



Your peace of mind



Which wounds



2nd degree burn



ulcus cruris venosum



deep cut

require your attention?



diabetic foot



pressure sore

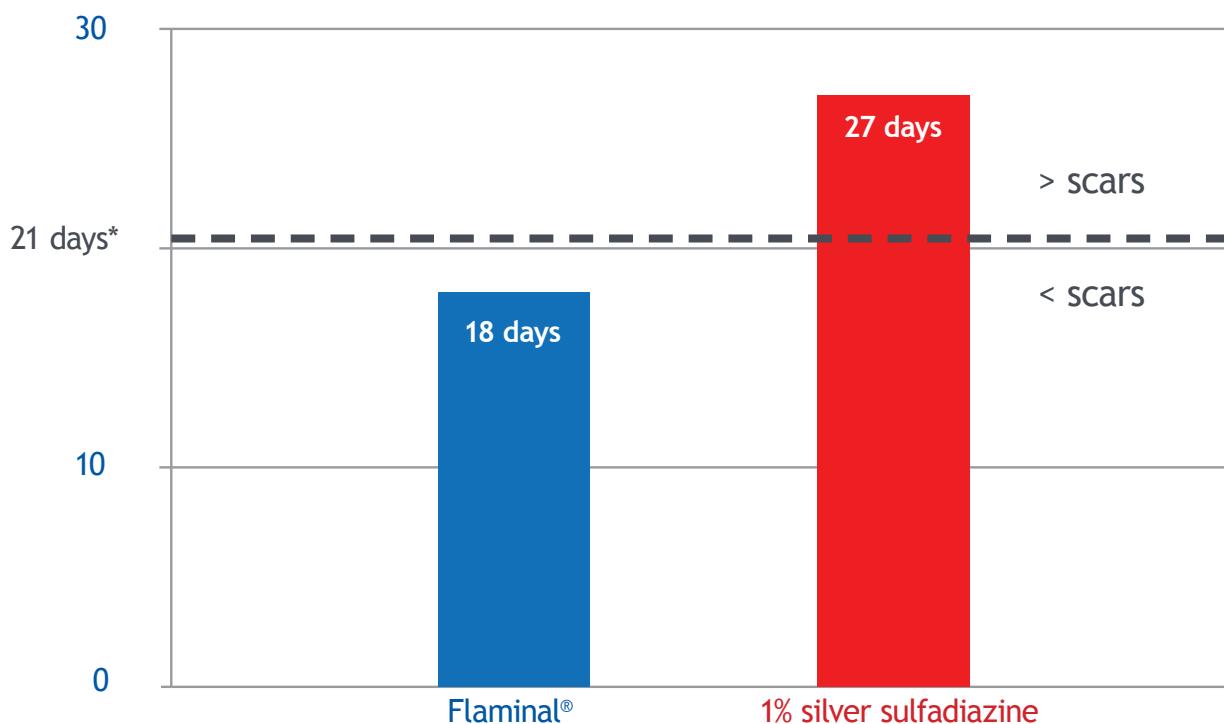


skin tear

Flaminal®

reduced scarring compared to 1% silver sulfadiazine

“Healing in more than 3 weeks can make a tremendous difference in final outcome due to the substantially increased risk of hypertrophic scarring and contractures.” [1,2]*



Number of days healing time for deep 2nd degree burns.

* Hoeksema H., Vandekerckhove D., Verbelen J., Heyneman A., Monstrey S., A comparative study of 1% silver sulphadiazine (Flammazine®) versus an enzyme alginogel (Flaminal®) in the treatment of partial thickness burns. *Burns* 2013; 39(6) : 1234-1241.

Hoeksema H, Vermeulen B, Verbelen J, et al. Flaminal Forte: an enzyme alginogel: 10 years experience in burn care. 2011; Presentation at the European Burns Association Meeting. September 14-17, The Hague, Netherlands.

[1] Deitch EA, Wheelahan TM, Rose MP, Clothier J, Cotter J. Hypertrophic burn scars: analysis of variables. *J Trauma* 1983;23(10):895-8.

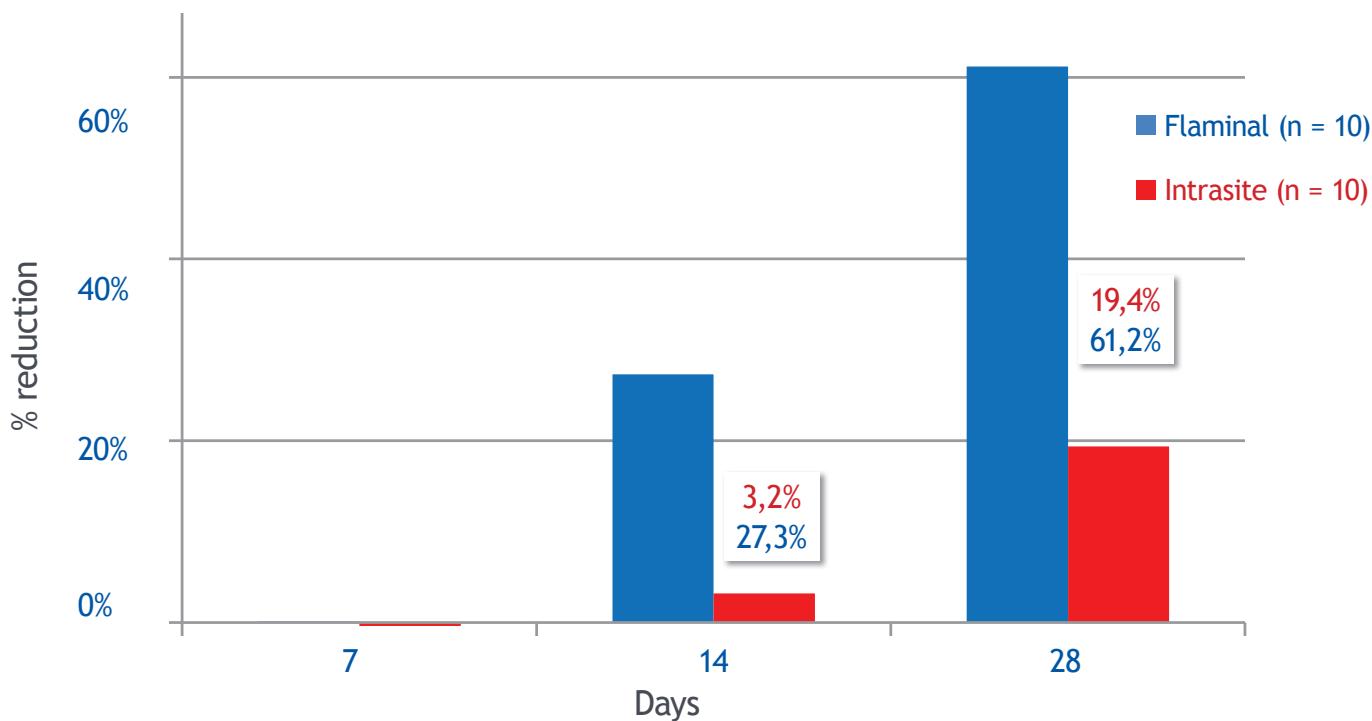
[2] Cubison TC, Pape SA, Parkhouse N. Evidence for the link between healing time and the development of hypertrophic scars (HTS) in paediatric burns due to scald injury. *Burns* 2006;32(8):992-9.

Flaminal®

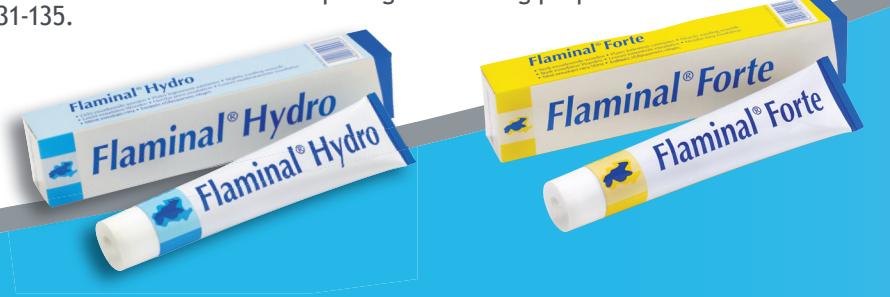
time to wound closure is 3x faster

Journal of the European Academy of Dermatology and Venereology*

JEADV



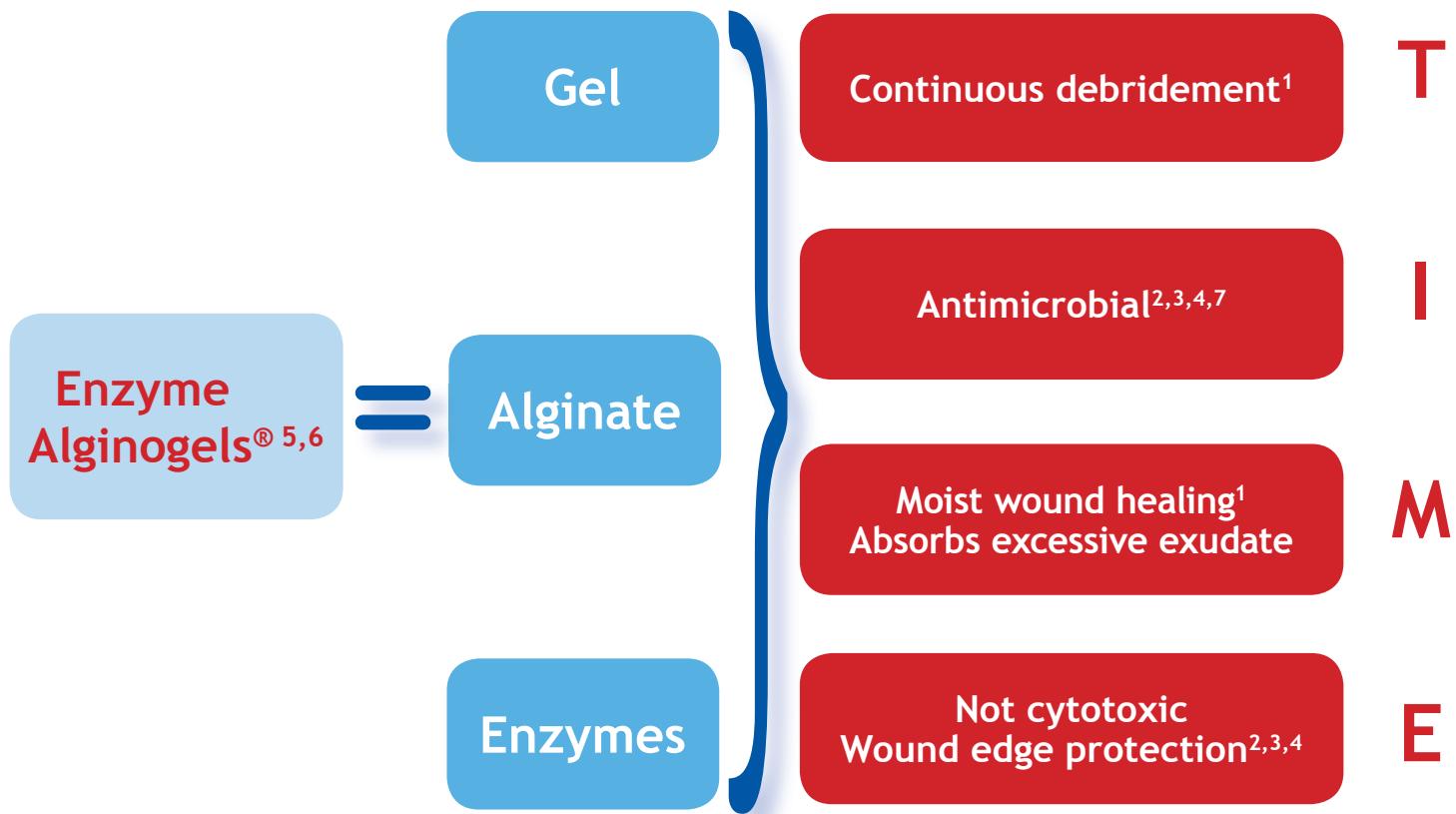
* de la Brassine M, Thirion L and Laenen Horvat L-I. A novel method of comparing the healing properties of two hydrogels in chronic leg ulcers. JEADV 2006;20:131-135.



Flaminal®

a UNIQUE class

a UNIQUE mechanism of action



a COMPLETE solution
for EACH wound type

Flaminal®

wound healing in 3 steps

<p>1. Clean with Flamirins®, then carefully dab dry</p>	<p>Flamirins®</p> 
<p>2. Apply a thick layer of 0.5 cm</p>	<p>Flaminal® Hydro - Flaminal® Forte</p> 
<p>3. Cover with</p>	<p>a vaseline gauze or a non-stick wound dressing</p>

1, 2, 3 = healed

Renew every 2 to 3 days
Necrotic, fibrinous wounds: change daily



Flaminal®

Your peace of mind

1. total solution for each wound type
2. reduced scarring
3. time to wound closure is 3x faster
4. simple and safe to use
5. cost-efficient

a **COMPLETE** solution
for **EACH** type of wound



References

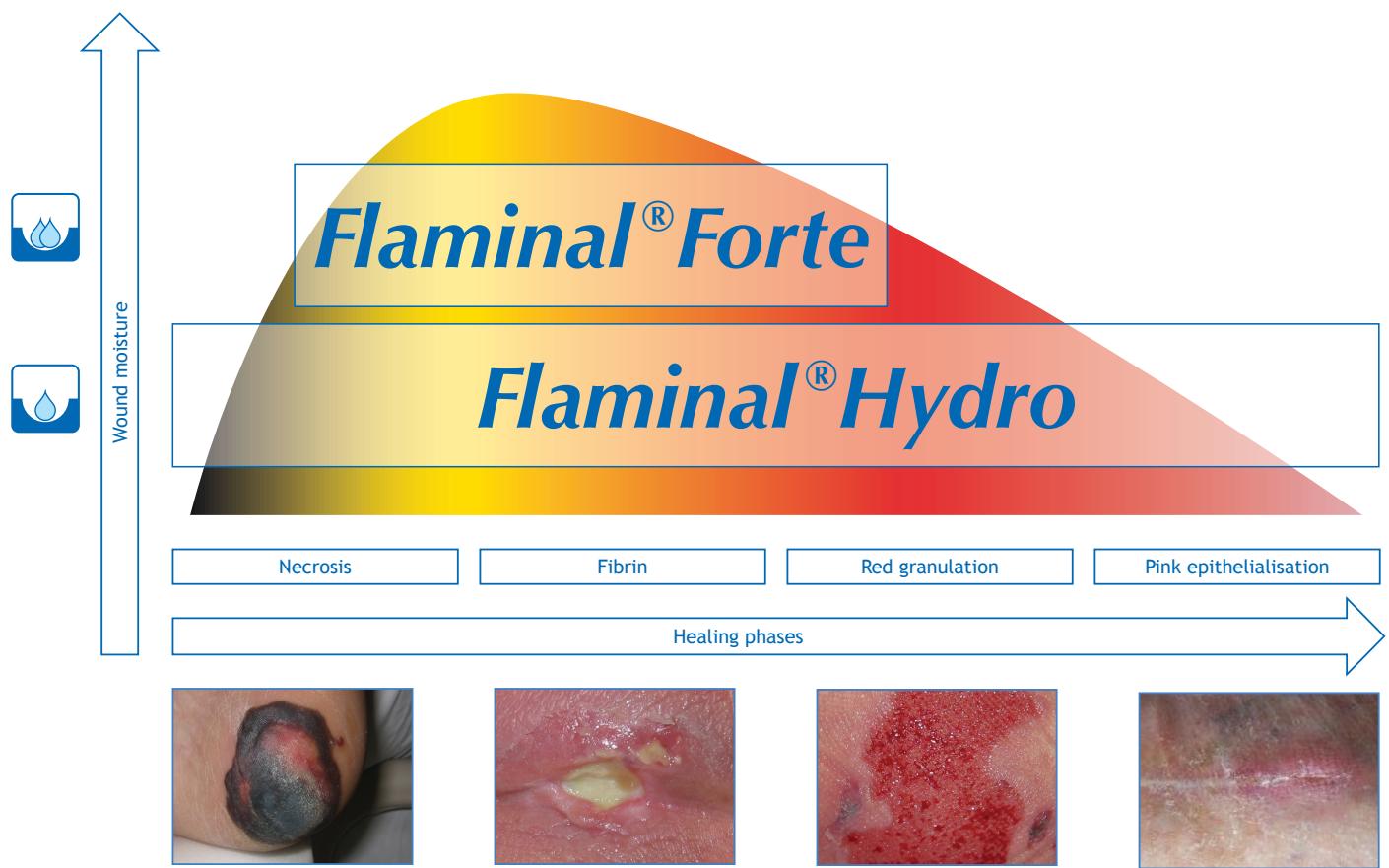
1. de la Brassine M, Thirion L and Laenen Horvat L-I. A novel method of comparing the healing properties of two hydrogels in chronic leg ulcers. *JEADV* 2006;20:131-135.
2. Vandenbulcke K, Laenen Horvat L-I, De Mil M, Segers G and Beele H. Evaluation of the antibacterial activity and toxicity of 2 new hydrogels: a pilot study. *The International Journal of Lower Extremity Wounds* 2006;5:109-114.
3. De Smet K, Van den Plas D, Lens D and Sollie P. Susceptibility of antibiotic-resistant bacterial strains to a naturally occurring antimicrobial enzyme system. Presented at EWMA 2007 (Glasgow, UK), EBA 2007 (Budapest, Hungary) and CPC 2008 (Paris, France).
4. De Smet K, Van den Plas D, Lens D and Sollie P. Pre-Clinical Evaluation of a New Antimicrobial Enzyme for the Control of Wound Bioburden. *Wounds* 2009;21(3):65-73.
5. Beele H, Durante C, Kerihuel S, Rice S, Rondas A, White R. Expert consensus on a new enzyme alginogel. *Wounds International* 2012;3.
6. Hoeksema H, Vandekerckhove D, Verbelen J, Heyneman A, Monstrey S. A comparative study of 1% silver sulphadiazine (Flamazine®) versus an enzyme alginogel (Flaminal®) in the treatment of partial thickness burns. *Burns* 2013;39:1234-1241.
7. Cooper R. Inhibition of biofilms by glucose oxidase, lactoperoxidase and guaiacol: the active antibacterial component in an enzyme alginogel. *Int. Wound J.* 2013;10(6):630-637.



Flaminal®

choose according to exudate level

- slightly exuding = Flaminal® Hydro (3,5% alginate)
- heavily exuding = Flaminal® Forte (5,5% alginate)



Flaminal®

properties

	Hydrogel	Honey	Foam dressing	Silver dressing	Alginat	Hydro-fiber®	iso-Betadine®	silver sulfadiazine	FLAMINAL®
T.	CONTINUOUS DEBRIDEMENT	+	-	-	-	+	+	-	+
I.	ANTIMICROBIAL	-	-	+	+	-	-	+	+
M.	MOIST WOUND HEALING / ABSORBS EXCESSIVE EXUDATE	-	-	-	+	+	+	-	+
E.	NOT CYTOTOXIC / WOUND EDGE PROTECTION	-	-	+	-	-	+	-	+



Flaminal®

How does an Enzyme Alginogel® work?

Restores bacterial balance

Step 1: glucose oxidase

Peroxide



Step 2: lactoperoxidase

Oxygen radicals (ROS)

← *Guaiacol stabilises*

Destruction of microbial cell wall



Flaminal®

is antibacterial scientific support

“Flaminal® did not lead to a higher incidence of wound infection, positive haemocultures or to an elevated use of antibiotics.”

Hoeksema H., Vandekerckhove D., Verbelen J., Heyneman A., Monstrey S., A comparative study of 1% silver sulphadiazine (Flammazine®) versus an enzyme alginogel (Flaminal®) in the treatment of partial thickness burns. *Burns 2013; 39(6) : 1234-1241*

“In our experience, Flaminal® enzyme alginogel offers a comprehensive solution for burn wounds. It provides debridement, wound decontamination and infection control.”

Weissman O. MD, Harats M. MD, Winkler MD E., Haik J. MD MPH. Our Experience with the Treatment of Severe 2nd and 3rd Degree Burns with Enzyme Alginogel (Flaminal®). *WUWHS 2012*

“Enzyme Alginogel proved to be as effective at reducing wound colonisation as nano-crystalline silver (Acticoat®) but was significantly more effective than a silver foam (Mepilex® Ag).”

Campbell P., Vandervord J. MD, Van Der Saag D., Investigating the role an Enzyme Alginogel can play in the management of burns. *ISBI 2012*

“With increasing concerns about bacterial resistance to antibiotics, this study shows that low concentrations of the GLG-enzyme system are successful in killing antibiotic resistant bacterial strains. Furthermore results show that GLG-enzyme system combines strong anti-microbial activity with non-cytotoxicity.”

De Smet K., Van den Plas D., Lens D., Sollie P. (2009), Pre-clinical evaluation of a new antimicrobial enzyme system for the control of wound bioburden. *WOUNDS 2009: a compendium of clinical research and practice 21(3):65-73*

“In this study, Flaminal and Flaminal Hydro demonstrated antimicrobial effects, both in vitro and in vivo.”

“Eight days after the start of the treatment with Flaminal or Flaminal Hydro, wounds had become negative for several bacterial species.”

“The number of different types of isolated species decreased significantly ($P = .018$) after the use of Flaminal or Flaminal Hydro.”

Vandenbulcke K., Horvat L. I., De Mil M., Slegers G., Beele H. (2006), Evaluation of the antibacterial activity and toxicity of 2 new hydrogels: a pilot study. *Int J Low Extrem Wounds 5: 109-114*

“This study demonstrates that the active antibacterial component in Flaminal can prevent the formation of biofilms and inhibit established biofilms in vitro.”

Cooper RA, Inhibition of biofilms by glucose oxidase, lactoperoxidase and guaiacol: the active antibacterial component in an enzyme alginogel. *Int Wound J. 2013, 10(6) : 630-637*

Expert Working group, chaired by Richard White. The use of topical antimicrobial agents in wound management.

Third Edition. Pag 15, Tabel 2 Guide to topical antimicrobials Wounds UK

Flaminal®

How does an Enzyme Alginogel® work?

Debrides continuously

	Debridement by dissolution and autolysis	Debridement by absorption	Debridement by restoring bacterial balance
Enzyme Alginogel®	PEG/water	Alginate polymer	Enzyme system
Cadexomer iodine	PEG	Modified starch polymer	Iodine
Honey	Water	Sugars	?
Sugar paste with PEG and peroxide	PEG	Saccharose	Hydrogen peroxide



Honey: no scientific evidence in wound care

“Honey may delay healing in deep burns and in ulcers caused by insect bites. There is not enough evidence to give guidance for the use of honey in other types of wounds.”

Jull AB, Walker N, Deshpande S, Honey as a topical treatment for wounds, *NICE Cochrane Database Syst Rev.* 2013 Feb 28;2:CD005083. doi: 10.1002/14651858.CD005083.pub3

“At 12 weeks there was a 5.9% absolute increase in healing in favour of honey, although this failed to reach statistical significance.

Wounds treated with honey also achieved a 9,6% greater reduction from baseline and 23% fewer episodes of infection, although neither parameter achieved statistical significance.

The application of honey was found to result in increased pain compared to traditional treatments. 4 participants gave pain as the rationale for withdrawal from treatment.”

From the site of medihone: <http://www.springmedical.nl/page/50/publicaties-.html>

V Robson, S Dodd, S Thomas, Standardized antibacterial honey (Medihoney™) with standard therapy in wound care: randomized clinical trial. *Journal of Advanced Nursing* 2009, 65: 565-575. doi: 10.1111/j.1365-2648.2008.04923.x

“Evidence-based recommendations are given against the use of medicinal honey.”

Rüttermann M, Maier-Hasselmann A, Nink-Grebe B, Burckhardt M: Clinical practice guideline: Local treatment of chronic wounds in patients with peripheral vascular disease, chronic venous insufficiency and diabetes. *Dtsch Arztbl Int* 2013; 110(3): 25-31. DOI: 10.3238/atztbl.2013.0025

“This review reveals several gaps in the research of honey in modern wound care.”

L Vandamme L, A Heyneman, H Hoeksema, J Verbelen, S Monstrey, Honey in modern wound care: a systematic review. *Burns.* 2013 Dec;39(8):1514-25. doi: 10.1016/j.burns.2013.06.014. Epub 2013 Jul 26

“Honey can slow down wound healing in second and third degree burns. Until there is enough evidence available about the effect, the routine use of honey dressings should be limited.”

H Beele, Kan topisch gebruik van honing de wondheling van acute en chronische wonderen versnellen? *Minverva*, 2014, Maart 13 (2)



Flaminal®

reduces pain

"Several examples emerged that not only reduced a patient's pain but their length of stay. One in particular a 14y.o. boy with Partial Thickness leg burns was unable to walk because of pain, after the application of Flaminal and encouragement of Physiotherapy the patient left hospital 48hrs later fully ambulant and with little to no pain."

Campbell P., Flaminal; A Clinical Trial to assess the efficacy of use in Partial Thickness Burns. ANZBA 2012

Flaminal® reduces pain in burns

	Flaminal®	Silver dressings	
		Mepilex® Ag	Acticoat®
n =	25	16	13
Average pain level (0-10)	2.4	3.2	7.7
Pain after dressing change	55% ↓	10% ↓	Increased pain ↑

Campbell P., Vandervord J. MD, Van Der Saag D., Investigating the role an Enzyme Alginogel can play in the management of burns. ISBI 2012

Flaminal® reduces pain in chronic wounds

"A reduction in pain before, during and after wound care product change was noted over the course of the evaluation."

Durante C.M., MD (2012), An open label non-comparative case series on the efficacy of an enzyme alginogel. Journal of Wound Care 2012; 21(1):22-28

