



Prostheses

What is a prosthesis?

A prosthesis is a man-made substitute for a missing body part (just one is called a **prosthesis** and is also often called a **prosthetic**; the plural is **prostheses**).

Sometimes, a part of the body must be removed if cancer is found there. Sometimes getting treatment might result in hair loss. Either way, a prosthesis can be used to help with appearance after surgery or other treatment for cancer. It can help a person look as though the body part had never been removed or that hair loss hasn't happened, and to help the person feel better and function as naturally as possible.

Types of prostheses

There are many different types of prostheses. Some are worn on the outside of the body and can be put on and taken off (external prostheses), and others are inserted during surgery (implants). For example, people with cancer may need a prosthesis due to loss of a breast, eye, leg, or arm. An implant may be used in the penis, or in a breast, testicle, or bone. If the larynx has been affected by cancer, an electronic voice device may be needed. Wigs for [hair loss](#)¹ from some kinds of chemo are considered prostheses, too.

Hair prostheses (wigs)

[Radiation therapy](#)² to the head and certain [chemotherapy drugs](#)³ damage hair follicles, making hair fall out.

- Ask your insurance company if hair prostheses are fully or partially covered. If so, you will likely need a written prescription or a letter of necessity from your doctor.

- You can learn about preparing for hair loss, finding and buying a wig, what to do if you can't afford a wig, and how to choose a wig in [Choosing and Wearing a Wig⁴](#).

Breast prostheses and implants

Whether a breast prosthesis or implant is used depends on the type of breast surgery being done to remove the cancer, the need for other cancer treatments, risk and benefit for the patient's situation, along with their lifestyle and preferences.

Breast prostheses

An external breast prostheses (or breast form) is fitted for size and comfort and worn on the outside of the body where the breast, or part of it, has been removed. Here are some tips when choosing and getting fitted for a breast prosthesis.

- Small prostheses (equalizers) are available for women who have had just part of a breast removed.
- Nipple prostheses can be added during surgery when the nipple can't be saved. External nipple prostheses are also sold to cover flat or missing nipples.
- Prostheses are sold in surgical supply stores, lingerie shops, and in the lingerie departments of many department stores. Call before you go to make sure that a professional fitter will be there.
- Wear a form-fitting top when you shop for a prosthesis, so that you can better see how it looks when you move. Consider having your spouse, partner or a good friend go with you.
- Try many different types. Prostheses vary in shape, weight, and consistency. You can also find custom-made forms if needed.
- Prostheses may feel heavy, but they should stay in place when you move and feel comfortable. They should also look like your natural shape and feel a lot like your other breast when you touch them.
- Ask if the prosthesis absorbs sweat, and find out how to clean and care for it.
- Ask your insurance company if breast prostheses are fully or partially covered. If so, you will likely need a written prescription or a letter of necessity from your doctor.

Breast implants

Some patients who have had part or all of a breast removed due to cancer may prefer an implant instead of a prosthesis. An implant is placed during [breast reconstruction surgery](#)⁵.

- Talk to your doctor about the benefits and risks of getting an implant.
- There are different options and types of breast implants, including implants made of saline and silicone gel. The type, size, shape, and consistency of the implant should be part of discussions with the cancer care team prior to surgery.
- Implants are sometimes done or started at the same time as mastectomy, while others are done later.
- Sometimes the process of getting an implant means having more than one operation.
- Talk to your insurance company about coverage.
- Learn more about [breast reconstruction options](#)⁶.

Limb (leg, arm, hand, foot) prostheses

Physical and activity limits are the most significant changes to deal with after removal of part or all of a limb (amputation). The type of prosthesis that might be needed after surgery depends on the type, [stage](#)⁷, and location of the cancer, any additional treatment that might be needed, and the patient's lifestyle and preferences.

- Before surgery that will affect a limb (arm, leg, foot, or hand), ask about prosthesis options, risks, benefits, and how your prosthesis will be fitted.
- Sometimes a bone implant may be used or needed, and attached to an external prosthesis. Targeted muscle reinnervation (TMR) might also be used. These can help make the prosthesis more stable and easier to control.
- Depending on the limb affected and how much needs to be removed, a temporary limb prosthesis might be fitted during the first surgery and a permanent prosthesis can be fitted after you are stronger.
- Be sure you know how to care for the surgical site and the prosthesis.
- Talk to your insurance company about coverage.

Testicular implants

A testicular implant may be inserted when, or after, surgery to remove a testicle is done. Studies show that having counseling along with a discussion about risks and benefits

before having an implant are helpful in making a decision to get one and being satisfied with the decision after the procedure.

- You might want to discuss the possibility of a prosthesis with your partner.
- Before surgery, talk to your cancer care team about whether you want a testicular prosthesis. Studies show that having counseling along with a discussion about risks and benefits before having an implant are helpful in deciding whether to get one and being satisfied with the decision after the procedure.
- Talk to your insurance company about coverage.
- For the procedure, a testicle-shaped form is put in the scrotum during surgery or at a later date. The size, shape, and consistency of the implant should be part of discussions and counseling sessions before surgery.
- See [Sexuality for the Man With Cancer](#)⁸ for more information.

Penile prostheses and implants

Using a penile prosthesis or getting a penile implant may be explored by some patients after surgery for penile or prostate cancer, or if other cancers or cancer treatments affect the ability to have an erection.

- You might want to discuss the possibility of a prosthesis or implant with your partner. Counseling sessions may help with making a decision.
- Penile prostheses are external, and worn outside the body. They are often attached with a strap.
- Penile implants are placed after recovery from cancer surgery.
- Different types, sizes, and shapes of penile prostheses and implants are available. Discuss options and what type is best for you with your partner and with your cancer team.
- Talk to your insurance company about coverage.
- See [Sexuality for the Man With Cancer](#)⁹ for more information.

Larynx (voice box) prostheses and devices

When the larynx (voice box) is removed during cancer surgery (laryngectomy), the voice is lost. After surgery, patients might decide to have a voice (laryngeal) prosthesis placed or may use an electronic voice device to help restore speech.

Tracheoesophageal puncture (TEP)

TEP is the procedure used to place a laryngeal prosthesis. This procedure creates a connection between the windpipe and esophagus through a small hole at the stoma site. A small one-way valve put into this hole makes you able to force air from your lungs into your mouth.

Electrolarynx.

If you cannot have a TEP for medical reasons, or while you are learning to use your TEP voice, you may use an electrical device to produce a mechanical voice. The battery-operated device is placed at the corner of your mouth or against the skin of your neck. When you press a button on the device, it makes a vibrating sound.

Read more about these options in [Living as a Laryngeal or Hypopharyngeal Cancer Survivor](#)¹⁰.

Facial and oral prostheses and implants

Cancers of the head and neck area include those that affect the face and facial features, also called the **maxillofacial** area. Examples are cancers of the sinuses (sinus cavity), nose (nasal cavity), mouth (oral cavity), cheek, and jaw (mandible). They usually require surgery to remove the tumor and sometimes the area surrounding it. Surgery can result in major changes to appearance and function of the area affected.

Sometimes reconstructive procedures can be done to help with appearance. And in some cases, a prosthesis or implant might be offered, can help a patient look and feel better, and certain types can help restore function. For example, a prosthesis or implant might be offered to help with things like chewing, swallowing, smell, or speech.

- The decision to offer a prosthesis or implant depends on the type and [stage](#)¹¹ of the cancer, where it's located, how extensive the surgery to remove cancer needs to be, and the preferences and other health problems a patient may have.
- Specially trained prosthetic professionals work with the surgeon to custom-make maxillofacial prostheses and implants based on the size and shape of the part that's removed.
- Talk to your insurance company about coverage.
- Learn more about specific types of head and neck cancers in [Surgery for Nasal Cavity and Paranasal Sinus Cancers](#)¹² and [Surgery for Oral Cavity and Oropharyngeal Cancers](#)¹³.

Ocular (eye) prostheses and implants

Loss of an eye is called **enucleation**. While sometimes only a part of an eye needs to be removed, removal of the entire eyeball is often needed for people with eye (ocular) cancer, including ocular [melanoma](#)¹⁴, ocular lymphoma, and [retinoblastoma](#)¹⁵. In these cases, an artificial eye (ocular prosthesis or implant) might be offered.

- The decision to offer a prosthesis or implant depends on the type and stage of the cancer, where its located, how extensive the surgery to remove cancer needs to be, and the preferences and other health problems a patient may have.
- Artificial eyes are usually made of silicone or hydroxyapatite (a substance similar to bone).
- An artificial eye is custom-made to match the size and color of the remaining eye. Once it is in place, it is hard to tell it apart from the real eye.
- The surgeon might be able to attach the artificial eye to the muscles that move the eye, so it moves the same way as the eye would have.
- An **ocularist** (a specialist in eye prostheses) works with the doctors and helps to fit a person with an artificial eye.
- Talk to your insurance company about coverage.
- Read more about these procedures, prostheses, and implants in [Surgery for Eye Cancer](#)¹⁶ and [Surgery for Retinoblastoma](#)¹⁷.

Paying for prostheses

Some prostheses can be expensive. The cost for a prosthesis is often covered in different ways and in different amounts. Cost depends on the type of prosthesis and why it's recommended or needed. Sometimes coverage depends on if the prosthesis is cosmetic (used mostly for looks) or whether it helps replace a function that's been lost (functional use). The type of insurance coverage you have makes a difference too.

Most insurances, including [Medicare](#)¹⁸, help pay for certain types of prostheses. But, some prostheses may have limited coverage, some may not be considered "medically necessary," or the procedure to implant them might be considered elective. It's a good idea to check with your insurance company first to find out if getting a prosthesis is covered. You can ask your health care team to help. Visit [healthcare.gov](#)¹⁹ for more information about what certain plans cover. If you're on Medicaid, check with your [state's Medicaid office](#)²⁰ about coverage.

If your insurance covers the prosthesis

- Find out how much you might have to pay out-of-pocket.
- It's important to know some prostheses, such as wigs and breast prostheses, might need to have a written prescription to be covered. So be sure to ask about any paperwork, prescription, or approval that might be needed.
- Find out if there is a certain brand of prosthesis that is covered or if you need to go to a certain place to get the prosthesis.
- If your doctor tells you that rehabilitation (rehab such as physical therapy or occupational therapy) will be needed after you get a prosthesis, ask about whether those services are covered.

If your prosthesis or therapy related to it is not covered

- Talk to your doctor about organizations that might be able to provide financial help.
- Your doctor can also refer you to a social worker, patient advocate, or patient representative that can help.

Rehabilitation or therapy after getting a prosthesis

Sometimes rehabilitation (rehab) or therapy is recommended for people with cancer who are learning to live with a prosthesis. Rehab and therapy can improve or regain function, help people adjust to role changes at work and at home, and improve quality of life. Examples are physical therapy, occupational therapy, or speech therapy.

Cancer rehabilitation (rehab) is specialty care that can be used at any time during a person's cancer journey. In cases when prostheses are needed, trained rehab professionals can help treat physical and functional deficits. Cancer rehab after surgery or treatment can also help improve a patient's well-being and can help them when they might have problems doing certain daily activities. When a patient is referred for cancer rehab, a personal plan of care is developed based on the problem being treated and the goals and preferences of the patient. Ask your doctor if cancer rehab or a certain type of therapy might be a good option for you.

Hyperlinks

1. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/hair-loss.html
2. www.cancer.org/treatment/treatments-and-side-effects/treatment-

- [types/radiation/effects-on-different-parts-of-body.html](#)
3. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/chemotherapy.html
 4. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/hair-loss/choosing-and-wearing-wig.html
 5. www.cancer.org/cancer/breast-cancer/reconstruction-surgery.html
 6. www.cancer.org/cancer/breast-cancer/reconstruction-surgery/breast-reconstruction-options.html
 7. www.cancer.org/treatment/understanding-your-diagnosis/staging.html
 8. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/sexuality-for-men-with-cancer.html
 9. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/sexuality-for-men-with-cancer.html
 10. www.cancer.org/cancer/esophagus-cancer/after-treatment/follow-up.html
 11. www.cancer.org/treatment/understanding-your-diagnosis/staging.html
 12. www.cancer.org/cancer/nasal-cavity-and-paranasal-sinus-cancer/treating/surgery.html
 13. www.cancer.org/cancer/oral-cavity-and-oropharyngeal-cancer/treating/surgery.html
 14. www.cancer.org/cancer/eye-cancer.html
 15. www.cancer.org/cancer/retinoblastoma.html
 16. www.cancer.org/cancer/eye-cancer/treating/surgery.html
 17. www.cancer.org/cancer/retinoblastoma/treating/surgery.html
 18. www.medicare.gov/coverage/prosthetic-devices
 19. www.healthcare.gov/coverage/what-marketplace-plans-cover/
 20. www.medicaid.gov/state-overviews/index.html

References

Dieckmann KP et al. Testicular prostheses in patients with testicular cancer: Acceptance rate and patient satisfaction. *BMC Urol.* 2015;15:16.

Faris C, Heiser A, Quatela O, Jackson M, Tessler O, Jowett N, Lee LN. Health utility of rhinectomy, surgical nasal reconstruction, and prosthetic rehabilitation. *Laryngoscope.* Dec 2019 [Epub ahead of print]. doi: 10.1002/lary.28480.

Gerber LH, Hodsdon B, Comis LE, Chan L, Gallin JI, McGarvey CL 3rd. A brief historical perspective of cancer rehabilitation and contributions from the National Institutes of

Health. *PM R*. 2017;9(9S2):S297-S304.

Glaser KM, McDaniel DC, Hess SM, Flores TF, Rokitka DA, Reid ME. Implementing an integrative survivorship program at a comprehensive cancer center: A multimodal approach to life after cancer. *J Altern Comp Med*. 2019;25(S1):S106-S111.

Goiato MC, Bannwart LC, Haddad MF, dos Santos DM, Pesqueira AA, Miyahara GI. Fabrication techniques for ocular prostheses: An overview. *Orbit*. 2014;33(3):229-233.

Havon S, Michael J, Coward RM. The modern testicular prosthesis: Patient selection and counseling, surgical technique, and outcomes. *Asian J Androl*. 2020;22(1):64-69.

Kaye R, Tang CG, Sinclari CF. The electrolarynx: Voice restoration after total laryngectomy. *Med Devices*. 2017;10:133-140.

Lee GK, Sheckter CC. Breast reconstruction following breast cancer treatment: 2018. *JAMA*. 2018;320(12):1277-1278.

Madiraju SK, Hakky TS, Perito PE, Wallen JJ. Placement of inflatable penile implants in patients with prior radical pelvic surgery: A literature review. *Sex Med Rev*. 2019;7(1):189-197.

Medicare.gov. *Is my test, item, or service covered? Prosthetic devices*. Accessed at <https://www.medicare.gov/coverage/prosthetic-devices> on January 20, 2020.

Mioton LM, Dumanian GA. Targeted muscle reinnervation and prosthetic rehabilitation after limb loss. *J Surg Oncol*. 118(5):807-814.

Nail LM, Lee-Lin F. Alopecia. In Brown CG, ed. *A Guide to Oncology Symptom Management*. 2nd ed. Pittsburgh, PA. Oncology Nursing Society; 2015:21-33.

Pergolotti M et al. A health services research agenda to fully integrate cancer rehabilitation into oncology care. *Cancer*. 2019;125(22):3908-3916.

Phasuk K, Haug SP. Maxillofacial prosthetics. *Oral Maxillofac Surg Clin North Am*. 2018;30(4):487-497.

Wassersug RJ. Maintaining intimacy for prostate cancer patients on androgen deprivation therapy. *Curr Opin Support Palliat Care*. 2016; 10(1):55-65.

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