

Understanding Video Otoscopy

What is video otoscopy:

Video otoscopy is the use of an otoscope (this is an instrument used to look in the ears) that has a very tiny video camera that transmits images to a television screen. These scopes use fiber optics to transmit a very bright light that illuminates the ear canal. In addition, video otoscopes have a working channel that allows the ear to be irrigated and vacuumed dry to help remove debris that can cover important structures or changes within the ear. The channel can also be used by instruments that can grab objects or tissue samples for cleaning or diagnostic purposes. We can take and print digital images of anything we find within the ear canal.

Why we do video otoscopy:

The video otoscope allows the doctor to see in the ear much better than a traditional hand held otoscope. With the irrigating function, debris can be cleaned deep within the ear that would be impossible to remove any other way. With handheld scopes, the doctor can not see through any fluid in the canal (the light just reflects off the surface of any liquid), but the video otoscope can “see underwater” making observation and diagnosis much better. This makes the video otoscope very valuable when **cleaning a very dirty ear** (deep ear flushing). The video otoscope is also the best instrument for **flushing behind a ruptured tympanic membrane** (ear drum) and for **diagnosing and biopsying tumors** in the ear canal.

How we do video otoscopy:

The video otoscope can be used just like any otoscope for routine examinations, but is often employed in diagnostic or cleaning procedures for diseased ears. Usually patients are anesthetized for these types of procedures for two reasons. First, when working near the ear drum, the patient must hold completely still to prevent damage to the delicate structures in the ear. Second, because the ear canal can have a direct connection to the throat (via the Eustachian tube), irrigating flush could get into the lungs causing pneumonia, so patients must have an endotracheal tube inserted to protect the airway during these procedures.

What to expect from video otoscopy:

As discussed above, patients are usually anesthetized for video otoscopic procedures. This usually means that they will be tired or sedated for up to 24 hours after the procedure.

Cleaning or taking biopsies can irritate the ear canals. Usually topical and oral medications are prescribed to treat or prevent inflammation and infection after a procedure. You should follow any instructions carefully and if you aren't sure what to do, call the office for clarification. The doctor will want to re-examine the ears after a procedure (usually 1-2 weeks later).

Risks and benefits of video otoscopy:

Video otoscopy is a very safe procedure. Common side effects include sedation for up to 24 hours after the procedure (due to the anesthesia). There may be increased irritation or bleeding in the ear canals for up to 72 hours after video otoscopy (depending on if biopsies are taken or not). Rare side effects include decreased hearing after a procedure, paralysis of the nerves controlling the eye and face on the side of the procedure, or dizziness due to irritation or damage to the balance center of the inner ear. These are often temporary and go away in a few weeks, but they can be permanent.

The safest medications and best monitoring tools are used while your pet is anesthetized, but no anesthetic procedure is completely risk free. Very rarely, patients can have unexpected, serious, even life threatening, side effects during anesthesia. Fortunately all of these events are very rare.

Video otoscopy's benefit is that it is often the safest, most cost effective and best method for diagnosing and treating serious ear diseases. Dr. Strauss will discuss video otoscopy for your pet after examination and explaining your pet's situation and other treatment options with you.