Anesthesia by Michael Broder, M.D.

There has been some recent confusion about different types of surgical anesthesia. This is a summary of information which I hope is helpful.

Orthopedic and other surgeons generally work with an anesthesiologist, a specialist in Perioperative Medicine. This is care of a patient prior to, during and after surgery.

This includes evaluating and preparing a patient to undergo the rigors of surgery. The anesthesiologist plans the anesthetic for the patient and then cares for the patient during the surgical procedure. He/she monitors the patient's blood pressure, heart rate, breathing, and level of consciousness and analgesia. The anesthesiologist adjusts the anesthetic plan, medications, fluids, and other parameters to provide a safe, pain free surgical experience for the patient. He/she will take care of your medical needs during the operation so he surgeon can concentrate on the surgery.

After the surgery, the anesthesiologist continues to provide the care necessary to ensure smooth emergence from the anesthetic and pain control after your surgery. Anesthesiologists are specialists in control of both acute and chronic pain. They also are involved in the care of critically ill patients.

To become an Anesthesiologist requires four years in college to earn an undergraduate degree, four years of medical school to earn a Doctor of Medicine degree. He/she must then complete another four years of training in an accredited Anesthesia Residency Program. The physician may then complete another one or two years in a subspecialty of anesthesia such as Obstetrical Anesthesia, Cardiac Anesthesia, Pediatric Anesthesia, or Pain Management.

After completing the above training, he or she must then pass a rigorous written and oral exam. To become a "Diplomate of the American Board of Anesthesiology". Some anesthesiologists complete similar requirements to become certified in their subspecialty as well, such as Pain Management Certification.

In some cases a certified Nurse anaesthetist may perform much of the monitoring and some other parts of the procedure, under supervision of the anaesthesiologist. Regulations vary somewhat from state to state.

Types of anesthesia

Anesthesia: lack of sensation

- Local: An injection in the skin and subcutaneous tissue. This might be used for a superficial biopsy.

- Nerve Block: Injection into a nerve sheath to affect an entire area served by the nerve. This is a common technique used by dentists for example. An injection of the dental (mental) nerve will result in numbness of the entire mandible (jawbone) on that side FOR HIP SURGERY, A FEMORAL NERVE BLOCK IS GIVEN. THIS RESULTS IN DEEP LOSS OF SENSATION IN THAT LEG
Spinal anesthesia — Two types

- Epi-Dural Anesthesia — This is reserved for a more limited area where only a few of the exiting spinal nerve roots will be affected. A very tiny needle or small plastic catheter is injected into the space just outside of the main covering over the spinal nerve roots and cord. It is trapped in that area & can not change levels.

- "Spinal" Sub-Dural Anesthesia — Allows for deeper and more extensive area of pain control and paralysis. Prevents uncontrolled muscle movement (so you don’t kick the surgeon in the head), and has other advantages. In the early phase, the anaesthetic can move up and down the spinal cord with gravity, controlled by positioning the patient.

Sometimes, special needles and catheters are used to combine both types of spinal anesthesia.

General anesthesia

This usually refers to the use of an endo-tracheal tube, Anesthetic gases and is reserved as back up for other techniques, use in people with respiratory, cardiac and certain other high risk situations.

Sedation

This refers to a variety of techniques using various intravenous medications.

Conscious sedation refers to a common technique which may be used for a variety of diagnostic and therapeutic procedures such as colonoscopy and gastroscopy. The advantage is that the patient is able to cooperate and follow instructions while controlling anxiety. Often, the patient may be given medication so that there is no memory of the procedure.

For Hip surgery, on otherwise healthy patients, the best combination may be a Femoral nerve block, spinal anesthesia and with intravenous sedation. NOTE: The level of intravenous sedation can be varied at will throughout the procedure. This will not affect the level of pain control.

This is why a number of surface hippies have reported “waking up” (light sedation) during their surgery. This is under the control of the anesthesiologist and doesn't indicate a mistake.

When you go for pre-anaesthesia assessment, ask questions and be sure to answer fully and honestly so that the best procedure can be planned.

Best to all,

Michael (MD in NC) (L) C+ 3/31/03

Michael Broder is an MD, Certified by the American Board of Radiology in Diagnostic Radiology, since 1975 and has been practicing in North Carolina since 1976.