PILONIDAL SINUS CENTER MUNICH

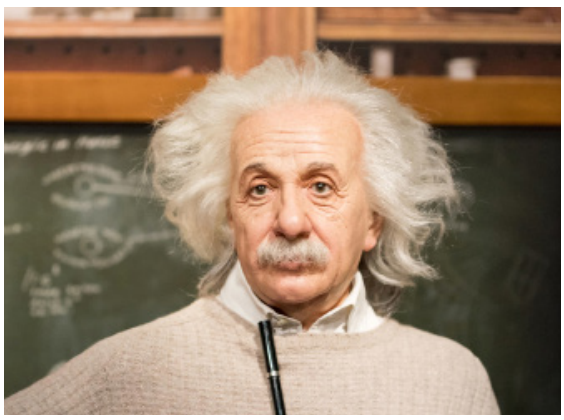
Laser - Epilation for Pilonidal Sinus

What is the advantage of laser hair removal in Pilonidal Sinus disease

A tailbone cyst is caused by the **penetration of hairs into the subcutaneous tissue**. It is for good reason that the medical term is Sinus pilonidalis, „hair nest." About 80 % of these hairs come from the area around the gluteal fold, 20 % from the head and neck. **This applies both to the first occurrence of Pilonidal Sinus and to relapse (recurrence)**.

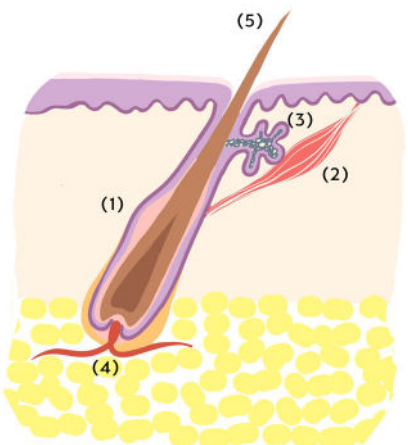
In other words, **80 % of all Pilonidal Sinus could be prevented** by systematic hair removal. New scientific trials prove that the recurrence rate is being reduced by half.

Laser, IPL, or electro-epilation tackle hair growth at the (hair) root. Shaving, epilating, waxing, and depilatory cream only tear off the hair while leaving the root.



Albert Einstein[1] (1879-1955): His theory prepared the foundation of the first laser (Theodor Maimann 1961)

Hair removal by light - how does it work?



Normal hair root. Bulge region (1), Erector pili (2), Sebaceous gland (3), Dermal papilla (4), Hair (5)

Temperatures above 61 °C permanently inactivate the hair root by destroying the stem cells in the area of the dermal papilla (4) and the „bulge" (1). How can this temperature be reached without damaging the skin?

When the laser beam hits the skin, part of the energy is reflected at the surface. Part of the energy penetrating up to 2 cm is scattered and part is absorbed by so-called chromophores (**absorption**).

Chromophores in tissue are **melanin** (pigment of hair and tanned skin), **hemoglobin** (red blood pigment) and **tissue water** (H2O).

The amount of energy absorbed depends on the **wavelength of the laser**. It is chosen so that melanin absorbs a lot of energy and hemoglobin and water little (**selective photothermolysis**). Hair removal is easy for light skin and dark hair and difficult or even impossible for dark-skinned individuals.

Objective of laser epilation: prevention of early and late relapse

- If a Pilonidal Sinus appears again after surgical removal we call it a relapse or recurrence. There are three types of relapse:

- **Early relapse:** Pit-picking removes the enlarged hair roots as skin cylinders of a few millimeters in diameter. In the past, it was not uncommon to see newly formed hair growing centrally into the still fragile scar shortly

1 Albert Einstein Wax figure in Madame Tussauds Museum in Istanbul. (c) 2020 dreamstime.com

after healing, thus causing it to open again. And this despite the fact that, according to traditional belief that scars would be hair-free. We suspect that **stem cells from the bulge region** that are inevitably left behind during minimally invasive surgery are responsible for this. According to our experience, the problem can almost always be avoided by **single laser treatment** with high energy before the operation.

- **Genuine late relapse:** In the further course after surgery for a Pilonidal Sinus, relapses occur most frequently in the first five years. As with a patient without previous surgery, **ingrown hair follicles („pits") can lead to a newly formed fistula**. Repeated laser treatment - an average of 5 treatments are required - reduces the number of hair roots in the critical area in order to avoid this kind of recurrence.

- **„Pseudo-relapse":** We see this type of recurrence most often after radical surgery. According to the principle „constant dripping wears the stone," **hairs from the surrounding area pierce into the scar**. The point of highest hair density and lowest mechanical resistance is usually at the lower end of the scar. The recurrence often only becomes noticeable when the fistula at the upper end of the scar comes to the surface again. Laser epilation must be performed with **high energy and preferably under local anesthesia**, as the crucial region is sensitive to pain. It takes up to 10 treatments to reach safe groundNur.

Laserepilation in detail

After **explaining the benefits and risks**, we first carefully shave the area to be treated.

We offer a **local anesthetic** for laser therapy. This is more pleasant and also more effective, as higher energy doses are possible with local anesthesia.

Then **contact cooling gel** is applied to the skin. The laser handpiece glides easily, the cooling is most effective, and less laser light is reflected.

Several laser units (800 and 950 nm) are integrated into the handpiece of our high-power laser, which emits energy in parallel. The **success of the treatment** can be seen by a slight redness (perifollicular erythema) or swelling (edema) of the hair follicle.



The epilation handpiece of the Asclepion MeDioStar NeXT laser with integrated Peltier cooling element

Our affordable rates

Laser Epilation
Single Treatment

€ 95⁰⁰

per session

- Facilitates the surgery
- Prophylaxis of early relapse
- Upgrade to special value bundles possible

Standard

Pain-free thanks to local anesthesia (on request)

Laser Epilation
Save 14 %
Bundle of 5

€ 400⁰⁰

5 sessions

- Facilitates the surgery
- Prophylaxis of recurrence
- Special value bundle

Value

Pain-free thanks to local anesthesia (on request)

Laser Epilation & LLLT/Cold Plasma
Bundle of 5 and LLLT

€ 1050⁰⁰

2 x 5 sessions

- Facilitates the surgery
- Prophylaxis of recurrence
- Promotes wound healing

Premium

Pain-free thanks to local anesthesia (on request)

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