

Module 3 : Nail Anatomy

- About how fast nails grow and how to help them grow faster
- The structure of the nail
- Why understanding the nail anatomy is vital to your job
- The difference between the various parts of the nail

In this module you will learn:

- About how fast nails grow and how to help them grow faster
- What the structure of the nail is
- Why understanding nail anatomy is vital to your job

3.1 Nail Anatomy



The nail is an important structure that is not just there for aesthetic purposes.

As well as protecting the ends of the fingers, it plays an important role in sensing the world around us. As such, it requires as much protection as the skin. At the same time, this means the nail has the potential to cause a lot of pain, just as the skin does.

Beneath the nail is a nerve-rich bed. This bed gives us sensory information every time we touch an object, allowing us to sense the world around us. If you have ever accidentally pulled off more of a nail than you intended, or stubbed your toe, you will know just how sensitive these nerves are.

3.2: How Fast do Nails Grow?



As a budding nail technician, the chances are one of your clients will ask you how fast their nails are going to grow.

Naturally, this varies between individuals. The healthier a person is, the faster their nails will grow.

As a general rule, fingernails grow faster than toenails. They accelerate at a rate of around 3mm per month. While this may not seem like much, it is astounding just how soon those 3mm can make someone's nails seem extremely long. If a nail breaks off completely, it can take around six months to regrow again.

As for toenails, they tend to grow at a rate of around 1mm per month. When they are broken off completely, they take around 9-18 months to regrow. How long this growth takes depends on the person, their age, and their health.

3.3: Are there Ways of Encouraging Faster Nail Growth?



Absolutely! How fast a person's nails grow is a great indicator of their health.

When the growth is stunted, there is a chance that something is wrong nutritionally.

While you are not in a position to deliver full nutritional advice as a nail technician, you can suggest that clients eat a more balanced diet, drink more water, and cut down on bad lifestyle habits. This can include quitting smoking, drinking less, and exercising more. However, that is about where your advice should begin and end. Clients looking for more advice should, ideally, consult a qualified professional; like a GP.

Otherwise, you may be able to suggest that your clients take a nutritional supplement that focuses on hair and nail growth. Usually, these supplements are rich in calcium. However, you should also highlight to your clients that they should only take these supplements after talking to their doctor.

Clients' nails may also be affected by any health conditions or medications they are on. If your client is unaware of any medical conditions make sure to not diagnose them as you are not medically trained, but again maybe suggest they consult a qualified medical professional.

3.4: How is a Nail Structured?

The nail has several key structures. If any one of these structures is disturbed in some way, it can cause the nail to grow abnormally.

Knowing a little more about these structures can help you practise safely as a technician.

Nail root

Have you ever looked at a completely bare nail and seen a little white portion that appears to sit underneath it? Well, this is the nail root, and it is otherwise known as the 'germinal matrix'. This root actually extends a little into your skin, and forms most of the nail's bulk.

Nail matrix

This is where the nail is made. It is the only living part of the nail, and contains, small blood vessels, nerves, and melanocytes. Remember the melanin discussed in an earlier chapter? Well, that comes from melanocytes. Knowing this is important for a nail technician, as patients who are suffering from certain types of skin cancer develop ominous brown patches beneath their nails; watch out for these. If your client has damaged the nail matrix or maybe has an ongoing medical condition, this will affect how the nail grows.

Nail mantel

The skin covering the matrix and the base of the nail plate.

Cuticle

The overlapping skin surrounding the nail. Its job is to protect the matrix from being invaded by bacteria and physical damage. It acts also as a waterproof barrier.

Lunula

The half-moon-shaped point where the matrix and nail bed meet.

Nail bed

This is the part of the finger underneath the nail plate.

Nail walls

The skin on both sides of the nail plate

Nail plate

This is the visible part of the nail that sits on top of the nail bed. It is made by Keratinization; the transformation of living cells to hard, dead cells, and it consists of carbon, hydrogen, oxygen, sulphur and nitrogen. It is typically pink because of the blood vessels that rest beneath it. Along the side of the nail plate are grooves, which help it stick to the nail bed.

Nail grooves

These are the grooves on the skin at the sides of the free edge, and the nail follows them as a guideline when it grows.

Hyponychium

This is the area between the nail bed and the fingertip. Much like the cuticle, it acts as a waterproof barrier.

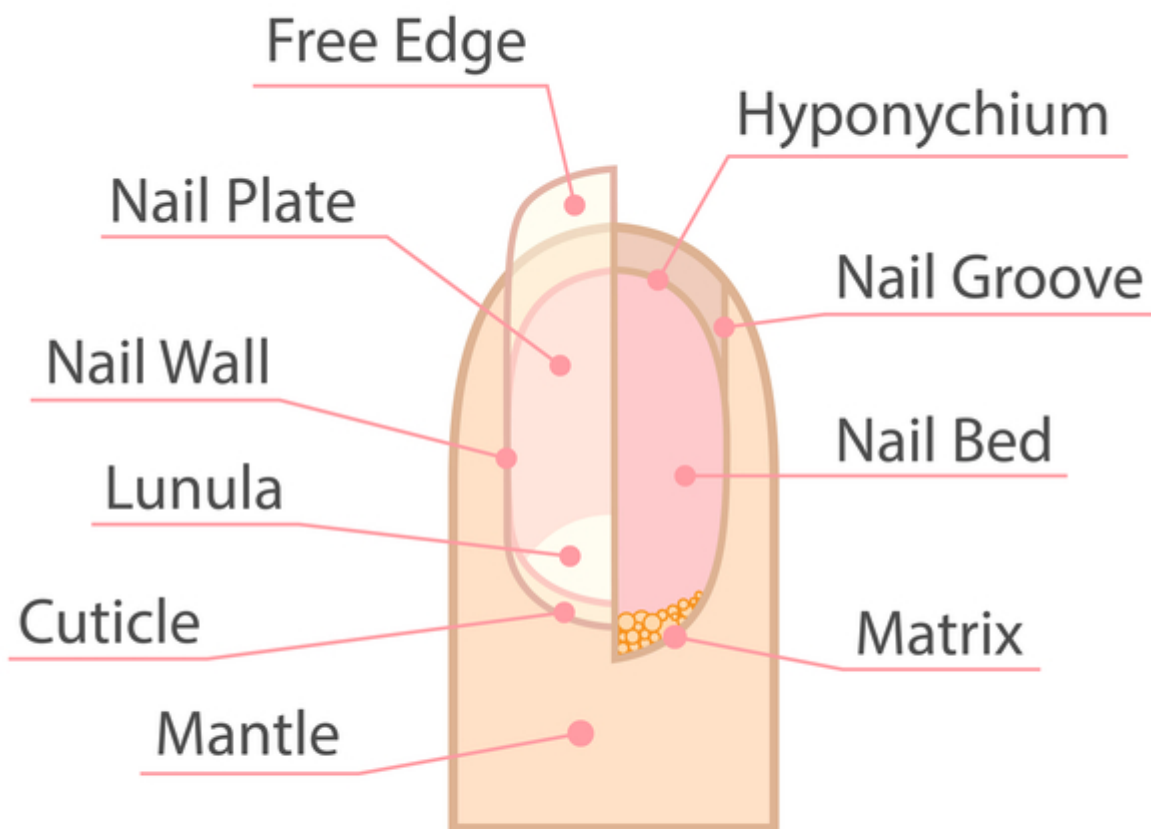
Free edge

This is the end of the nail plate that is shaped during a manicure and pedicure.

Perionychium

The perionychium is that little area of skin that sits at either side of the nail. When you remove nail tips and it doesn't quite go right, this is where a little overhang develops. Thanks to the nerve-rich nature of this area, having an overhang can be incredibly painful.

Nail structure



3.5: Why is it Necessary to Know about the Nail's Anatomy?

Okay, so nobody is expecting you to turn into a dermatologist here.

Believe it or not, the nature of the nail and its anatomy is far more complex than the last few paragraphs have made out.

However, it is absolutely necessary for you to know about the nail's anatomy for several reasons.

1. The nail plate - is what you are going to be painting. A person's nail plate can give away

quite a lot about their general health. Glaringly obvious melanocytes aside, brittle nails may also indicate that the individual in question is suffering from poor nutrition. When this happens, you may be able to share some tips or suggest some supplements.

2. The perionychium - is a great source of pain. Overhangs can soon begin to develop. Not only do they look messy when you are trying to achieve that perfectly manicured look, but they can also cause a stinging sensation when you are trying to remove them.
3. Cutting the nails - know how far to cut down. This is especially relevant on the toenails and on older clients as their skin may attach to the nail as they get older and you want to avoid cutting into this as it can cause pain and, potentially, bleeding.
4. The cuticle needs a lot of attention if you are going to achieve the right aesthetic results. It can look a little messy and needs to be removed. This is especially the case when it comes to the little toes of the feet, where the cuticles can become quite large. At the same time, knowing that the cuticle has its waterproofing role allows you to not over-treat it.

You need to be careful with the cuticle and know what to remove and what not to remove, as taking too much can damage the cuticle and cause pain for the client - taking too much can also lead to the cuticle growing more than usual.

Those are the four key anatomical challenges that can arise. Along the way, you will learn a little more about further challenges and how you are expected to deal with them.

Module Summary

In this module on nail anatomy, you learned about the basic structure of the nail, as well as some details about nerves and blood vessels.

This was a good opportunity to learn about the nail's importance and how to treat each area properly as a technician.
