



IN PARTNERSHIP
WITH



4 SEPTEMBER 2024 7:30

HEALING BURNS WITH MICROWORLD:

A NEW ANIMATED WAY
TO LEARN

KRISTINA STILES
*BURNS AND PLASTIC SURGERY
CLINICAL NURSE SPECIALIST*



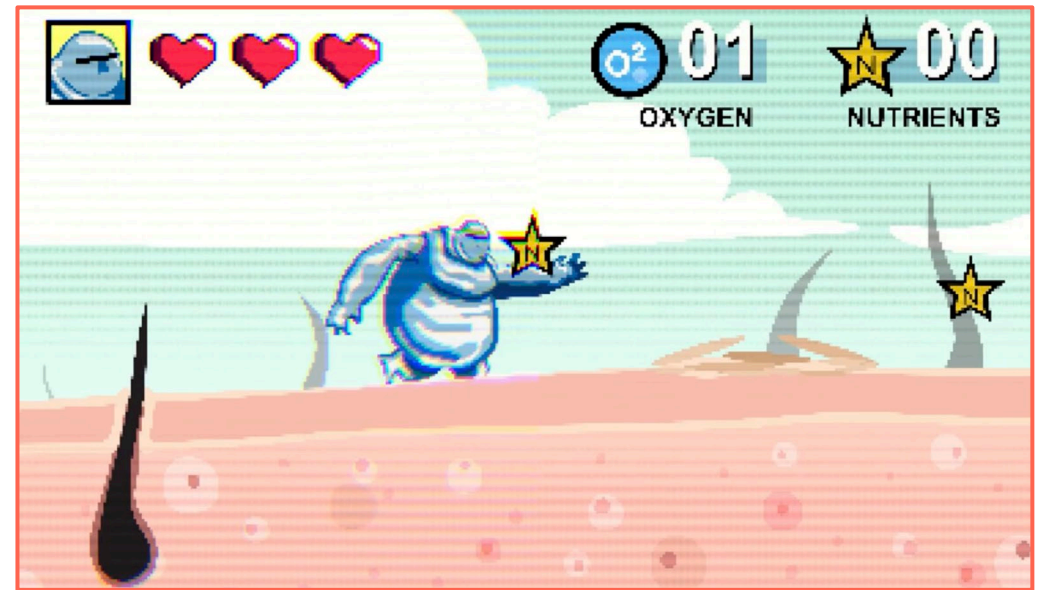
WHAT IS MICROWORLD?

- Microworld is an interactive, animated platform designed to help users to learn in their preferred way
- There are seven key styles of learning, which include visual, aural, verbal, physical, logical, social and solitary methods
- Microworld enable all these learning techniques, while taking a new, less traditional approach to education.



WHAT IS MICROWORLD?

- Microworld content is delivered via engaging animation, video of clinicians, illustrations and games
- The content is based on the latest evidence, so it is reliable and accurate
- Completing a module counts towards revalidation, and also unlocks other areas of the site.



MICROWORLD CHARACTERS

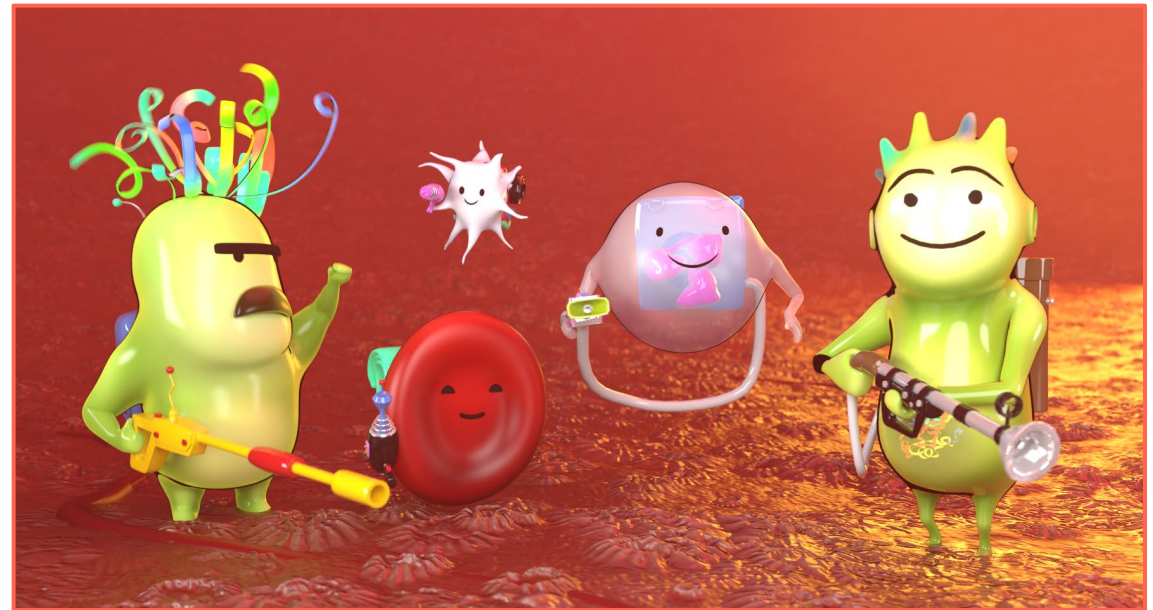
Microworld takes you on a learning journey inside the body, where a range of animated characters react to wounding, and get healing underway.



MICROWORLD CLASSES AVAILABLE

There are a range of Microworld classes available:

- Class 1: Wound healing
- Class 2: Exudate
- Class 3: Infection
- Class 4: MOIST
- Class 5: Incisional care
- Class 6: Pressure injuries
- Class 7: Diabetes-related foot ulcers
- Class 8: Venous leg ulcers.



CLASS 9: BURNS

CLASS 9: BURNS

This class will take you through:

- The definitions of burns – complex and non-complex
- Common causes of burns
- First aid
- Primary and secondary burn assessment
- Non-complex burns management
- When burns should be referred for specialist intervention.

CAUSES OF BURNS

It is important to identify the mechanism of injury, as it may influence how the person with the burn is managed, particularly when first aid is delivered. Burn causes include:



Thermal
burns



Radiation



Electrical



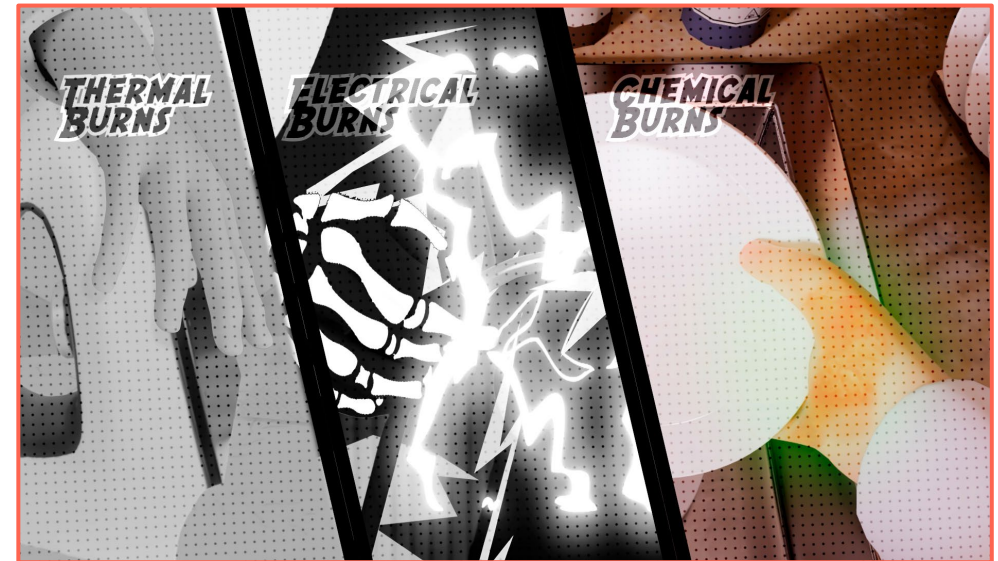
Friction



Chemical



Cold.

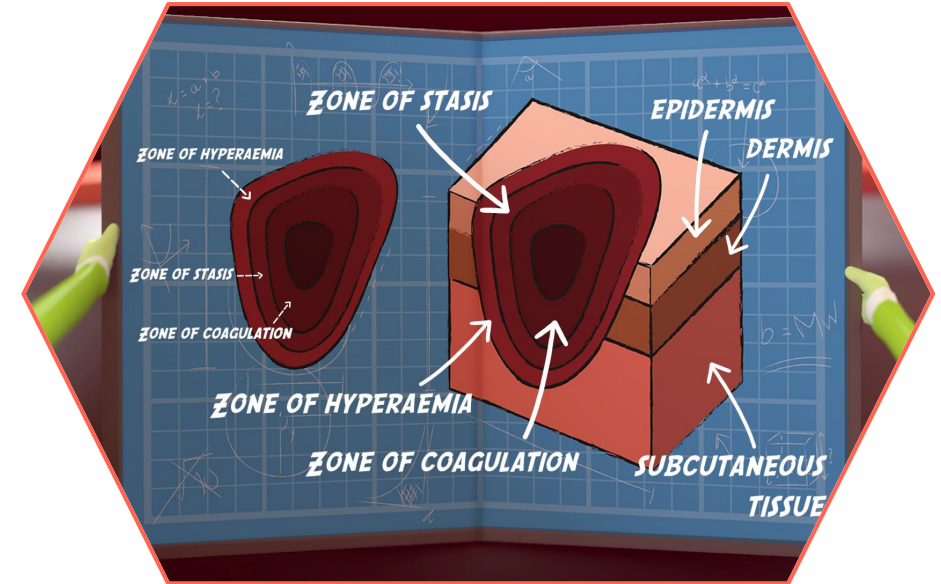




INJURY RESPONSE

Local response to injury occurs in three zones:

1. Zone of coagulation is the burn centre. The tissue is damaged beyond repair.
2. Zone of stasis has reduced perfusion but can possibly be saved.
3. Zone of hyperaemia is the outermost area of the burn, has good perfusion and is likely to recover.



FIRST AID

Key first aid steps include:

- Stop, drop and roll to extinguish any flames
- Remove the patient to a safe place
- Remove non-adhered jewellery and clothing, including nappies
- Follow with the four C's:
 - Cool
 - Call
 - Cover
 - Care.



BURN SEVERITY

The cause of a burn can influence its severity. Other factors include:

- Patient age
- Patient history
- Depth of injury
- Total body surface area of injury
- Location of injury.

Consideration of these factors helps to determine if the burn is **complex** or **non-complex**.

NON-COMPLEX BURNS

Non-complex burns (previously known as minor):

- Any thermal burn **not affecting all layers** of the skin
- Cover **less than 10%** of total body surface area in children (**less than 5%** in children aged below 1 year)
- Cover **less than 15%** of total body surface area in adults
- Do not affect a **functional area**, e.g. hands, feet, face, joints, genital area
- May be a deep dermal burn covering **less than 1%** of body.

COMPLEX BURNS

Complex burns (previously known as major):

- Any thermal burn injury **affecting a critical area**
- Cover **more than 15%** total body surface area in adults
- Cover **more than 10%** in children (or **more than 5%** in children under a year)
- All **chemical** or **electrical** burns
- Result in **dysregulated inflammatory and immune response** within a few hours of injury.

DYNAMIC INJURY

- Burn injury is dynamic, with tissue changes occurring up to **72 hours after injury**
- All burns trigger a **local inflammatory response** to start repair of the wound
- In complex wounds, a **systemic response** is also triggered, which can be life-threatening
- Therefore, it is important to **observe vigilantly** for this period.



ASSESSMENT

Following first aid, assessment of the patient and the wound should be performed. This is described as:

- **Primary** assessment, in which the aim is to identify and stabilise any life-threatening injuries
- **Secondary** wound-specific assessment.



PRIMARY ASSESSMENT

Primary assessment can be guided using **A,B,C,D,E,F**:

- A. Airway maintenance
- B. Breathing and ventilation
- C. Circulation and cardiac status
- D. Disability, neurological status
- E. Exposure (remove clothing or items) and environmental control
- F. Fluid resuscitation proportional to burn size.

SECONDARY ASSESSMENT

Secondary assessment is specific to the burn and should consider factors relating to the wound and surrounding skin, including:

- Wound depth
- Percentage of total body surface area affected
- Wound management
- Wound-related pain.

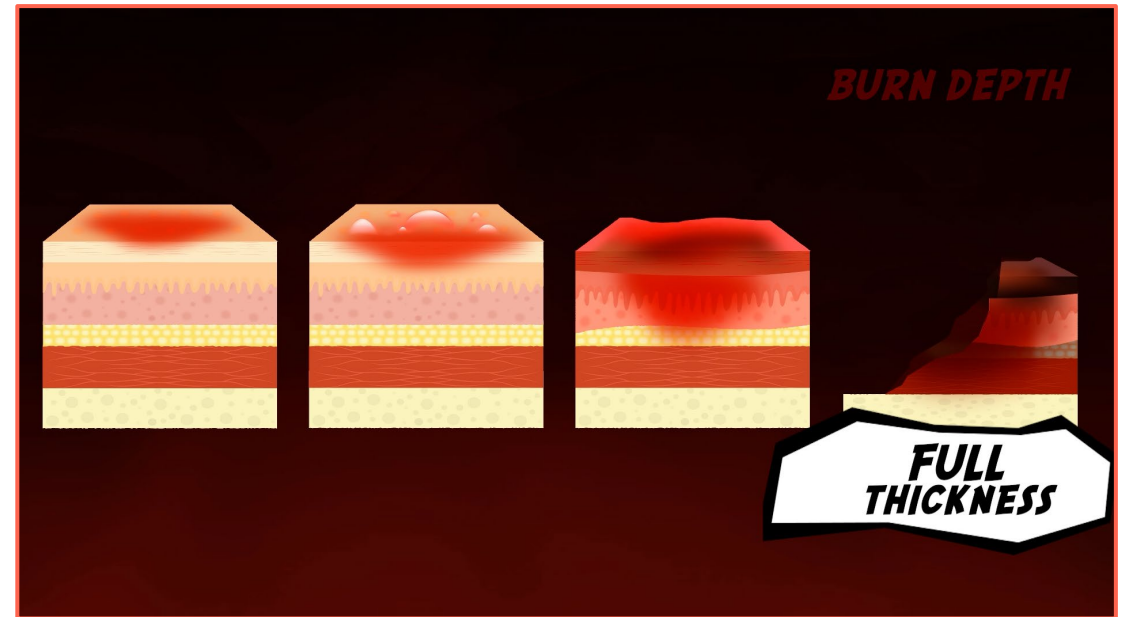


WOUND DEPTH

Wound depth is assessed to see if the wound is **likely to heal within three weeks** or if it will require excision and grafting.

Wound depth is classified as one of four categories, based on tissue loss:

- Superficial
- Superficial partial thickness
- Deep partial thickness
- Full thickness.



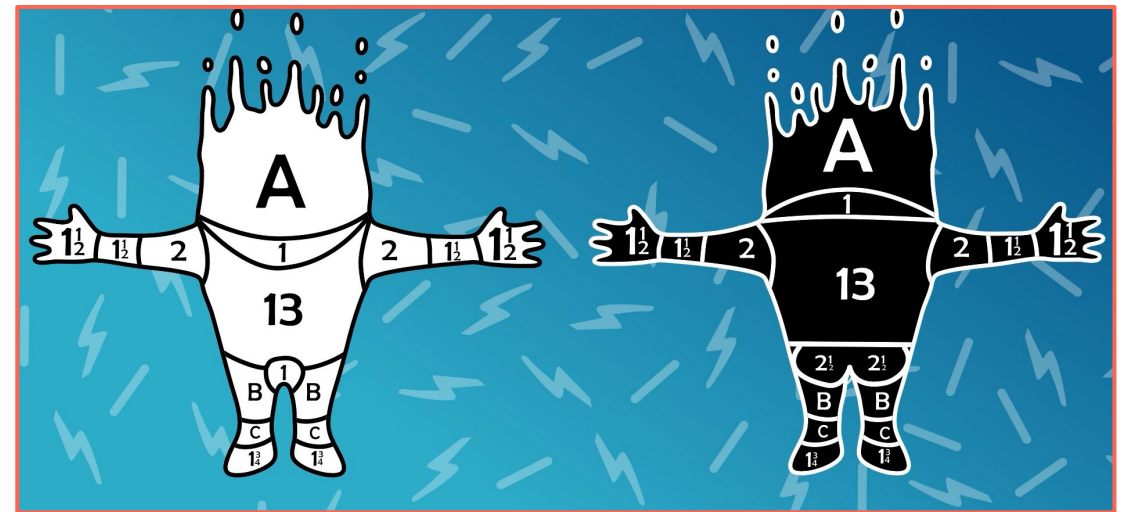
WOUND TBSA

Wound total body surface area (TBSA) is established to help identify severity of the injury, and guides management.

There are different methods for establishing %TBSA of a wound, including:

- Palmar surface
- Wallace's 'rule of nine'
- Lund and Browder chart.

The Lund and Browder chart is commonly used as is considered to be the most accurate.



HISTORY

A full history should be considered for each individual patient to help determine treatment, and should include:



Burn severity
(cause, location, depth & TBSA)



Social history



Medical history



Nutritional status



Age



First aid.

PAIN

Pain management is crucial component of treating people with burns.

World Health Organisation analgesic ladder can guide medication according to pain level:

- Non-opioids
- Weak opioids
- Strong opioids.



TREATMENT

A non-complex burn is a wound, so the principles of wound management apply:

- **Cleanse and debride** to create a prepared wound bed
- **Deroof blisters** if present
- Create a **moist wound environment** to promote healing, using a suitable wound dressing
- Dressing selection should be based on **local wound conditions**.

DRESSINGS

Essential characteristics of a wound dressing should include:

- Maintain a moist wound environment
- Absorbent
- Atraumatic
- Easy application and removal
- Pain minimising
- Antimicrobial (if needed)
- Cost effective.



REFERRAL

Referral should be considered at all stages.

Referral may be needed for some people with non-complex burns, for several reasons not related to burn severity. These include:



Medical history



Non-accidental injury



Psychological circumstances

AFTERCARE

Inform the patient of:

- Wound care
- Skin care
- Scar treatment
- Psychological support
- Diet and nutrition.



AT THE END OF THE CLASS

- So, we hope you have enjoyed the introduction to class 9 on burns, and the snippets we have shown you here
- When you reach the end of the class, you will get a brief recap on the content, and you can then take a quick test on your knowledge
- Remember, completing the module also opens up other areas of the site, giving you access to further content.



DASHBOARD
CLASSROOM
ACTIVITY HISTORY
BONUS / DOWNLOADS

MICROWORLD OVERVIEW

0 MW POINTS

TOTAL MW PROGRESS **100%**

12:30

TOTAL HRS

12:07

07/04/2021
LAST LOGIN

1/1

REGISTERED CLASSES

LATEST ACTIVITY

CLASS 1
Wound healing

START CLASS
08:57 AM
07 APR 2021

COMPLETED CLASS
--
--

FEATURED GAME - SKIN GAME

How far can you run across the epidermis? Avoid the hairs and see how far you can run. But beware it's not as easy as it looks.

Play game

PARTNER RESOURCES

MÖLNLYCKE ADVANTAGE Click to explore further educational resources from our partner, Mölnlycke

Click to explore products and solutions from our partner, Mölnlycke

CLASSROOM OVERVIEW

CLASS 1
Wound healing

This class will take you through the delicate process of wound healing including the functions and anatomy of the skin and the four phases of healing.

LATEST CLASS
WOUND HEALING

100%

PROGRESS

0

POINTS

BADGE

--/--

TEST RESULTS

--

CURRENT STATUS

CPD CERTIFICATE

CONCLUSIONS

- You should now better **understand burns**, their **causes** and the **importance of first aid** in halting injury
- You should appreciate **how to assess a burn injury** and recognise the key elements to consider when deciding if you can treat the injury or if specialist referral is needed
- You will now recognise what constitutes **good burn management**, including selection of an **appropriate dressing**
- Finally, we hope you appreciate how **Microworld** can help you to learn about wounds in a **different** and **fun** way.

CALL TO ACTION

- Visit Microworld and continue your learning journey
- Register for free at Microworld www.mymicroworld.online/ to access a comprehensive range of classes and have fun learning about wounds!
- Visit the Mölnlycke website for more information on burn care: <https://www.molnlycke.co.uk/wound-types/burns/>





WOUND CARE TODAY

Wound Care Today 2025

TELFORD

12-13 MARCH

Registrations open Monday 9th September