volatile anesthetic towards the end of the case (target lower effect site concentration).
- Provide adequate analgesia (e.g. remifentanil, sufentanil, fentanyl, methadone, hydromorphone) to allow minimization of volatile anesthetic.
- Discontinue volatile anesthetic early while continuing analgesic administration (e.g. remifentanil 0.2 mcg/kg/min) towards the end of the case **after reversal of NM-blockade**.

Avoid Unwanted Intraoperative Movement

- Target **age adjusted MAC** for volatile anesthetics
- Provide **adequate analgesia** alongside volatile anesthetics
- **Monitor depth of neuromuscular blockade** when using paralytic agents
- Consider **targeting brief deep anesthesia** (Ex: periods of EEG suppression) for intense stimuli such as intubation and surgical incision