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MASTERING WOUND CLEANSING AND DEBRIDEMENT WITH MICROWORLD



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WELCOME AND INTRODUCTION

- Tonight, we will be introducing you to the latest Microworld class on wound cleansing and debridement
- It has been developed to help you learn about wound cleansing and debridement in a fun and animated way.



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.



WHAT IS MICROWORLD?

- Microworld uses all these learning techniques, but combines and presents them in a new way
- The content is delivered via engaging animation, video of clinicians, illustrations and games
- The content, however, is still based on the latest evidence so it is reliable and accurate
- Completing a class counts towards revalidation and opens other learning areas of the site.

MICROWORLD CLASSES AVAILABLE

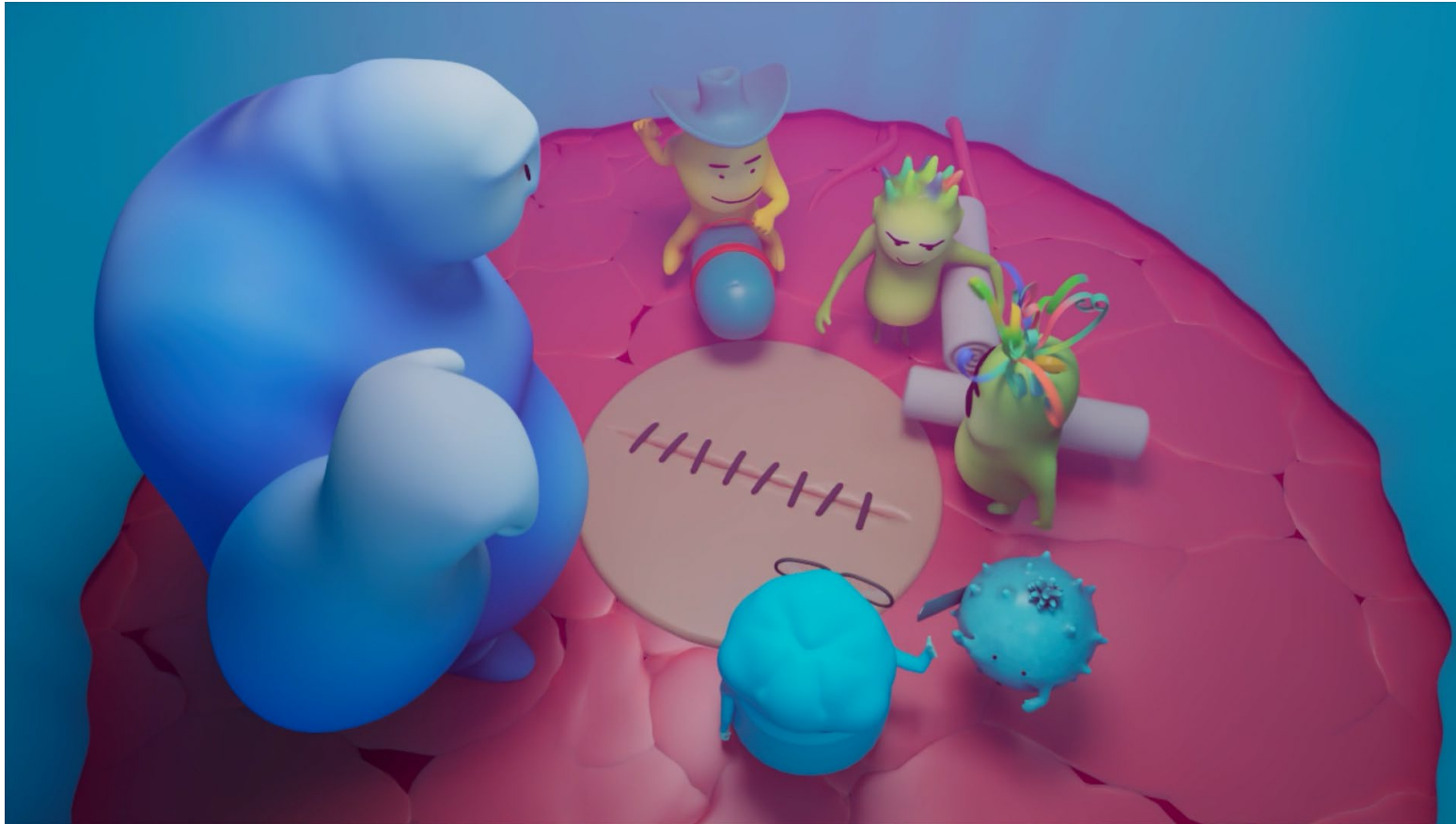
So far, we have a range of Microworld classes available:

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



CLASS 10: CLEANSING AND DEBRIDEMENT

CLASS 10: CLEANSING AND DEBRIDEMENT



LEARNING OBJECTIVES

This FB Live will take you through:

- The definitions of cleansing and debridement, and the differences between them
- Why wounds need cleansing and debridement
- The importance of holistic patient assessment in identifying if debridement is needed, and if so, what technique is appropriate
- The different methods of debridement available in practice
- How to identify when debridement is not appropriate
- To highlight when referral for debridement should be made.

MEET OUR PATIENT



The class starts by meeting our patient. He has decided to give his house a Spring clean. After putting out his rubbish, he has to sit down due to the pain in his leg wound, which he has had for a long 10 months.

HOLISTIC ASSESSMENT



- A comprehensive holistic and wound assessment must be undertaken before debridement
- Assessment helps to identify if debridement is needed and highlights if debridement shouldn't be used

HOLISTIC ASSESSMENT

Holistic assessment should consider:



Diagnosis of the wound type and identification of underlying comorbidities



Wellbeing and psychological factors



Social and environmental factors



Practitioner skills, competency and resources



Patient and family concerns, including patient quality of life



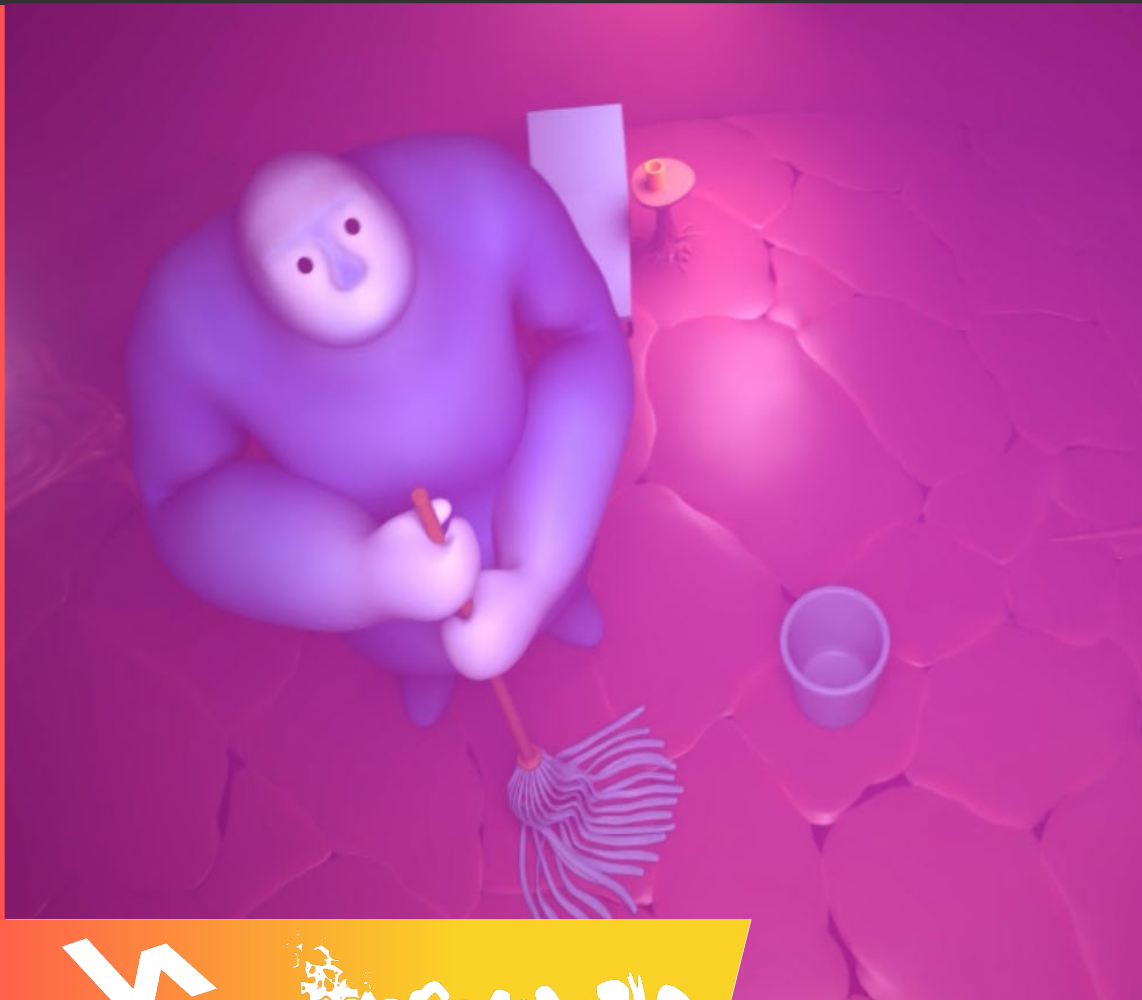
Local guidelines and regulations

WOUND CLASSIFICATION

| Status | Definition | Treatment |
|---------------------------|--|---|
| Healable | <ul style="list-style-type: none">• Patient has capacity to heal and is adherent to care plan• Adequate blood supply• Cause of wound addressed | <ul style="list-style-type: none">• Provide moist wound healing• Treat infection / inflammation• Promote granulation |
| Maintenance | <ul style="list-style-type: none">• Patient has capacity to heal but external factors are delaying the process | <ul style="list-style-type: none">• Decrease moisture• Reduce bioburden• Prevent deterioration• Improve patient quality of life including pain, exudate, and odour control |
| Non-healable / palliative | <ul style="list-style-type: none">• Patient does not have the capacity to heal• Untreatable poor blood supply• Untreatable underlying cause | <ul style="list-style-type: none">• Decrease moisture• Reduce bioburden• Prevent deterioration• Optimise comfort. |

Kumah et al (2023)

WHAT IS WOUND CLEANSING?



Wound cleansing is defined as:

'The removal of surface contaminants, bacteria and remnants of previous dressings from the wound surface and its surrounding skin.'

(Rodeheaver and Ratcliffe, 2018).

WHY CLEANSE THE WOUND?

Wound cleansing helps to:

- Improve visualisation of the wound bed and edges
- Remove organic and non-organic material
- Remove excess exudate.

Cleansing differs from debridement in that it helps to remove surface contaminants and helps to prepare the wound for debridement.



SELECTING A CLEANSING SOLUTION

When selecting an appropriate cleansing solution, consider:

- Acute or chronic wound
- Risk, or presence of, infection
- Low cytotoxicity
- Ease of use and availability
- Clinical efficacy and evidence for use
- Cost effectiveness.

ACUTE OR CHRONIC WOUNDS



VS



WHAT IS WOUND DEBRIDEMENT?

Debridement is the removal of viable (living) and non-viable wound components, including necrotic tissue, slough, microorganisms, biofilm, extracellular polymeric substance (EPS) and foreign materials.



THE IMPACT OF WOUND DEBRIDEMENT

- The primary goal of debridement is to reduce the presence of both microbial and non-microbial components using the most effective methods with the fewest side effects
- It is vital that all wounds are regularly debrided, unless contraindicated, as this removes barriers that delay or stall healing.



Mayer et al (2024)

WHY DO WOUNDS NEED DEBRIDEMENT?

Debridement plays a vital role in wound management, particularly in hard-to-heal wounds, by:

- Accelerating healing / promoting growth of new tissue
- Reducing bacterial burden and biofilm to minimise the risk of infection
- Controlling inflammation
- Managing malodour and excess moisture
- Improving quality of life
- Enabling full visualization of the wound bed.



THE IMPACT OF WOUND DEBRIDEMENT

- Study carried out in 2013, to determine the interval between debridements and time to heal in days
- Data from 525 wound care centres between 2008 and 2012 - 312,744 wounds of all causes were included
- Average of 70.8% of wounds healed with an average of 2 debridements
- Overall, the more frequent the debridement, the better the healing outcome.

THE IMPACT OF WOUND DEBRIDEMENT



THE DECISION-MAKING PROCESS!

It requires a complex decision-making process:

- Evaluation of the environment where the patient is
- Evaluation of the patient status and co-morbidities
- Involve the patient and the caregiver, if applicable, in the process
- Resources that are available
- Determine the right time to do it, for instance, in cases of infection can be urgent
- Knowledge and expertise in local wound assessment
- Involve other elements of the team
- Select the most adequate technique
- Re-evaluate and consider other options if the aims are not achievable.

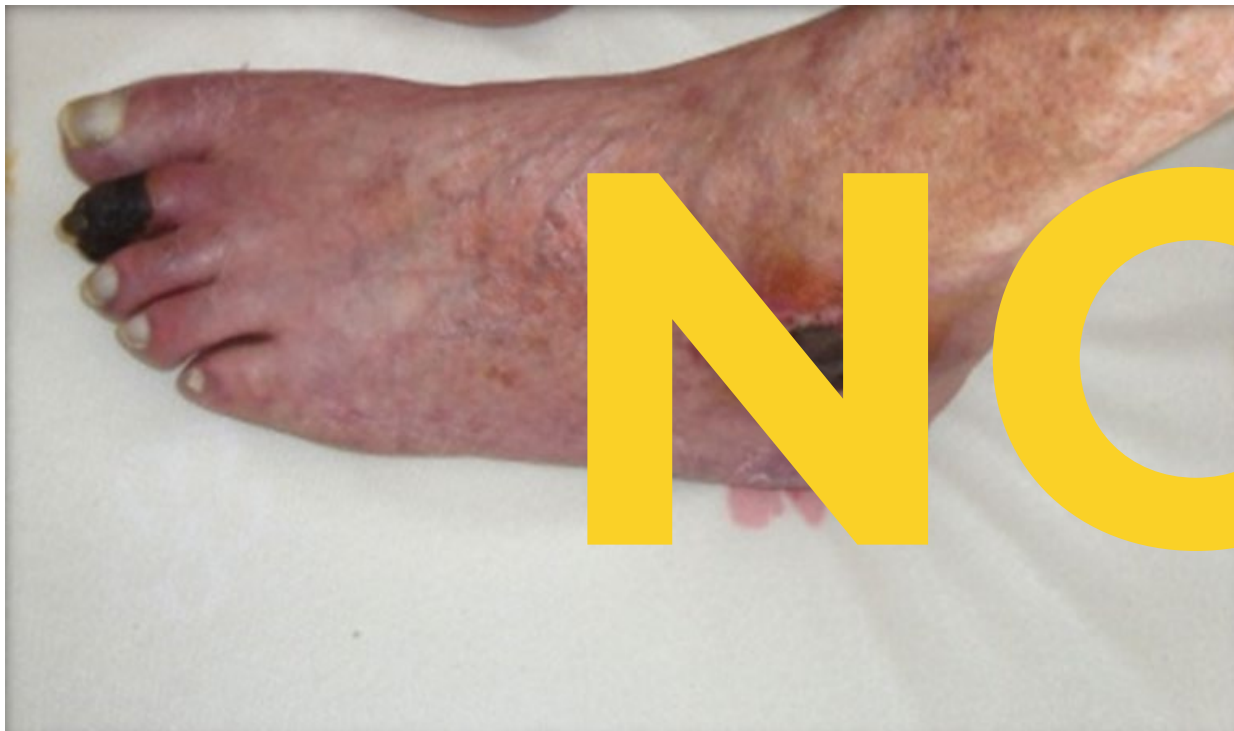
SHOULD ALL WOUNDS BE DEBRIDED?



NO!



SHOULD ALL WOUNDS BE DEBRIDED?



NO!

SHOULD ALL WOUNDS BE DEBRIDED?



NO!

WHEN IS THE RIGHT TIME TO START DEBRIDEMENT?



WHEN SHOULD YOU NOT DEBRIDE A WOUND?

While most wounds can be safely debrided, there are instances where debridement is unsafe, inappropriate, or requires caution:

Dry gangrene: In cases such as a mummified, gangrenous toe, debridement is contraindicated because rehydrating or removing devitalised tissue could increase the risk of systemic infection.

Lower limb wounds requiring revascularisation: Debridement should be left until a sufficient blood supply has been re-established.

Dry and stable necrosis pressure injury on the heel.

WHEN IS THE RIGHT TIME TO START DEBRIDEMENT?

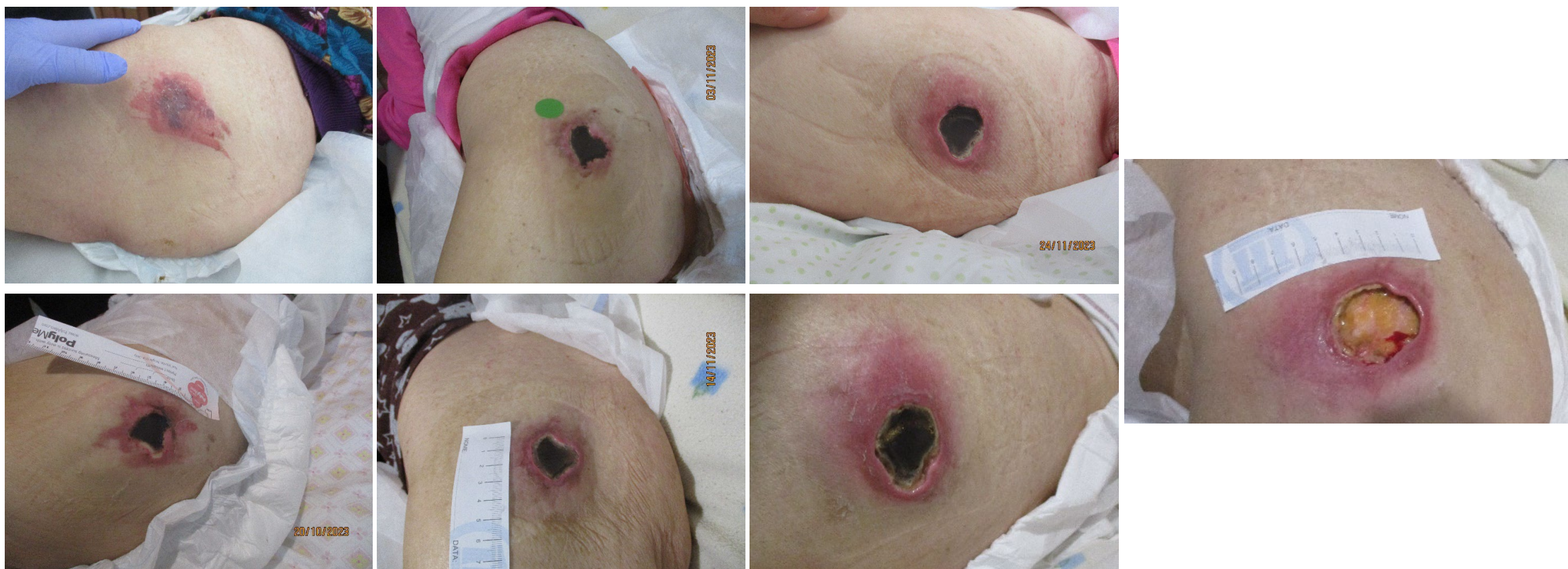


5 months, 3 weeks

YES!



THE DECISION PROCESS



THE DECISION PROCESS



THE DECISION PROCESS



WHEN SHOULD WE BE CAUTIOUS ABOUT DEBRIDEMENT?

Additional caution is urged in certain high-risk areas and situations, such as:

- Wounds on the face, hands, feet, or genitalia
- Wounds located near major blood vessels, nerves, tendons, implants, or dialysis fistulas
- Patients with clotting disorders (e.g. those on anti-coagulant medications).
- Patients with inflammatory conditions such as pyoderma gangrenosum.

DEBRIDEMENT COMPLEXITY: WHICH TECHNIQUE?

| Technique complexity | Type of debridement | Method type |
|----------------------|-------------------------|---------------------|
| Healable | Surgical | Standalone methods |
| | Curettage | |
| | Hydrosurgery | |
| | Biological / ultrasonic | |
| | Mechanical | |
| Maintenance | Enzymatic | May need an adjunct |
| | Autolytic | |

Mayer et al (2024)

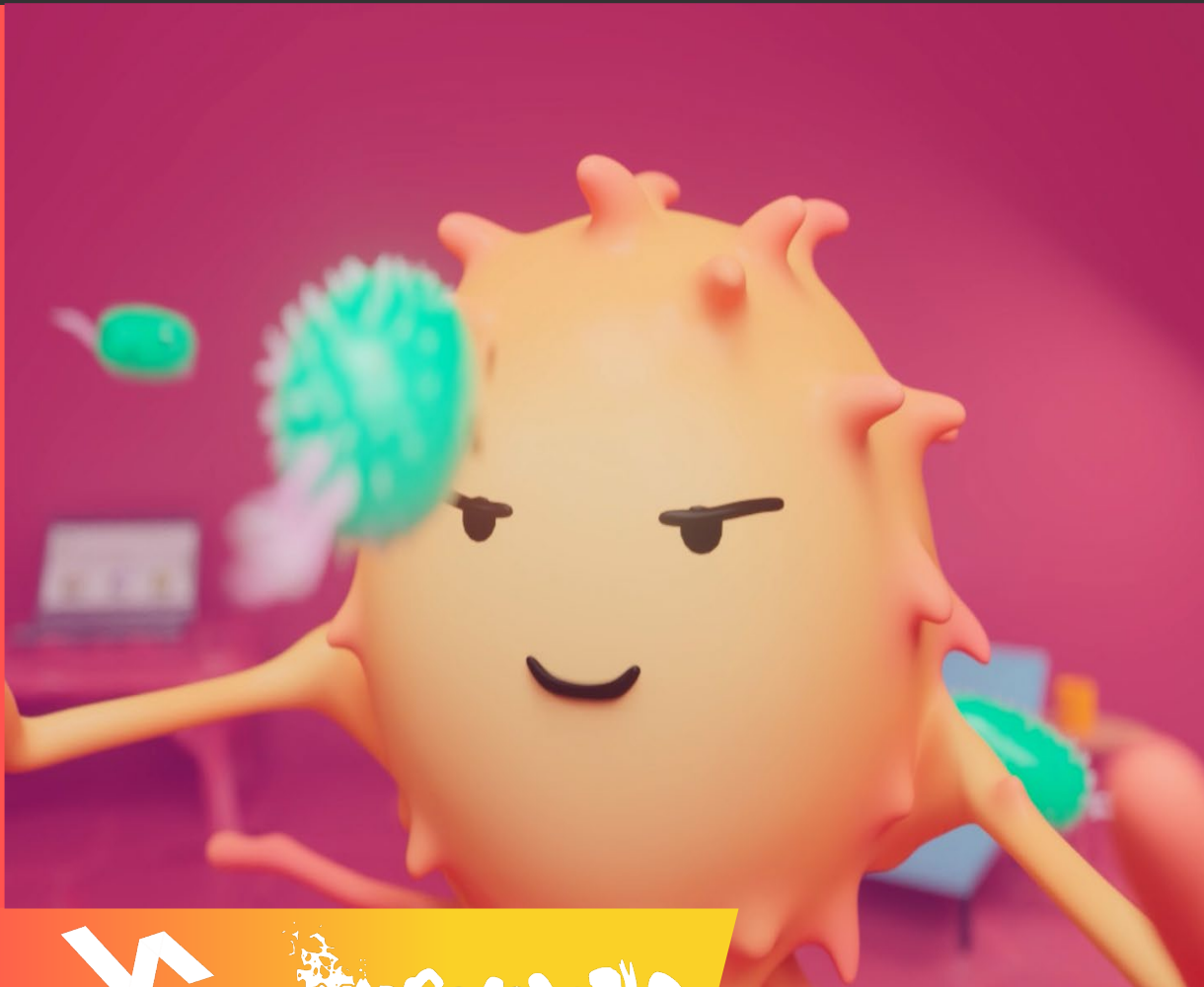
ADVANCED DEBRIDEMENT TECHNIQUES



Examples of these techniques include:

- Hydrosurgical debridement
- Ultrasonic debridement
- Negative Pressure Wound Therapy with Instillation (NPWTi-d)
- Chemical debridement.

THE ROLE OF ANTISEPTICS

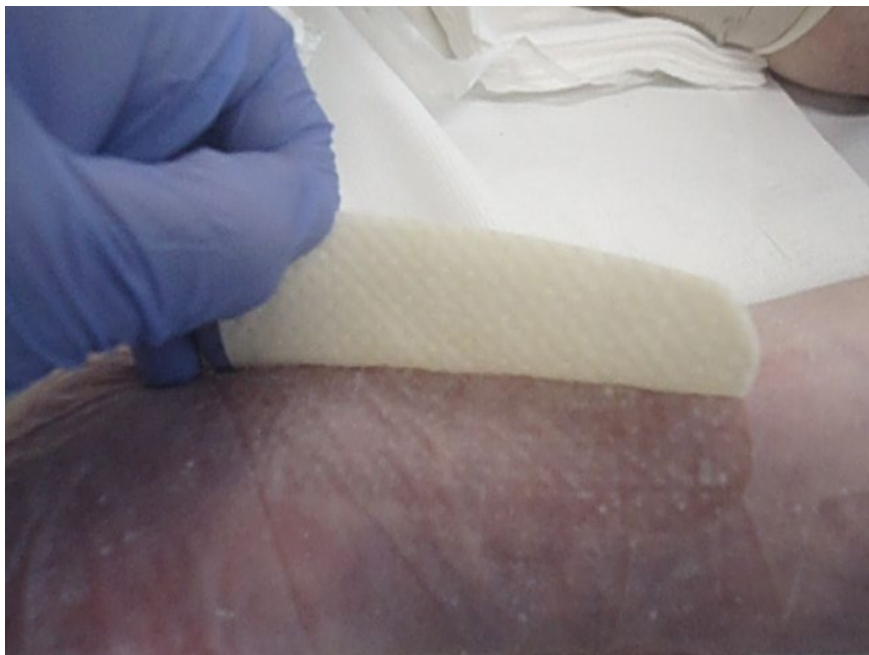


Before the application of an antiseptic agent, the following factors must be considered:

- Determine the underlying cause of any chronic, nonhealing wound
- Cleansing and debridement are essential to maximise the effect of the antiseptic
- Manage the individual wound according to its local conditions, especially when selecting a wound dressing.

Kramer et al (2018)

THE ROLE OF WOUND DRESSINGS



PUTTING ALL THE PIECES TOGETHER



CLEANSING AND DEBRIDEMENT; HANDS ON



CLEANSING AND DEBRIDEMENT: THE OUTCOME



THREE DAYS AFTER DEBRIDEMENT



NINE DAYS AFTER DEBRIDEMENT



UNDISTURBED WOUND HEALING (UWH)



25 days
(Started 1/ week treatment)



57 days



65 days

UNDISTURBED WOUND HEALING (UWH)



94 days



127 days

SUMMARY

- Wound cleansing and debridement are **essential to remove debris, nonviable tissue** and **micro-organisms** that accumulate on the surface of a chronic wound
- Assessment is key to ensure that the **right debridement technique is selected**
- **Patient collaboration is important** to ensure that specific needs of the patient and the wound are met including consent to treatment
- Selection of the correct debridement method should be **based on patient-centered outcomes** rather than adherence to familiar techniques
- Referral to appropriate HCP should always be considered if you do not have the knowledge or skills to **perform the appropriate debridement method**
- After controlling local barriers, allow the wound to heal **undisturbed**.

VISIT MICROWORLD

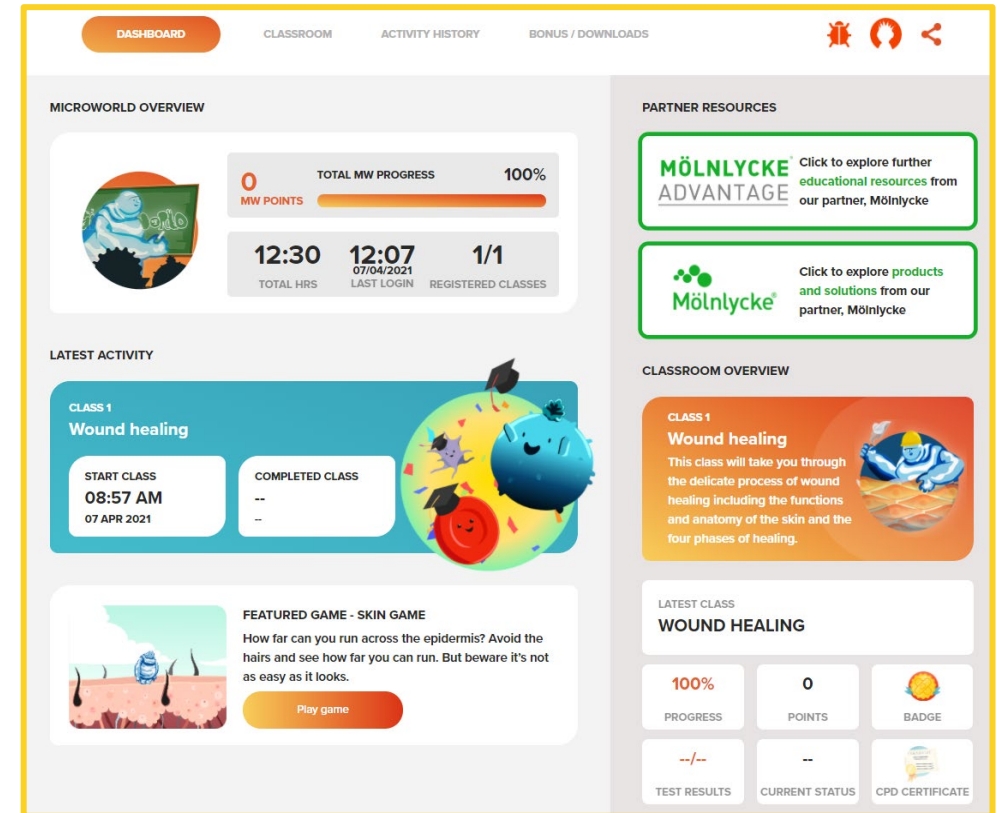
- We hope you have enjoyed the introduction to Class 10 on cleansing and debridement, and the snippets of the class you have seen here
- Start exploring Microworld and all the available classes now
- Register at Microworld:

www.mymicroworld.online



AT THE END OF THE CLASS

- For each class you complete, at the end you will get a brief recap on the content, and you can then take a quick test of your knowledge
- Completing the class also opens up other areas of the site, giving you access to further content
- You can monitor your progress on your personalized dashboard
- Access new content, view your activity and visually track, monitor and analyse your performance in one place.



CONCLUSIONS

- Thanks for joining us and we hope this FB Live has helped you to understand more about cleansing and debridement and their important roles in creating a healthy wound bed and helping to prepare the wound for healing
- Finally, I hope you have recognised how Microworld can help you to learn in a fun, new way.

REFERENCES

- Kramer et al (2018) Skin Pharmacol Physiol 31: 28-58
- Kumah EA, et al (2023) Adv Skin Wound Care 36: 180-7
- Mayer DO et al (2024) J Wound Care 33(6), Suppl C, June
- Rodeheaver GT, Ratcliff CR. Wound cleansing, wound irrigation, wound disinfection. In: Krasner DL, van Rijswijk L, eds. *Chronic Wound Care: The Essentials e-book*. Malvern, PA: HMP; 2018: 47-62
- Wilcox et al (2013) JAMA Dermatol 2013 Sep;149(9):1050-8. doi: 10.1001/jamadermatol.2013.4960