

# Vetamac Vapors

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Please visit our booth at these upcoming conferences. For locations and booth numbers, please go to our website at [www.vetamac.com](http://www.vetamac.com).

January 25-27, 2008 Indiana Veterinary Medical Association Annual Meeting

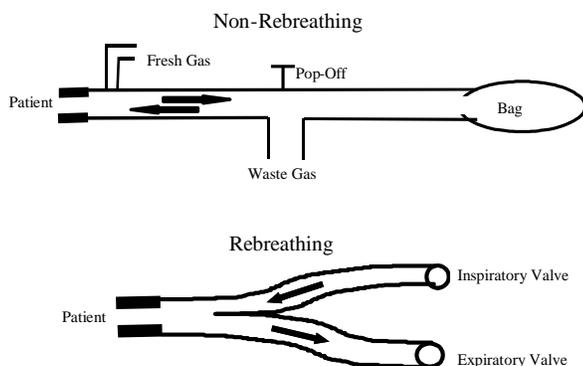
February 21-24, 2008 Ohio Veterinary Medical Association Midwest Veterinary Conference

## Rebreathing VS. Non-Rebreathing

This issue of Vapors will discuss some of the differences between a rebreathing and non-rebreathing system.

It is important to know how the systems differ both in form and function. The non-rebreathing system is most often used on small patients that weigh less than 10 lbs. Although some practices do not use a non-rebreathing (NRB) system regardless of the size of the patient, there are definite advantages to the NRB system.

The flow of the gas in a rebreathing system is always one way – toward the patient during inspiration and away from the patient during expiration. This is true regardless of the type of tubes - Y-tube or Universal F tube. The universal style does not function as a NRB system. The use of a rebreathing system requires the patient to open the one way valves. Although the resistance to opening the valves is small, nevertheless the patient must overcome this resistance. In the NRB system the flow of gas is to and fro and there is no resistance to flow. However, since the expired gas is introduced into the same space from which it was inspired, the fresh gas flow into the system must move the expired gas far enough away from the patient so that the next inspiration does not contain any of the expired gas from the previous breath. This fact requires a higher fresh gas flow than when a rebreathing system is used.



The higher flow rates used in the NRB make is less economical than the rebreathing system. However, since each inspiration contains only fresh gas, the depth of anesthesia can be controlled easier than with a rebreathing system. If the vaporizer setting is changed, the patient receives the changed concentration immediately. With a rebreathing system it will take 5-15 minutes (depending on the flow rate) for the patient to receive the changed concentration since the expired gas is being mixed with the gas in the bag.

The flow rate for the non-rebreathing system is published at 100-300ml/kg per minute\*. The lower end of the range is for a Bain type NRB and the higher end is for the T-piece type NRB. Ten to fifteen pounds and under is frequently the weight at which a NRB system is used.

\*Lumb & Jones' Veterinary Anesthesia, Third Edition, p. 396

By Harry Latshaw  
MS, RVT, VTS (Anesthesia)



Pam Bellamy is a Registered Veterinary Technician with over 20 years experience in small animal medicine. She worked for 9 years as the Head Veterinary Technician in a small animal practice where she was responsible for training

other staff members, surgery, and anesthesia. In 1999 Pam joined the staff at the Iams Company where she handled technical calls and provided education and support. Pam joined Vetamac in June 2007 and is a Service Technician/Sales Associate based in Ohio.

## FAQs

Q: How do we clean our breathing tubes (rebreathing and non-rebreathing)?

A: Unless there is a reason to think that a patient has been infectious, washing the tubes with mild soap and water, rinsing them, and then hanging them to dry is sufficient. If a disinfectant is used, the tubes must be profusely rinsed with water or airway irritation may occur.

If you have a question you would like answered in our FAQs, please email us at [info@vetamac.com](mailto:info@vetamac.com).

## The Baby Has Arrived!



Madison Elaine Skiles was born December 1, 2007 weighing 6 lbs. 8 oz. Madison is the daughter of Chad & Stefanie Skiles. Stefanie is a Vetamac Service Technician/Sales Associate in Indiana.

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