

REBREATHING SYSTEMS

PROS:

- CONSERVE ON HEAT
- CONSERVE ON MOISTURE
- CONSERVE ON O₂
- CONSERVE ON ANESTHETIC AGENT (ISO, SEVO)

CONS:

- MECHANICAL DEAD SPACE
- CHANGING CO₂ ABSORBENT MATERIAL
- TAKES LONGER TO CHANGE FROM LOWER CONCENTRATION TO HIGHER (THAN NRB SYSTEM)
- MORE RESISTANCE IN SYSTEM (THAN NRB SYSTEM)

NON-REBREATHING SYSTEMS

PROS:

- NO MECHANICAL DEAD SPACE
- CHANGE CONCENTRATION OF ANESTHETIC QUICKLY
- NO RESISTANCE TO BREATHING
- UNIVERSAL CONTROL ARM MEASURES AIRWAY PRESSURE
- CAN BE USED WITH MECHANICAL VENTILATOR

CONS:

- USES MORE O₂ THAN RB SYSTEMS
- USES MORE ANESTHETIC AGENT THAN RB SYSTEMS
- DOES NOT CONSERVE ON HEAT – COLD O₂ TAKES BODY HEAT AWAY
- DOES NOT CONSERVE ON MOISTURE

In perspective, the cost of O₂ is roughly \$0.01 per liter (in H-tanks). Isoflurane cost is approximately \$0.10 per cc. One will use 6cc liquid anesthetic at 1 LPM flow and 2% concentration in 1 hour. That is about \$0.60 for Isoflurane and \$0.60 for O₂ or a total of \$1.20 per hour. The higher the flow rate, the more Isoflurane and O₂ are used.