

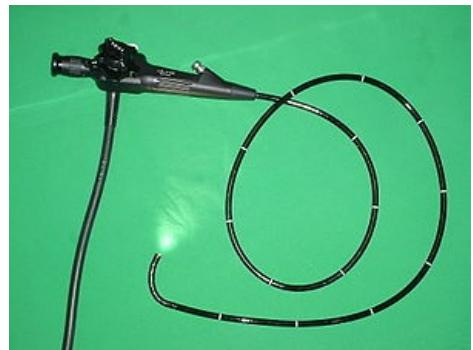
Endoscope

Endoscope is an optical instrument for imaging internal cavities.

According to the technical design, endoscopes are divided into:

- endoscopic mirrors;
- rigid endoscopes (tube);
- flexible endoscopes;
 - fiberscopes – CCD chip located proximally;
 - videoendoscopes – CCD video chip placed distally.

A **flexible endoscope** can be based on guiding light in a bundle of optical fibers. If the optical fiber in the outer layer has a refractive index smaller (a thinner medium) than the refractive index inside the fiber, then the fiber is completely reflected. By using many such fibers, the image can then be transmitted from the cavity to the observer.



Flexible Endoscope

Diagnostic Application

These are endoscopic examinations of the cavities:

- Gastroenterology (gastroscopy, colonoscopy).
- Pneumology (thoracoscopy, bronchoscopy).
- Urology (ureteroscopy).
- ENT (laryngoscopy).
- Orthopedics (arthroscopy).
- Gynecology (colposcopy, uteroscopy).

Therapeutic use

- Stop bleeding.
- Removal of polyps.
- Extraction of gallstones.
- A whole series of laparoscopic operations.

Links

Related Articles

- Endoscopy
- Gastrosopy
- Colonoscopy

External links

- Endoskop (Czech Wikipedia)
- Endoscopy (English Wikipedia)
- Endoskopie – Doc.RNDr. Roman Kubínek, CSc. (<http://apfyz.upol.cz/ucebnice/details/endoskopie.pdf>)