

**#MADEEASY**



**STRUCTURE OF  
NAIL**



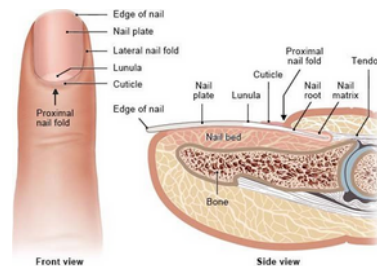


# STRUCTURE OF NAIL

- **The nail is a complex structure that protects the distal phalanx, enhances fine touch perception, and aids in precise movements.**
- **Understanding the structure of the nail is crucial for diagnosing and treating various nail disorders.**

## Can you explain with an example?

- **The structure and growth of nails is similar to gardening.**
- **Just as a plant requires healthy roots, soil and environmental conditions to thrive, nails need a healthy matrix, nail bed and proper care to grow well.**
- **Disorders of the nail can be thought of as pests or diseases that affect plants, requiring appropriate treatments to restore health.**



## Components of nail

| Component          | Description   | Structure & function   | Example  |
|--------------------|---|--|--|
| <b>Nail Plate</b>  | The hard, translucent part of the nail that is visible                  | Composed primarily of keratin<br>Protects the fingertip and the underlying tissues                 | The nail plate is like the hard shell of a turtle, providing protection to the soft tissues underneath |
| <b>Nail Bed</b>    | The skin beneath the nail plate   | Contains blood vessels, nerves & melanocytes<br>Provides nourishment and support to the nail plate | The nail bed is like the soil that supports and nourishes a plant                                      |
| <b>Nail Matrix</b> | The tissue (hidden under the proximal nail fold) that produces new nail | Contains rapidly dividing cells (keratinocytes)<br>Responsible for nail                            | The nail matrix is like the root of a plant, where growth originates                                   |





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|                             | cells   | growth  |  |
|-----------------------------|---|---|--|
| <b>Lunula</b>               | The visible, white, crescent-shaped area at the base of the nail              | Part of the nail matrix that is visible through the nail plate<br>Indicates the visible portion of the matrix | The <u>lunula</u> is like the moon seen from behind clouds                                     |
| <b>Cuticle (Eponychium)</b> | The thin layer of skin at the base of the nail plate, extending onto the nail | Made of dead skin cells<br>Protects the area between the skin and the nail from infection                     | The cuticle is like a seal on a container, preventing contamination                            |
| <b>Proximal Nail Fold</b>   | The skin that covers the base of the nail                                     | Provides protection to the new nail as it grows out<br>Protects the nail matrix from external damage          | The proximal nail fold is like a protective cover over delicate machinery                      |
| <b>Hyponychium</b>          | The area of thickened skin under the free edge of the nail                    | Forms a protective barrier<br>Prevents pathogens from entering under the nail                                 | The <u>hyponychium</u> is like the bumper on a car, providing protection from external impacts |
| <b>Nail Grooves</b>         | The grooves on the sides of the nail  | Acts as tracks for the nail to grow straight<br>Guides the growth of the nail                                 | Nail grooves are like railway tracks ensuring the train (nail) follows a straight path         |

