## Anesthetic Risk Dr. Andrew Hodges

I think there is a big misconception out there about animals dying under general anesthesia in veterinary medicine. Many clients are hesitant about putting their older pet under anesthesia for a procedure like dental cleaning and tooth extractions. I don't want to be cavalier about the situation but maybe we should talk about those risks. There are many studies out there but the general consensus is that less than 1 in 5000 healthy animals will die under anesthesia. The risk however is not the same for every animal. A healthy 6 month old is a lower risk than a 13 year old with severe dental disease.

So how do we mitigate that risk? Pre-anesthetic blood work will tell us if an animal's internal organs such as kidney or liver are functioning properly. There are some very safe anesthetic drugs that rely on the kidney and liver to be cleared by the body and by knowing if these organs are working properly the veterinarian can make an informed decision on those anesthetic drugs.

If an animal has an intravenous catheter placed the veterinarian has access to give IV fluids which help to maintain blood pressure and provide the ability to give drugs to help maintain blood pressure or a higher heart rate if needed. If there is a complication with the anesthesia or the surgery there is instant access to provide emergency medications. Many veterinary clinics will have their staff trained to deal with anesthetic emergencies with step by step protocols and emergency medications on hand.

At the Sylvan Lake Veterinary Clinic dogs and cats that are put under general anesthesia are first examined to assess general health with special attention taken with the heart and lungs. Blood is drawn for a pre-anesthetic blood panel. If that panel comes back healthy then the animal is given some sedation including a medication to increase the heart rate and blood pressure. If an animal receives sedation prior to anesthesia then we can use less anesthetic drugs making the procedure safer. Once the animal is sedated an intravenous catheter is placed and an induction anesthetic drug is given. The animal will now be under general anesthesia and can have an endotracheal tube placed and be put on oxygen and an inhaled anesthetic gas. Inhaled anesthetic gas has given us the ability to turn up and down the level of anesthesia to maintain the animal's vital signs during the procedure.

Constant anesthetic monitoring will allow the veterinary technician to alert the veterinarian if blood pressure, heart rate or respiration rate changes. The veterinarian can then make decisions if the level of anesthetic gas needs to be changed or if other medications need to be added.

There have been major advances in veterinary anesthesia in the last 20 years. Current pre-anesthetic and anesthetic protocols are much safer than the drugs we used to have available to us.

Every anesthetic has a risk associated with it. Unfortunately we will never be able to give a guarantee. As veterinarians it is our job to do a risk assessment of every animal prior to anesthesia and make that anesthetic event as safe as possible.

Every veterinarian and clinic has different anesthetic protocols and monitoring abilities. As a pet owner you can ask your veterinarian about their level of anesthetic deaths and how they are going to mitigate any risks that your pet may have for an adverse anesthetic event.

As for that 13 year old with severe dental disease as long as they do not have any other underlying disease that animal's quality and quantity of life will be greatly improved. The gains outweigh the risks. With a personalized anesthetic protocol and close monitoring the risks of an adverse event are greatly decreased.

Communication and the level of trust in your veterinarian should help you make an informed decision. If you are unsure then seek a second opinion. I think that too many animals miss out on having procedures that will improve the quality and length of their life due to a misconception on anesthesia safety.