

# “WHAT ARE WE TRYING TO ACHIEVE IN TREATING PARTIAL-THICKNESS BURNS?”

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# SUPERFICIAL SECOND DEGREE (PARTIAL-THICKNESS)



- Heal in 7-14 days
- BLEB, PAIN, MOIST, PINK !!
- Treatment: Topical antimicrobials or Synthetic wound dressing

# DEGREE OF WOUND

- First degree (Epidermal) : No scar healing
- Second degree (Partial-thickness): Dermal wound
  - Superficial dermal wound

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- Deep dermal wound

- Third degree (Full thickness) : whole skin
- Fourth degree : deep to muscle
- Fifth degree : deep to bone

**Surgery**

# CHOOSING THE RIGHT DRESSING

- Infected
  - If infected → antimicrobial dressing
- Exudate
  - Low or moderate → Hydrogel, Hydrocollod, Silicone
  - High → Foams, Alginates, Hydrofiber

# TREATMENT OF SUPERFICIAL PARTIAL THICKNESS BURN, SECOND-DEGREE

- Mepitel with an absorbent dressing initially<sup>1,2,3,4,5,6</sup>
- When the wound is dryer –any Mepilex product can be used<sup>7</sup>
- If signs/ risk of infection – Mepilex Ag







# Mepitel

consists of a flexible polyamide net coated soft silicone-based adhesive

For non to high exuding wounds:

- ✓ Finger tip injury
- ✓ Partial thickness burn
- ✓ Nail bed removal



# WOUNDS AND SKIN GRAFTS WITH MEPITEL

- Speed healing
- Decrease vulnerability to infection
- Most applied between 3<sup>rd</sup> and 21<sup>st</sup> days

Autograft: Tissue from self. Results in a donor site.

Allograft: Tissue from cadaver

Xenograft: Animal skin (e.g. pig)

Other: Integra, Alloderm

# GRAFT FIXATION WITH MEPITEL



The grafts in place



Mepitel fixating  
the grafts



Post op day 5

Day 10





# Mepilex Ag

- Safetac<sup>®</sup> soft silicone layer
- Polyurethane foam
- Silver sulfate is added into the foam during the manufacturing process.
- It is only the foam that contains silver, sustained release of silver up to 7 days.
- $\text{Ag}_2\text{SO}_4$ , 1,2 mg silver/cm<sup>2</sup>
- Activated carbon
- Polyurethane film



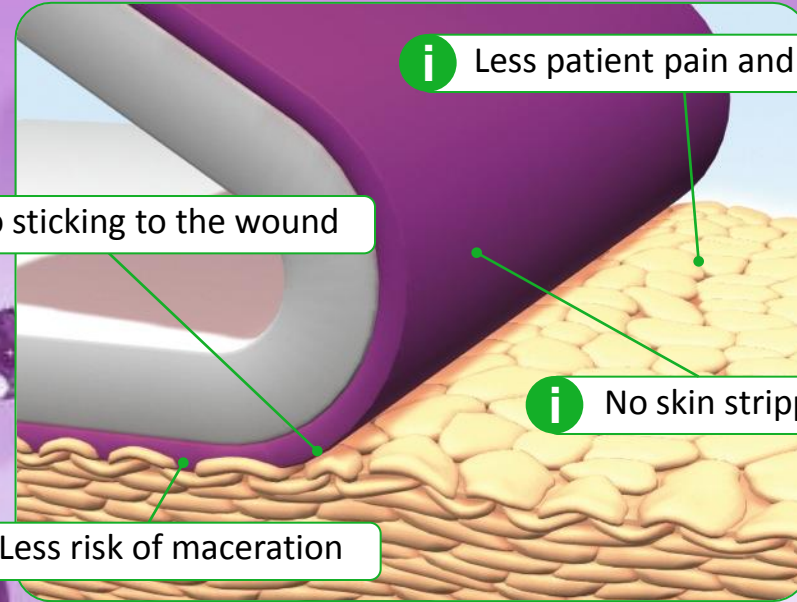
## Improve healing with Safetac<sup>®</sup>

**i** No sticking to the wound

**i** Less patient pain and stress

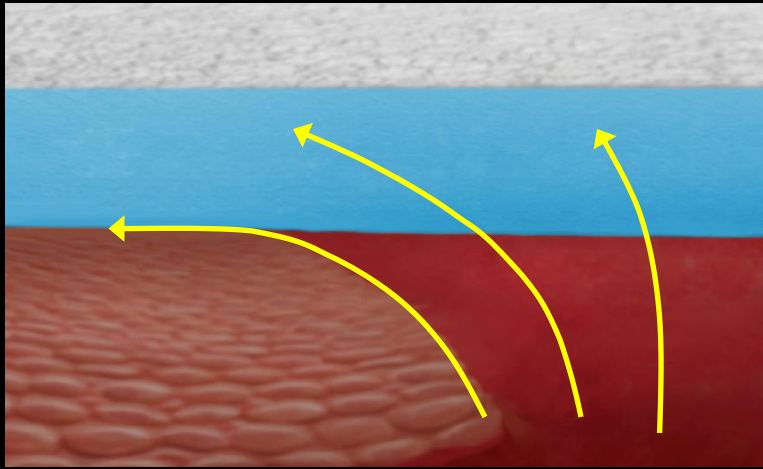
**i** No skin stripping

**i** Less risk of maceration



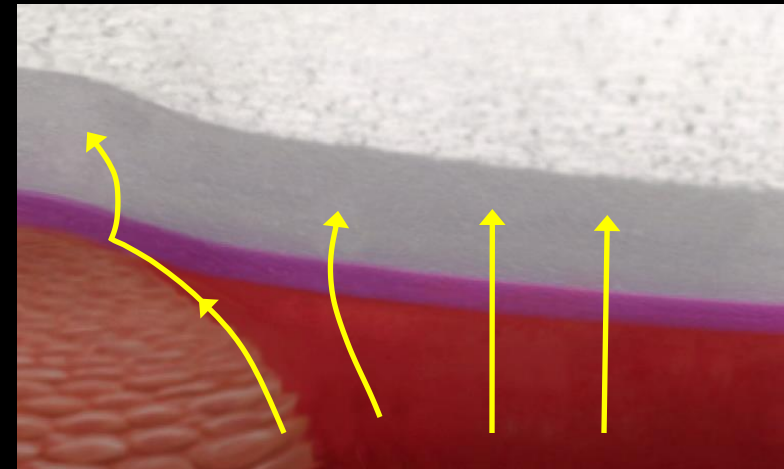
# Less risk of maceration

Traditional adhesives



- Does not form a complete seal around the wound
- Could lead to exudate spread

Dressing with Safetac® technology



- Seals the wound margin
- Effectively minimising the risk of maceration<sup>1</sup>

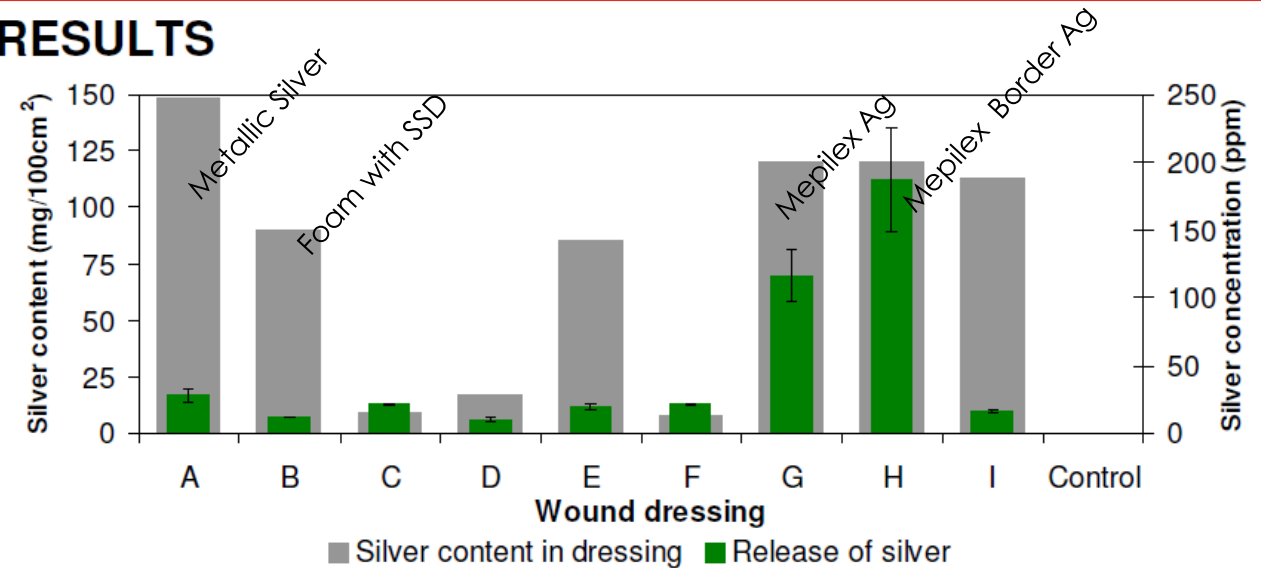
1. Meaume S, et al. A study to compare a new self adherent soft silicone dressing with a self adherent polymer dressing in stage II pressure ulcers. *Ostomy Wound Management*, 2003, 49:44–51



# SILVER CONTENT IN DIFFERENT DRESSINGS

Product	Silver concentration (mg/cm <sup>2</sup> )
Acticoat 7	1,2
Acticoat	1,1
Acticoat Absorbent	1,0
Acticoat Moisture Control	1,6
Contreet	0,9
Aquacel Ag	0,1
Silvercel	1,1
SilvaSorb	0,1
Actisorb Silver 200	0,1
Silverlon	5,5
Mepilex Ag	1,2

## RESULTS



**Fig 2.** Silver content<sup>3, 4</sup> (primary axis) and silver release (secondary axis) of Dressings A-I\* at 24h when tested against *S. aureus*.

\* Dressings used in the study: **Dressing A:** Acticoat 7 (Smith & Nephew) Polyethylene dressing with absorbent inner core and nanocrystalline silver, 148 mg Ag/100cm<sup>2</sup>; **Dressing B:** Allevyn Genlte Ag (Smith & Nephew), Polyurethane foam dressing with soft gel adhesive and silver sulphadiazine, 90 mg Ag/100cm<sup>2</sup>; **Dressing C:** Aquacel Ag (ConvaTec) Sodium carboxymethylcellulose with "ionic silver", 9 mg Ag/100cm<sup>2</sup>; **Dressing D:** Cellosorb Ag (also named Urgcell Silver, Urgo) Polyurethane foam dressing with lipid colloid and silver sulfate, 17 mg Ag/100cm<sup>2</sup>; **Dressing E:** Contreet (also named Biatan Ag, Coloplast) Polyurethane foam dressing with silver sodium hydrogen zirconium phosphate, 77-95 mg Ag/100cm<sup>2</sup>; **Dressing F:** Melgisorb Ag (Mölnlycke Health Care) Alginate dressing with silver sodium hydrogen zirconium phosphate, 8 mg Ag/100cm<sup>2</sup>; **Dressing G:** Mepilex Ag (Mölnlycke Health Care) Soft silicone foam dressing with silver sulfate, 120 mg Ag/100cm<sup>2</sup>; **Dressing H:** Mepilex Border Ag (Mölnlycke Health Care) Self-adherent soft silicone foam dressing with silver sulfate, 120 mg Ag/100cm<sup>2</sup>; **Dressing I:** Silvercel (Systagenix) Alginate and carboxymethylcellulose dressing with metallic silver, 113 mg Ag/100cm<sup>2</sup>.





Burn Unit, Div. of Traumatology, Siriraj Hospital, Thailand





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VIDEO UPON  
REMOVAL  
FROM TRUNK



# DONOR SITE WITH MEPILEX



The fresh donor site



Mepilex



After 5 days



After 5 days



After 11 days



# DONOR SITE



# MEPILEX® AG FOAM DRESSINGS ON DONOR SITE



Day 1



Mepilex® Ag Foam dressing in situ



Day 14

*Burn Unit, Div. of Traumatology, Siriraj Hospital, Thailand*



## INTERVENTION:



Mepilex<sup>®</sup> Ag Foam dressing (10 cm x 10 cm) was applied to the donor site sized 6x8 cm., and was then covered by a retention bandage wrap. This antimicrobial foam dressing conformed well with thigh and was easy to apply.

# OUTCOME:



## Clinical outcome

- This donor site showed completely epithelization after 14 days.
- The Mepilex® Ag Foam dressing provided optimal management of exudate and bacterial barrier leading to less maceration, less disturbance of epithelialization and good infection control.

## Patient

- The patient reported that the dressing reduced wound pain while in place and that no discomfort was experienced with dressing removal.





VIDEO UPON  
REMOVAL  
FROM TRUNK

Deep second degree  
(Partial-thickness)



DRY, WHITE TO YELLOW, LESS PAIN!!









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Third degree burn

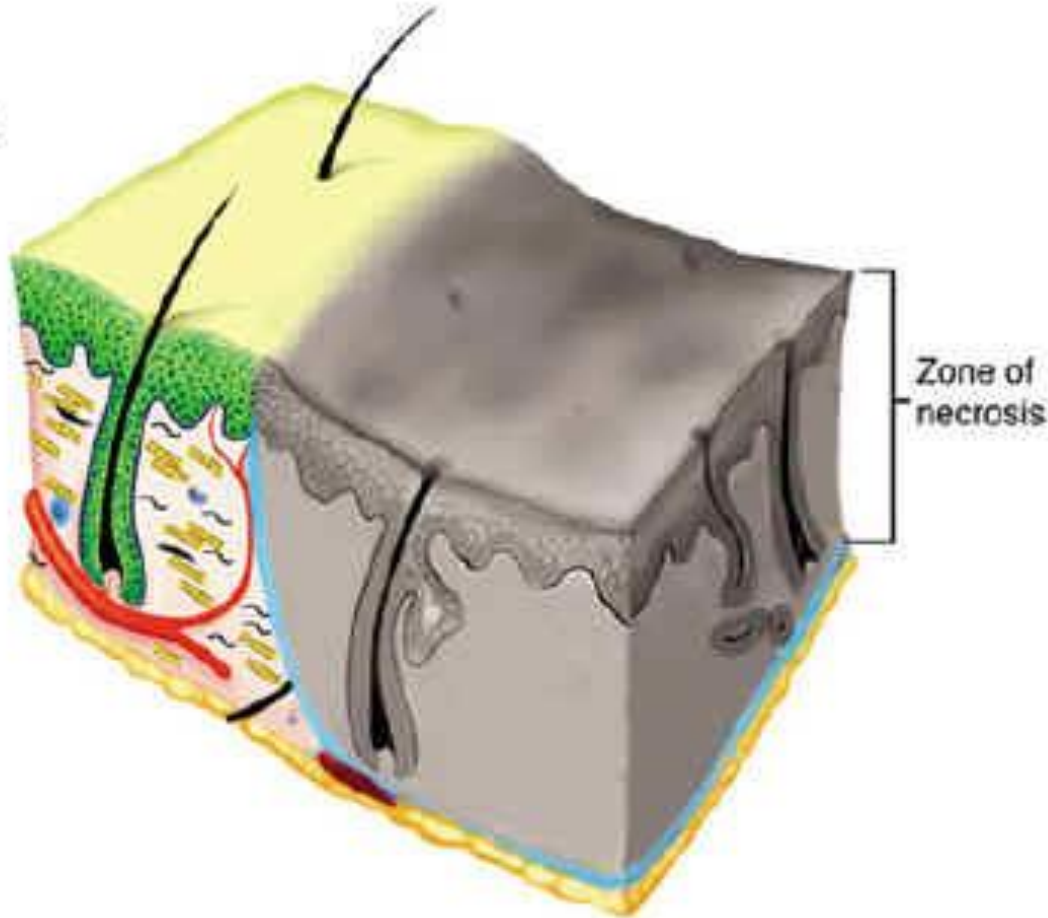


# THIRD DEGREE BURN

## Full Thickness Burn

### Characteristic

No remaining  
viable dermis



○Require Early excision and grafting





# TREATMENT OF DEEP PARTIAL THICKNESS BURN

- Mepilex Ag - until clean
- Smaller burns - secondary healing – the same regime as for superficial burns
- Extended burns – early surgical excision and grafting
- Mepitel for fixation of the grafts







2 month, female burn, scald burn





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# APPLY MEPILEX AG







PBD 4



PBD 6



PBD 9







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PBD 30

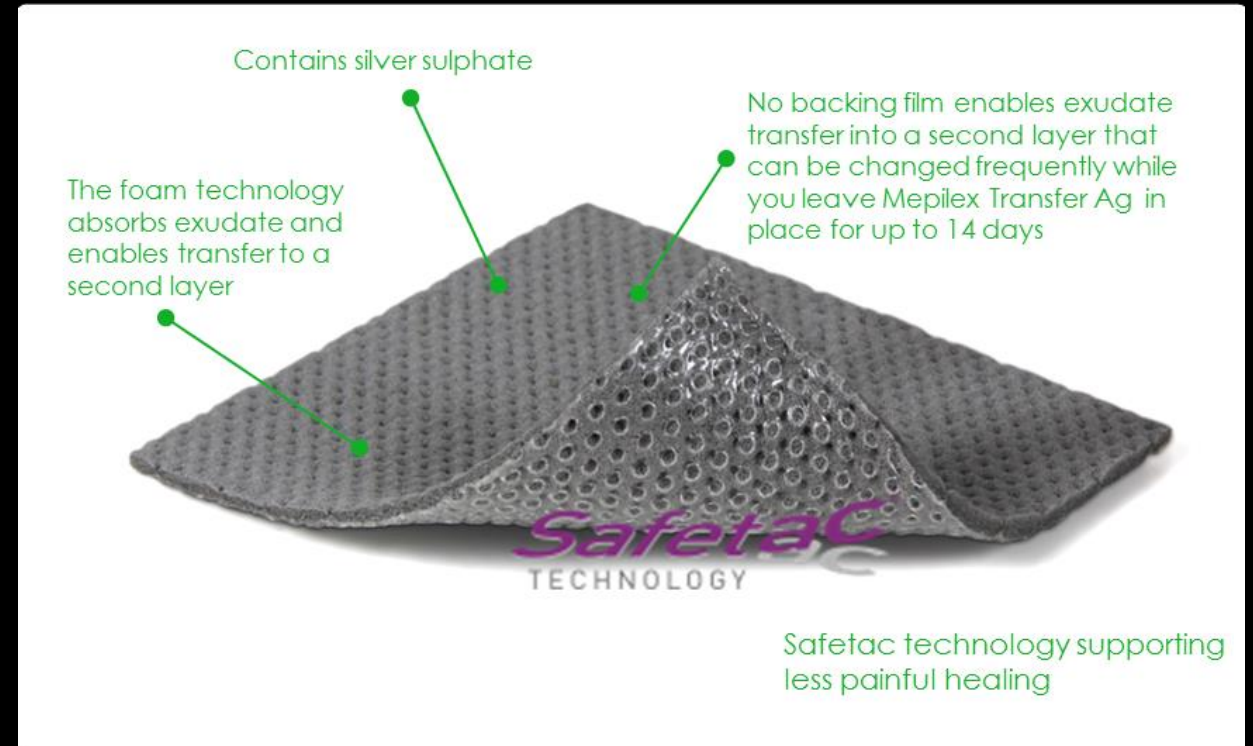
# DEEP DERMAL WOUND



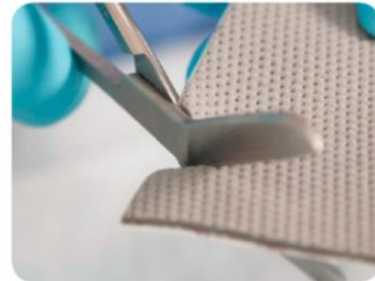


# MEPILEX TRANSFER AG

- Less painful dressing changes: Safetac® gentle adhesion, minimal wound disturbance and patient pain.
- Antimicrobial effect: **silver sulphate** particles, rapid and sustained antimicrobial effect on microorganisms.
- Good exudate management: **soft, flexible foam absorbs and transfers exudate**, fewer dressing changes.



Applying Mepilex® Transfer Ag:



## Mepilex Ag



Mepilex Ag, dressing for PTB's

- Supported by clinical evidence
- Recommended by clinicians

## Mepilex Transfer Ag



When Mepilex Ag is not ideal:

- For **hard-to-dress** areas e.g. hands
- Or **heavily exuding** burns
- OR **large areas** such as trunks











# KEY MESSAGE

## MODERN BURN WOUND CARE SHOULD HAVE TWO MAINLY CONCEPTS

- First is to avoid wound infection and second is to promote wound healing.
- For the superficial burn wound, the treatment objective is to keep appropriate moist and clean environment in order to promote healing by spontaneous epithelialization.
- The superficial burn wound can be healed by topical medication or using advanced wound dressings. We should provide a good barrier to protect from contamination and less adherent to wound bed to ensure good compliance of comfort, ease of use and less painful upon removal.
- In deep burn wound, the treatment is quite different due to the increased amount of dead tissues in this type of burn. Therefore, the standard treatment for deep burn wound is early burn wound excision and skin graft."

