

Honey: a sweet solution or a sticky subject?

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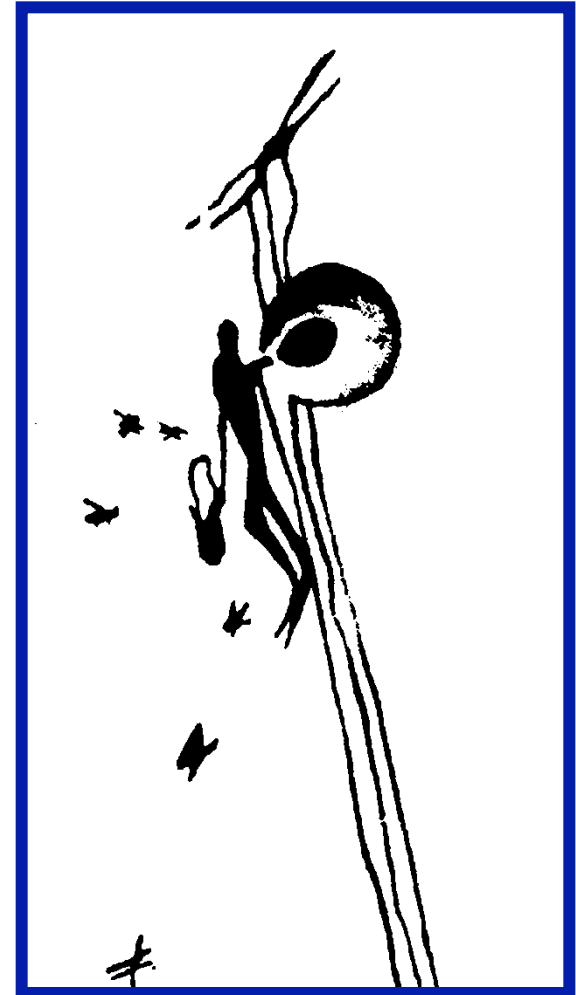


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Honey as an ancient wound remedy

- Sumerian clay tablet ~ 2100 BCE
- Ancient Egyptians
 - Edwin Smith papyrus ~1500 BCE
- Ancient Greeks
- Romans
- Ancient Chinese
- Koran, Bible, Vedas

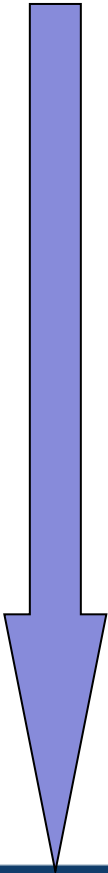


Medicinal uses of honey

- Respiratory infections
 - Gastro-intestinal problems
 - Recreational activities
 - Contraception
 - Baldness
 - Wounds
 - burns
 - diabetic foot ulcers
 - fungating lesions
 - leg ulcers
 - pressure sores
 - surgical wounds
 - trauma wounds
- Chronic wounds
- 

Honey for wounds as a medical device

- Honey has been used since antiquity in many local remedies
- 1935 Desitin was registered by Carl Klinke in Hamburg for treating burns and wounds
- 1970s table honey was used in British hospitals
- 1990s Tulle dressing impregnated with honey and cod liver oil

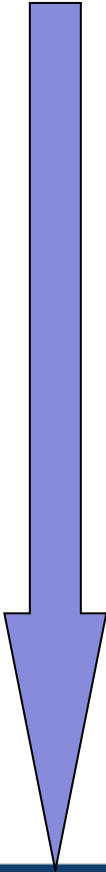


Honey wound dressing available in UK in 1990s



Honey for wound care: key landmarks

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- 1999 First modern wound care product licensed in Australia



Medihoney (Capillano)

Blend of jellybush and manuka honey sterilized by gamma radiation

Licensed in 1999 by Therapeutic Goods Agency in Australia as a complementary therapy for use in wound care

Available free on prescription in Queensland



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2002: two products developed in the Netherlands

-Honeysoft

-L-Mesitran

Dutch products

Honeysoft (Taureon)

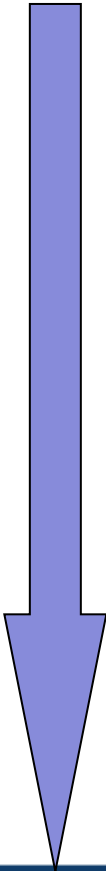


L-Mesitran (Triticum)



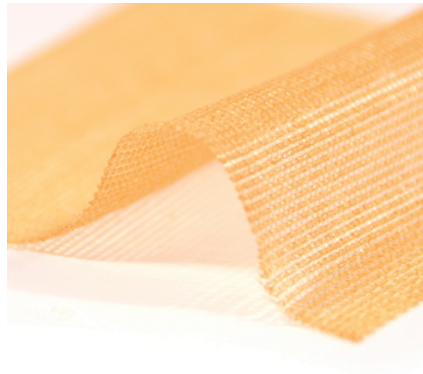
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Activon Tulle (Advancis Medical)

Manufactured in Nottingham
using manuka honey imported
from New Zealand
Available on drug tariff from 1st
March 2004

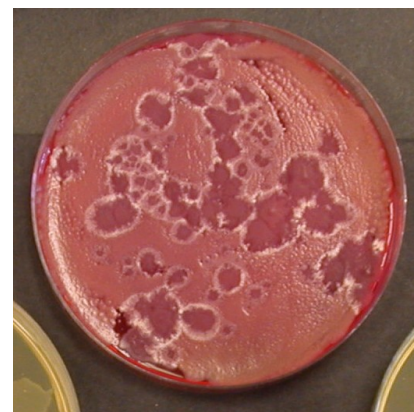
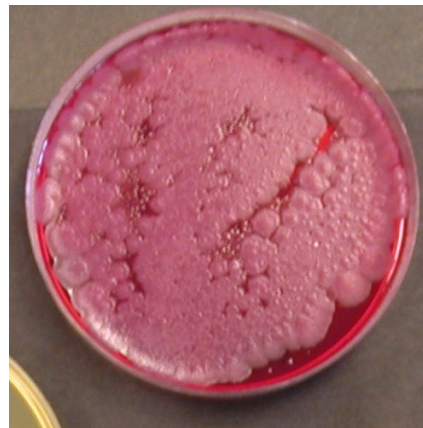


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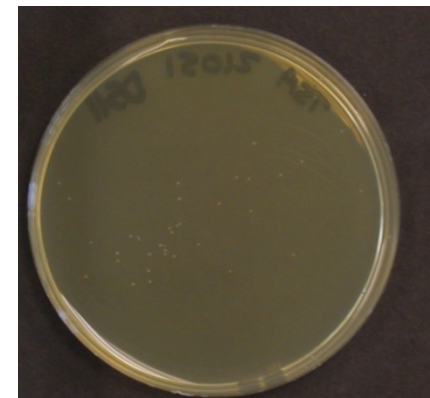
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- 2007: honey licensed in North America and Canada

Characteristics of medical grade honeys

- Proven antibacterial activity (laboratory test)
- Produced under hygienic conditions
- Traceable
- Free of pesticides, antibiotics and chemical residues
- Sterile



Medical grade honey

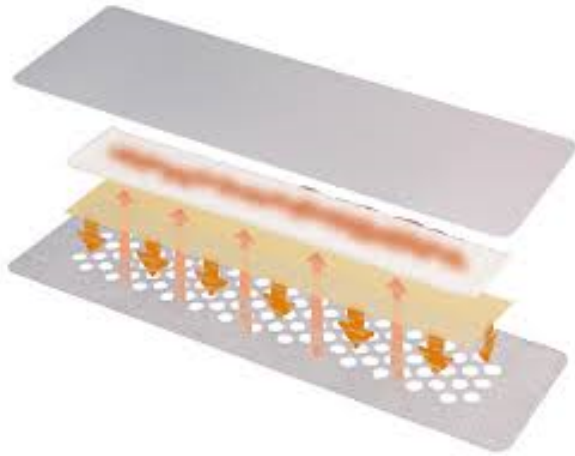


Honeys used in modern wound care

- Unspecified
 - Multifloral
 - Revamil®
- Manuka
- Chestnut
- Buckwheat
- Thyme
- Surgihoney

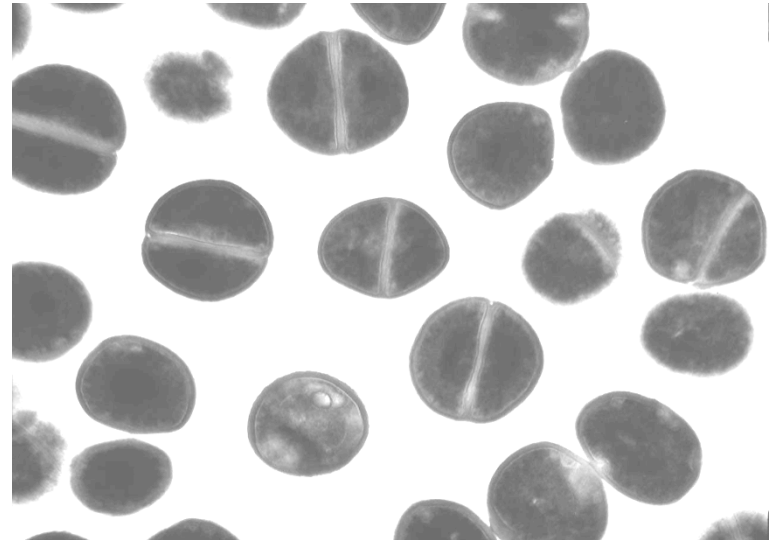


Second generation honey dressings



Manuka honey inhibits planktonic bacteria

- Cell division in *Staphylococcus aureus* interrupted

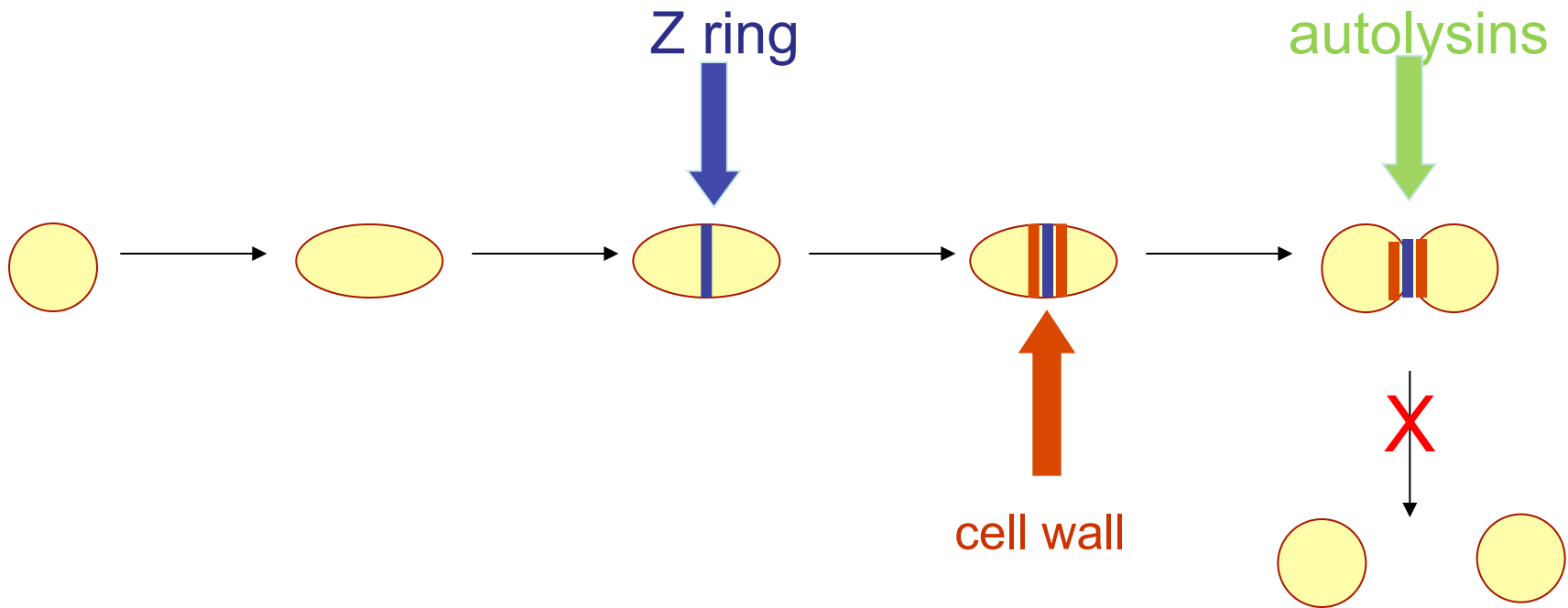


	% Cells with septa
control	16 (n=1025)
10% AH	20 (n=1235) p>0.05
10% MH	25 (n=1135) p=0.014

- Autolysins are implicated

Henriques *et al* (2010) Eur. J. Clin. Micro. Infect. Dis. 29(1): 45-50

Cell division in MRSA is prevented



Jenkins *et al* (2011) *J Antimicrob Chemother* 66: 2536-2542

Recent reports of MRSA eradication



Natarajan et al (2001) J. Dermatol. Treat. 12 : 33-36

Dunford, Cooper, Molan & White (2000)

Nurs. Stand. 29: 63-66



Recent reports of MRSA eradication

- Used on hospice patients
 - Chambers (2006) *Palliative medicine* 20: 557
- Used on maxillofacial patients
 - Visavadia, Honeysett, Danford (2006) *Br. J. Oral Maxofac. Surg.*
- Used on 7 consecutive patients with wounds infected or colonised with MRSA
 - Blaser *et al.* (2007) *J. Wound Care* 16(8): 325-328
- RCT sloughy VLU MRSA eradicated from 70% honey-treated ulcers v 10% hydrogel-treated
 - Gethin *et al.* (2008) *J. Wound Care* 17(6): 241-247

Conclusion

- Honey has been successfully re-introduced into modern medicine for wound care
- Cannot patent honey alone
- FDA refused antibacterial claims for honey because “active” ingredient had not been identified
- Need clinical data and an explanation of mode of action to promote sales