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OPTIMEL: Leptospermum spp. (Manuka) **Honey Eye Products**

- ✚ Long history of pure, raw honey use in traditional eye care
- ✚ Supersaturated solution of sugars with an acidic pH (mean 4.0)
- ✚ Medical *Leptospermum spp* honey – standardised (BP) for antibacterial activity
- ✚ Sterilised with gamma radiation
- ✚ Clinical ophthalmology use for treatment of dry eye and ocular surface disease since 2004
- ✚ Ongoing clinical studies
- ✚ Significant reduction in lid margin bacteria

Albietz J, Lenton L. Effect of antibacterial honey on the ocular flora in tear deficiency and meibomian gland disease. Cornea 2006; 25:1012-1019.

Albietz JM, Schmid KL. Randomised controlled trial of topical antibacterial Manuka (Leptospermum species) honey for evaporative dry eye due to meibomian gland dysfunction. Clin Exp Optom, 2017; 100:603-615



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OPTIMEL: Leptospermum spp. (Manuka) **Honey Eye Products**

- ✚ Proprietary mix of Australian *Leptospermum sp.* (Manuka) honeys – **STERILE – CE Marked**
- ✚ **Optimel™ Manuka Forte Eye Gel (10g tube)**- Moderate to severe dry eye – ideal for use before bed: *Leptospermum spp.* honey 980mg/g, preservative free
- ✚ **Optimel™ Manuka+ Dry Eye Drops (10ml dropper bottle)** Mild to moderate dry eye - *Leptospermum spp.* honey 165mg/g, water, sodium chloride, preservative benzoic acid
- ✚ 2 month open shelf life
- ✚ Precautions
 - Hypersensitivity to honey, food gums, benzoate preservatives (drop only)
 - Reactions exceeding transient stinging and redness

Albietz JM, Schmid KL. Randomised controlled trial of topical antibacterial Manuka (Leptospermum species) honey for evaporative dry eye due to meibomian gland dysfunction. Clin Exp Optom, 2017; 100:603-615



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OPTIMEL: Leptospermum spp. (Manuka) **Honey Eye Products**

- ✚ Clinical trial University of New South Wales (Aust) 2020 - ***Br J Ophthalmol***
- ✚ To evaluate the effects of **Optimel™ Manuka+ Dry Eye Drops** versus **Systane Ultra** on tear film properties in subjects with symptoms related to dry eye disease after 28 days of treatment.
- ✚ Forty-six subjects with symptoms related to dry eye (Ocular Surface Disease Index (OSDI) score >12) were enrolled and randomly assigned to receive either product.
- ✚ **CONCLUSION: Optimel™ Manuka+ Dry Eye Drops** were effective in reducing tear film evaporation rate and were more effective for improving symptoms of dry eye compared with the control eye drops after 28 days of treatment.

Tan J, Jia T, Liao R, et al. Br J Ophthalmol Epub ahead of print: [please include Day Month Year]. doi:10.1136/bjophthalmol-2019-315160



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OPTIMEL: Leptospermum spp. (Manuka) **Honey Eye Products**

- ✚ Clinical trial Queensland University of Technology (AUST) 2015
 - ✚ Recalcitrant MGD non-responsive to Stage 1 and 2 therapies:
 - ✚ Significant improvement in
 - ✚ meibomian gland expressibility with *Leptospermum spp.* honey 160mg/g and 980mg/g
 - ✚ tear film matrix metalloproteinase expression occurred with *both Optimel products*
 - ✚ Significant reduction in:
 - ✚ Ocular surface staining with **Optimel™ Manuka+ Dry Eye Drops** Total eyelid margin bacteria colony counts with **Optimel™ Manuka+ Dry Eye Drops**
 - ✚ *Staphylococcus epidermidis* counts with *both Optimel products*
 - ✚ Temporary ocular redness and stinging were the only adverse effects with *Leptospermum spp.*

Albietz JM, Schmid KL. Randomised controlled trial of topical antibacterial Manuka (*Leptospermum species*) honey for evaporative dry eye due to meibomian gland dysfunction. *Clin Exp Optom*, 2017; 100:603-615

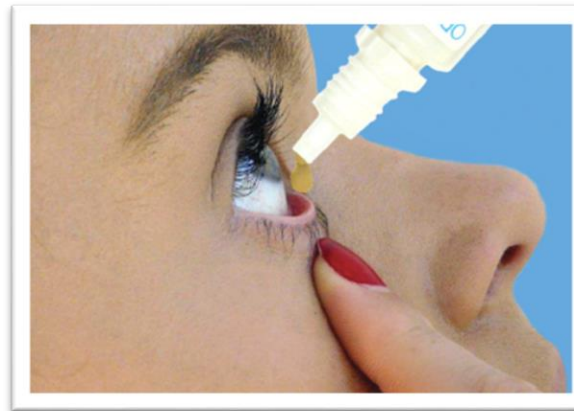
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Evaporative Dry Eye Disease

- + Case 1 Caucasian female 72 years
- + *Leptospermum* spp. honey 160mg/g
- + Anterior blepharitis, Meibomian gland dysfunction
- + 12 weeks pre & post



Albietz J, Lenton, L. Antibacterial Medical Honey. Sweet Success In Ocular Surface Management *Optometry Pharma* 2013 (June), 28-30

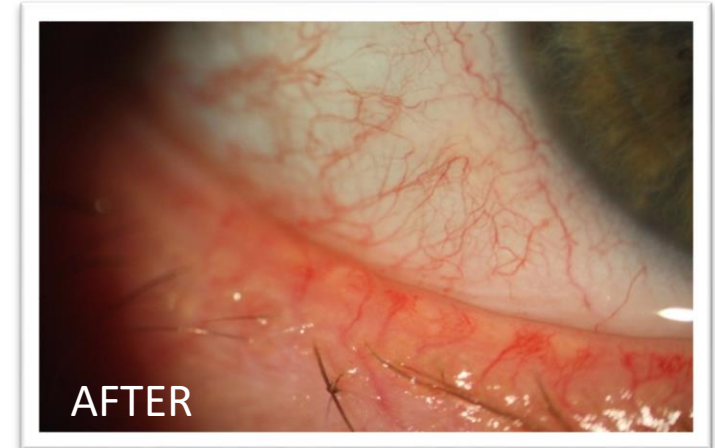
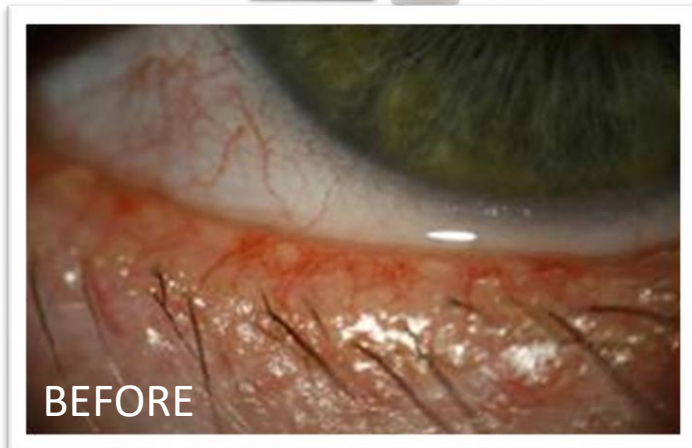
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Aqueous deficient and evaporative dry eye disease

- Case 2 Caucasian Male years
- Leptospermum spp.* honey 980mg/g
- Anterior blepharitis, Meibomian gland dysfunction, aqueous tear deficiency, Acne rosacea
- 12 weeks pre & post

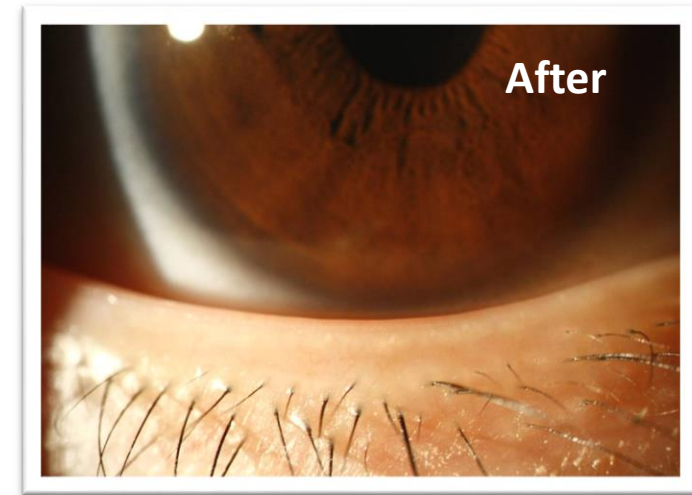
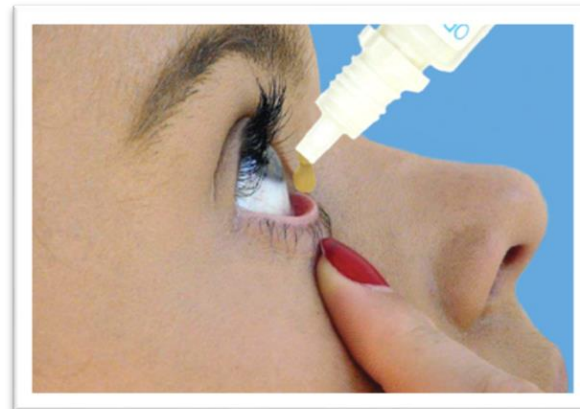
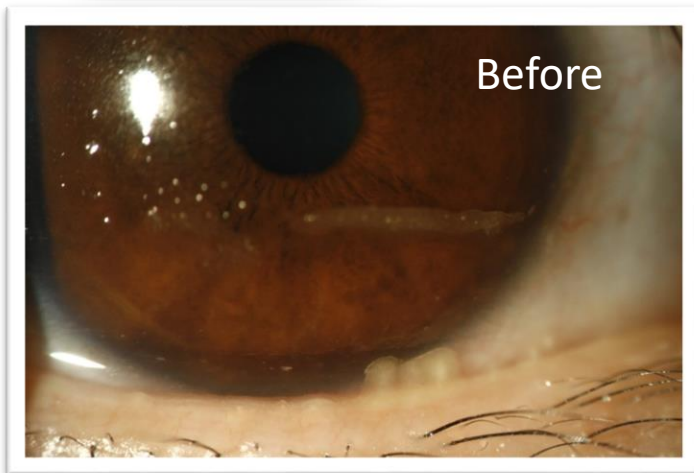


Albietz J, Lenton, L. Antibacterial Medical Honey. Sweet Success In Ocular Surface Management *Optometry Pharma* 2013 (June), 28-30.



Evaporative Dry Eye Disease

- ✚ Case 3: Asian Female 42 years
- ✚ *Leptospermum spp.* honey 160mg/g
- ✚ Meibomian gland dysfunction, contact lens wear, inhibited tear clearance, incomplete blinking
- ✚ 12 weeks pre & post



Albietz J, Lenton, L. Antibacterial Medical Honey. Sweet Success In Ocular Surface Management *Optometry Pharma* 2013 (June), 28-30

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Conclusions

+ Two Optimel™ products:

- **Optimel™ Manuka+ Forte Eye Gel** – Moderate to severe Dry Eye Disease (clinician only)
- **Optimel™ Manuka + Dry Eye drops** - Mild to moderate Dry Eye Disease

+ Optimel™ is indicated for use in chronic anterior blepharitis, meibomian gland disease and aqueous tear deficient dry eye and corneal erosion syndrome

+ Application of Optimel™ to the eye is expected to produce some initial stinging and redness due to its low pH but with repeated use the discomfort is likely to reduce. There may also be some transient blurring of vision.

+ Patients should be introduced to Optimel in practice so they understand initial sting is normal.

+ Optimel has a 2 month open shelf life.

+ UMF/MGO etc are not testing/rating criteria recognised by any regulatory authority – we test antibacterial activity using validated BP methodologies.

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