

Back Sleeping and Vomiting

How to describe anatomically why sleeping on the back does not pose an additional risk for aspiration of vomit/spit up or related adverse reactions.

When lying in the supine (back) position, the trachea is anterior (on top) of the esophagus. When vomit/spit up comes up from the esophagus, it would have to go against gravity to enter into the trachea.

Most of the time, this does not happen and the vomit is swallowed back down into the stomach. If the infant is lying on their belly, the trachea is posterior (under) the esophagus so gravity would be more likely to pull the vomit past the trachea where it could more easily aspirated before it is swallowed down. If the stomach contents come up with enough force to enter the mouth, either way it would pass the trachea and in this case, the reflex to protect the airway is strong and usually allows the infant to expel the vomit out of the mouth and swallow any remainder down. There are also pharyngeal folds that help "guide" the stomach contents back down the esophagus. Overall, the research shows that the risk of aspiration of vomit and its negative associated consequences is not greater in the supine (back) position and is low regardless of position.

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