# **How to maintain strong, healthy nails** whilst undergoing cancer therapy

Polybalm®

Facing cancer therapy can be overwhelming. While most people are aware of the possibility of hair loss, the impact on fingernails and toenails is often underestimated and undertreated.

In over 30% of cases nail damage impedes quality of life, impacting daily tasks such doing up buttons. It is also very visible, serving as a constant reminder – yet it can be prevented and repaired.

This guide aims to ease your journey by providing practical tips for managing potential side effects on your nails.

**The following pages explain:**





Chemotherapy, targeted therapies, immunotherapies and hormone therapies can cause **fingernail** and **toenail damage**, leading to **pain**, **infection** and even nail **detachment**.

This is particularly true if your treatment course is long or based on taxanes and anthracyclines.

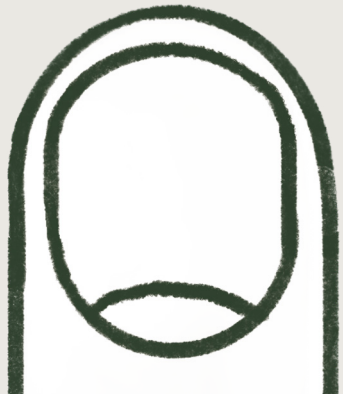
These types of chemotherapy are commonly used to treat cancers, including breast, ovarian, prostate, lung, leukaemia, lymphoma, stomach and uterus. But, many other cancer therapies including targeted therapies can also cause nail damage.

# Why do we need **nails**?

Nails do far more than simply look neat or polished — they play a vital role in everyday function and overall wellbeing. They protect the sensitive tips of our fingers and toes from injury, acting as a natural shield against impact and friction.

Functionally, nails provide counter-pressure to the soft pads of our fingertips, improving grip strength, stability, and precision. This allows us to perform delicate tasks such as pinching, typing, picking up small items, or scratching. They also support fine motor coordination, which is essential for dressing, writing, grooming, and using utensils. On the feet nails are important to balance and stability during walking.

Beyond their physical function, nails are also a visible indicator of health and a symbol of personal care and identity. We often take them for granted — until something goes wrong, such as during cancer therapy, when nail damage can become both painful and distressing.



# **Understanding** cancer therapy-related nail damage

**The type and severity of nail damage during cancer therapy can vary widely. Most intravenous (IV) treatments can cause ridging of the nails (Beau's lines) and pigmentation changes (Melanonychia), which often correspond with the timing of treatment cycles.**

**As treatment progresses — particularly after the first few rounds — nail damage can become more pronounced.** Patients may experience bruising or bleeding beneath the nail (Subungual Haematoma), nail plate splitting (Onychoschizia), soft tissue inflammation or infection around the nail fold (Paronychia), spoon-shaped nails (Koilonychia), or detachment of the nail from the nail bed (Onycholysis). In some cases, particularly in patients with neutropenia (low white blood cell count), Paronychia may lead to acute pain and secondary infection, which requires prompt clinical attention.

In addition to cytotoxic effects, chemotherapy and some modern therapies are known to impair blood vessel formation — a process known as anti-angiogenesis. While this is effective in slowing tumour growth, it may also reduce blood supply to the nail bed, contributing to nail separation, pain, and increased vulnerability to fungal infections.

Recovery from nail damage varies significantly between individuals and is often slow without appropriate support. Some patients are left with permanent nail ridging or uneven growth, while those with damage to the nail bed may experience long-term discomfort and sensitivity. Access to good quality advice and early intervention can make a meaningful difference to outcomes and patient wellbeing.

# When to use **Polybalm®**

## **Early signs** of nail damage

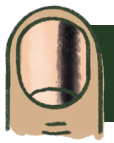
**Brown lines** | **Tingling sensations** | **Mild pain**

Ideally, start using Polybalm® as your treatment begins. If your treatment has begun, you can use Polybalm® to minimise the risk of damage occurring. If you are already experiencing the early signs of nail damage, use Polybalm to start the process of repair and reduce the risk of further damage occurring.

Nail damage can occur on both fingers and toes, though it's **often noticed first on the toes** due to the pressure from walking and standing.



# **Common** cancer therapy **nail damage**



**Discolouration** (Melanonychia)

Visible marks and white or dark lines on the nail that can be transverse, longitudinal, or diffuse and mostly appear 1 to 2 months after chemotherapy starts.

**Ridges or dents** (Beau's lines)

Beau's lines are grooves that run horizontally across the nails. They are common. The nails can change colour to yellow, and the lines on them can seem lighter or darker.

**Brittle, peeling or splitting** (Onychoschizia)

A widespread side effect of all cancer therapy is brittle, peeling, splitting and weak nails. These conditions are caused by damage to the nail matrix and the nail thinning. It can be very frustrating and painful when split nails catch on things and sometimes break off.

**Infection** (Paronychia)

If the white cell count is reduced, a state referred to as induced neutropenia, a skin infection around or under the nail, can occur. This is one of the most common conditions. Typically, the skin around the nail, especially the cuticle, becomes red, swollen, tender to the touch and sometimes produces pus. This can be painful and may require antibiotics to relieve the symptoms.

**Bleeding under the nails** (Subungual hematoma)

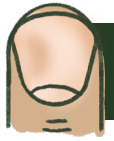
A side effect of cancer therapy can be bleeding under the nail, which often shows as dark brown bruising and may be painful.

**Separation** (Onycholysis)

Cancer therapy can disrupt the bond between the nail and the nail bed. It typically results in a well-defined opaque or white area of the nail. Loosening of the nail and nail loss are common. It can be painful and increases the risk of infection, as bacteria and fungi can easily enter the space between the nail and the skin.

**Detachment** (Onychomadesis)

Without the proper treatment, patients can experience partial or total nail loss which is very painful. It increases the risk of infection and can impede daily tasks such as doing up buttons or the ability to tolerate wearing shoes.



**Concave shape** (Koilonychia)

Patients may experience nail shape or texture changes called Koilonychia. This is most often a concave, spoon-like shape of the nails. Nails might become ridged or grooved as well. These alterations result from the drugs disrupting the normal growth pattern of the nails. Changes in nail shape or texture can be uncomfortable for patients and may affect their grip.

# **Protecting** and **repairing** your nails during cancer therapy

Polybalm® is specifically formulated to protect and repair cancer therapy patients' nails. It nourishes and protects nails from distressing side effects of cancer therapy.




# The **clinical trial***

Through rigorous testing and refinement, Polybalm® has achieved its clinically proven ability to deeply nourish the finger and toe nails, preventing drying, splitting, and cracking.

Professor Thomas – a highly respected oncologist practicing at Bedford and Addenbrookes Hospitals NHS Trust – and his team of multidisciplinary experts, frequently witnessed the challenging impact of chemotherapy on patients' toe and finger nails. Frustrated by the lack of clinically proven, effective solutions to recommend with confidence, they developed Polybalm®.

The team recognised that some patients and medical professionals inadvertently choose products that may irritate and dry the nails, exacerbating the side effects.

**Polybalm's all-natural formulation includes polyphenol-rich ingredients, providing anti-inflammatory and antioxidant properties. These qualities, combined with its antimicrobial features, contribute to preventing infections.**

Defining the precise amount of each ingredient was essential, as excessive essential oil can cause irritation to the nail.

To find out more about the Polybalm® study visit **polybalm.com/the-poly-balm-study/**

NCRI Advancing Cancer Research Together · NHS Health Research Authority · NHS Cambridge University Hospitals NHS Foundation Trust

## The clinical trial*: Participants, method and outcomes

### Trial Design

60 adults - 23 prostate cancer: 37 breast cancer, half treated with Polybalm®, half with petroleum balm, between 4 and 5 chemotherapy cycles

### Effectiveness

**Polybalm® proved effective for 27 out of 29 users**. Over half of the petroleum balm group suffered significant nail damage

### Safety and Quality of Life

**Patients using Polybalm® reported no side effects.** They experienced less pain and demonstrated improved quality of life scores for daily tasks, such as buttoning up clothing compared to the petroleum balm group.

### Global Recognition

ASCO

Presented at American Society of Clinical Oncology conference and published in the Journal of Breast Cancer Research

*Breast Cancer Research and Treatment (2018) 171:103-110

# Ingredients

**Polybalm® has been carefully formulated using natural ingredients that have gone through a gentle extraction process to preserve the active compounds.**

Purposefully chosen over chemical alternatives, the natural ingredients work gently and effectively to improve the condition of the nail during cancer therapy.


### African sage oil

Antifungal and antibacterial. Less drying than tea tree oil

### Beeswax

From hives close to Poplar trees. Antibacterial, emulsifier and moisturising

### Extra virgin olive oil

Rich in oleic acid. Antioxidant and anti-inflammatory

### Eucalyptus leaf

Anti-inflammatory, antioxidant, antifungal, antibacterial and analgesic

### Lavender flower

Anti-inflammatory, antioxidant, antifungal and antibacterial

### Organic cocoa seed butter

Rich in polyphenols and vitamins A & E. Restructuring, regenerative and antioxidant

### Unrefined shea butter

Hydrating and anti-inflammatory with fatty acids to create a natural barrier

### Wintergreen leaf

Natural salicylate that reduces inflammation and pain

*Contains natural trace allergens: Linalool, Limonene, Farnesol*



# How to use Polybalm® for optimal results

### Start early

Begin applying Polybalm® 3-4 days before your therapy starts and continue for 3-4 weeks after it ends.

### Deal with early signs of nail damage

If your cancer therapy has already begun, start using Polybalm® immediately, especially if you notice early signs of nail damage, such as tingling, mild pain or brown lines.

### Focus where the nail and skin meet

Use the applicator to massage Polybalm® around the nail, paying special attention to the cuticle and proximal fold where the nail and skin meet.

### Avoid cross-contamination

Each pack contains two tubes of Polybalm® – one for fingers and one for toes, reducing the risk of cross-contamination.

### Apply twice a day

Apply Polybalm® twice a day and after bathing, showering or swimming.


### How to get the most from Polybalm®

Polybalm is an all-natural balm made without any synthetic chemicals. Like butter, its texture naturally changes with temperature — firmer when cold and softer when warm. To avoid damaging the applicator and make the most of your Polybalm, we recommend bringing Polybalm to body temperature before opening, especially in colder weather. Simply keep it in your pocket for a few minutes or warm it gently in your hands. As the balm becomes softer, it's also easier to remove— particularly when the tube is running low. Polybalm® is most effective when combined with good nail care.

### What's it like to use?

Polybalm® has a mild, natural, fresh aroma of eucalyptus and lavender. It is non-greasy and at body temperature, is quickly absorbed into the nails.

# **Nail care** during cancer therapy

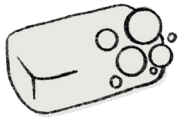
Maintaining good nail health throughout cancer therapy can minimise potential side effects of discolouration, disfiguration, inflammation, infection, pain and distress. Here are a few things to consider:

## Hand sanitisers

Hand sanitisers have a high alcohol content. Alcohol is an irritant that will also dry nails made susceptible to damage by chemotherapy. **We recommend washing your hands and avoid sanitising them where possible.**

## Big brands

Many well established brands contain chemicals and artificial ingredients which may irritate skin around the nails and clog pores.



## Soap

**When washing hands and feet, ensure they are wet before applying soap.** Wet hands and feet will reduce soap's irritating effect on nails.

After washing your hands and feet, always use a clinically proven natural nail balm.

Choose a natural soap and ensure it does not contain sodium laureth sulfate (SLS). SLS is an irritant, as are Parabens. Parabens are preservatives that extend the shelf life of soap. Synthetic fragrances are also potential irritants. It is best to choose "clean" beauty products.

## Loose nails

If one of your nails becomes loose, **do not pull it off**. It's better to **lightly cover the area with a bandage** or gauze to avoid accidentally ripping off your nail, allowing it to fall off naturally.

## Nail biting

If you bite your nails, **break the habit by wearing cotton gloves**. Biting your nails increases the chance of infection.


## Biotin

Biotin may help strengthen brittle nails but supporting evidence is limited.

## Pedicure

If you have a pedicure, **don't let your beautician use any razor-like tools** to remove dead skin and don't let them cut your cuticles. Plus, **ensure all the equipment is sterilised correctly** or better still, take your own.

## Artificial nails

**Try to avoid using artificial nails.** They are a nest for bacteria and infections. Furthermore, the chemicals used to remove false nails can cause drying and further damage to already chemotherapy-weakened nails.

**Do not use an electric file on your nails** as this will cause more damage.

Although we would not recommend it, if you feel the need for fake nails, ensure all the equipment your nail technician uses is sterilised or, better still, take your own.

## Gardening and washing dishes

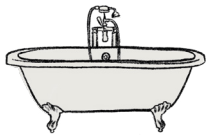
**During gardening, use cotton gloves** to protect your fingernails. **Rubber gloves should be worn when washing dishes** to prevent exposure to harmful chemicals and further drying of already sensitive skin.

## Nail Varnish/polish

Patients are often advised to wear dark nail varnish or polish. No clear clinical evidence supports this practice during chemotherapy.

Many nail varnishes are made of chemicals, especially quick drying ones. Chemicals may dry and aggravate nails and skin made sensitive by chemotherapy.

**If you use nail varnish, choose a water-based one.** When removing nail varnish, **ensure the remover is acetone-free** to reduce the drying effect. When wearing nail varnish and after removal, **moisturising the skin around the nail with a high-quality, clinically proven, natural nail balm is essential**.



## Bathing

Swimming, showering and bathing all reduce the moisture around your nails, so **using a clinically proven natural nail balm afterwards is essential**. Also, **dry thoroughly** around your fingers and toes to reduce the risk of fungal infection, particularly your toes.


## Oiling the skin around nails

Many patient groups and advisors suggest **massaging essential oils into the skin around the nails**, assuming this could help prevent damage and distress.

Polybalm® is the only clinically proven nail balm that can successfully treat and prevent chemotherapy nail damage.

No other clinical studies support this practice. In fact, if the quantity of essential oils is too high, it may irritate the nails.

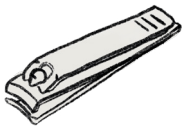
## Nail cooling

Professor Thomas, in a co-authored report showed that cooling the nail beds in iced water during chemotherapy reduces the severity of nail damage. Regularly wearing cold gloves and applying ice to your hands can be an uncomfortable and inconvenient experience, but research has shown that it is beneficial.

Special cooling devices for hands and feet are available from the NHS. The practice hasn't been widely adopted within the confines of busy chemotherapy units as they cover the veins of the hands and prevent quick assessment of the patient's extremities.

## Shoes

Choose comfortable, **loose-fitting shoes** with a wide toe box to reduce pressure and minimise trauma to your toenails.



## Manicure and cleaning

**Keep your fingernails and toenails neatly trimmed.** Clip any excess nails that might catch on things and tear the nails even more deeply, but don't over-trim or pick at the nail beds, which can cause more damage.

Ensure you clear debris from under the nails and around the nail beds, which may contain fungus and bacteria.

**Avoid using metal nail picks.** A metal nail pick may cause further damage; always use a wooden one.

## Drinking water

**Water is essential for flushing toxic chemicals out of the body**. Inadequate water intake slows down the body's ability to process and eliminate these chemicals, causing them to linger and potentially intensify the side effects of cancer therapy. Dehydration, often caused by insufficient water, exacerbates these symptoms and is one of the leading reasons patients seek medical assistance between treatments. It is also a common cause of hospital readmissions. **Staying well-hydrated helps manage side effects and supports overall recovery including nails**.

## Cotton socks

**Wear cotton socks** as they absorb dampness and may help you avoid fungal nail infections.

## Nail buffing

Regularly and **gently buffing your nails using the shiny side of a buffing block** may increase the blood supply helping nails grow and stay strong.

## Nail debridement

In more severe cases where the nail has become detached from the nail bed or there is an infection in or under the nail it may be deemed necessary to remove it. This process is known as nail debridement. The procedure can be painful, so local anaesthetic is typically required. Once the nail is removed the nail bed is exposed which is sensitive and needs to be protected. Regrowth strategies should be employed once any infection has cleared, to encourage new healthy nail to grow, which takes time and patience particularly for toes.



# **Diet** (and good gut health) during cancer therapy

**Phytochemicals, vitamins** and **essential amino acids** are required for the body to repair DNA in the finger and toe nails and across the body, which could be damaged by cancer therapy. They are also vital for the production of keratin, which is necessary for healthy nail and hair formation.

**A healthy diet will help you naturally acquire these vital compounds and reduce inflammation. Here are a few ideas:**

### Reduce the number of artificial chemicals and additives you consume

Try to avoid ultra-processed foods and high-temperature baked carbohydrates such as chips, fried food, or burnt meat products. Examples of ultra-processed foods include most ready meals, most supermarket sweet desserts, pizza, margarine, ice cream, ham, sausages, crisps, mass-produced bread, most breakfast cereals, biscuits, carbonated drinks, fruit-flavoured yoghurts, and instant, dehydrated foods

### Avoid products like sweet drinks, cakes, confectionary, sugary desserts and crisps

Several laboratory studies show that processed sugar and carbohydrates promote chronic inflammation.

### Omega 6

Omega 6 is an essential fatty acid that is thought to provide moisture and nourishment for nails. An insufficient amount may cause nails to become dry and break easily. It can be found in walnuts, sunflower seeds, avocado oil and eggs amongst other foods.

### Increase the amount of Phytochemicals you consume

Found in green tea, onions, and cruciferous vegetables, for example broccoli, cabbage, cauliflower and kale, and herbs such as ginger and turmeric.

### Ensure a good intake of vitamins and proteins

Foods rich in B vitamins, including thiamin (B1), folate (B9), and biotin (B7), are grains and dark green vegetables. Healthy protein-rich foods include eggs, lentils, beans and pulses.

### Omega 3

Found in oily fish and grass-fed meat, omega 3 is felt to have anti-inflammatory properties, but taking extra amounts in clinical trials has not been shown to help nails. Nevertheless, many people in the UK are deficient in omega 3 and increasing oily fish intake to at least three times a week is recommended.

## **Paige**, Nurse

**I am a chemotherapy sister at a day unit.** Our patients experience the first-hand discomfort of sore, brittle nails from active treatment. **Polybalm® is amazing and I find it incredible that there is finally a solution to protect our patients' nails!** I have recommended this to my patients and have seen outstanding results."

### **Sara**, Cancer patient

I'm nearing the end of chemo, and just wanted to thank you for your excellent product. **My nails have remained strong and healthy throughout.** A friend recommended I use Polybalm®, and I am so glad she did. I'm quite vain about my nails, so when feeling pretty ill over the last few months, it's been great that my nails still look good. Thank you."

### **Val**, Cancer patient

I received EC taxotere and herceptin for my breast cancer. Fortunately, my daughter's friend has heard of Polybalm® and bought a few tubes for me. None of the doctors or nurses had even mentioned it despite the study proving its effectiveness. I later found out **I was the only patient on the chemo unit with perfect nails!** Thank you."

### **CH**, Cancer patient

**Polybalm® is amazing, and I can't recommend it highly enough.** I have in fact become quite evangelical about it and tell everyone how well it's working."

### **Galligirl**, Cancer patient

I used Polybalm® throughout my chemo... **5 months on I still have my nails**...A few ridges at the tip now but nearly there. I found Polybalm® easy to use and as far as I can see, very effective. I would recommend."

# Testimonials



# The **bottom line**

## Your nails' colour, shape and tenderness will likely change during cancer therapy.

There is also an increased risk of infection and pain. Some cancer therapy drugs, such as taxanes, are most likely to cause nail loss.

## The best way to reduce the distress of nail damage, pain and infection during cancer therapy is to take special care of your nails alongside regular use of our natural, clinically proven nail balm.

The effectiveness of Polybalm® is in frequent application of its finely balanced, gently extracted, natural, **polyphenol-rich ingredients**, which synergise to minimise cancer therapy nail damage.

# Polybalm® is the only product clinically proven to profoundly reduce chemotherapy nail damage

Breast Cancer Research and Treatment (2018) 171:103-110


Laura's cancer therapy nail damage, before and after using Polybalm® for three months

"Laura, Cancer patient

## Polybalm® is amazing"

During cancer therapy, Laura's nails became unsightly and painful, even lifting from her nail beds. They were constantly snagging on clothes and bed sheets, waking her at night.

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To discover more about Polybalm® scan the QR code, or visit **polybalm.com**

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**Polybalm® gives back**
For every pack of Polybalm® sold through polybalm.com, we donate £1 to a cancer charity.

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