THE VASELINE® REPORT

The Good, *but mainly bad*

News For Your Foot Blisters

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blister PREVENTION

Contents

"Physicians coaches and athletic trainers continue to advocate the use of petrolatum jelly [Vaseline] and skin powders to prevent blisters while the scientific literature suggests these measures may actually increase the chance of blistering on the feet."

—DOUG RICHIE DPM (2010)

You've seen the video

https://youtu.be/oHbnLh97ztI

You saw me rub the back of my hand with my finger tip. You did it with me. You saw the stretching and distortion in your skin. You felt it.

Then you watched me put a big blob of Vaseline on the back of my hand. And saw how the shear distortions instantly went from huge… to tiny.

Video: How Vaseline works

There's no doubt about it - Vaseline massively lowers friction levels. This is how Vaseline stops blisters.

So why do I never use it personally? And almost never recommend it for:

- Runners
- Hikers
- And athletes who play tennis, basketball, netball, hockey, football, squash, soccer…

There are 5 BIG reasons why I don't recommend Vaseline for blister prevention

Reason 1 Vaseline takes away traction

Reason 2 Vaseline makes friction levels rise after about an hour

Reason 3 Vaseline weakens the skin

Reason 4 Vaseline attracts grit

Reason 5 Vaseline retards adhesion

Reason 1: Vaseline takes away traction

Vaseline makes things really slippery. This is good. In fact it's the whole point.

But not all friction is bad. In fact some friction is very necessary! Friction provides traction. And traction is important for the functional efficiencies of gait.

When you put Vaseline all over your foot, your foot loses traction. Without traction, your foot moves around too much in your shoe.

- Your toes can hit the end of your shoe causing black toenails and even toenail blisters
- You can lose your nail
- And over time, this trauma makes your nails get thicker and more deformed

Toenail blisters are a common result of too little traction for the foot within the shoe

This lack of traction also reduces your functional efficiency.

- Runners can't run as fast when their propulsive push is dampened by the slip in their shoe
- Hikers and trail runners are more likely to sprain their ankle on uneven terrain without traction
- Tennis players can't change direction as quickly when their foot slides in their shoe (the same goes for basketball, netball, squash, football, soccer, squash, hockey…)

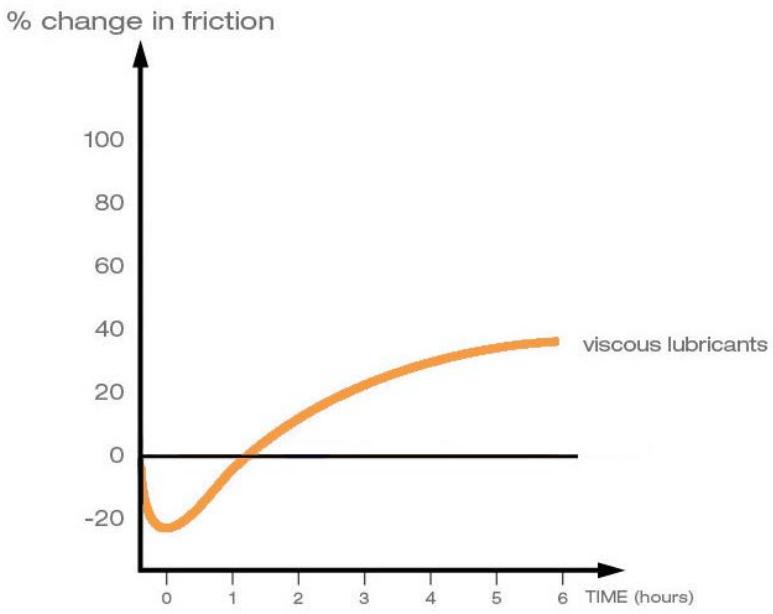
And it puts you at higher risk of more proximal musculoskeletal injury (not just foot injury) as your muscles have to work harder to compensate for the lack of traction.

Lubricating large areas of the foot (particularly the weightbearing surface) is not a good idea. A targeted approach is necessary. Targeting bad friction (where you get blisters) means you leave good friction intact (for traction). This is a better way to do it.

Reason 2: Vaseline makes friction levels rise after about an hour

Research using Vaseline (and other greasy lubricants) showed how friction levels changed over 6 hours. There are two things to notice here:

- The orange curve immediately dips below the baseline. This indicates very low friction – very slippery. This is what happened in the video when I put the Vaseline on the back of my hand and rubbed – it was very slippery and there was no way I could get a blister at that stage.
- Then see how the orange curve rises and crosses the baseline after 60-90 minutes. This indicates high friction. And this is how Vaseline can make blisters worse.

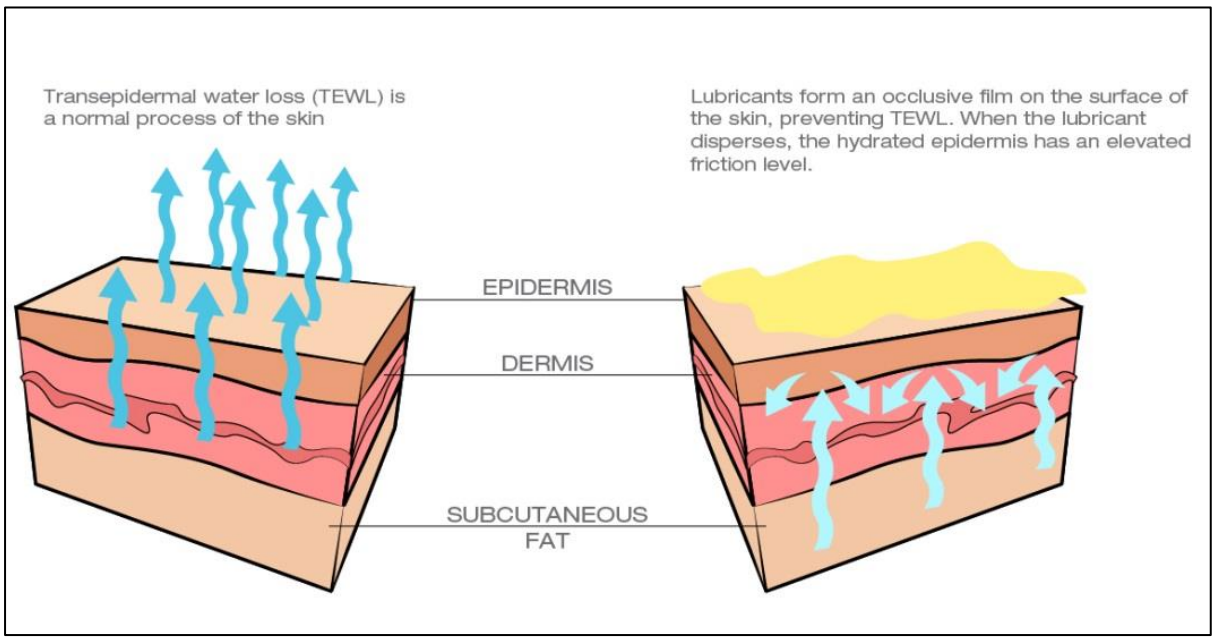


The effect of greasy lubricants (including Vaseline) on skin friction over time

If I had continued the video for 60 minutes or more, you would start to see my skin go from slippery to sticky. And the stickier it got, the bigger the stretching and distortion would have been in my skin. Instead of being a blister prevention, Vaseline becomes blister-causing!

Reason 3: Vaseline weakens the skin

Vaseline (and other greasy lubricants) are occlusive. That means they block sweat and other forms of moisture from exiting the skin. This is called transepidermal water loss (TEWL).



Lubricants are occlusive and trap moisture within the skin, making the skin weak

TEWL is a normal function of the skin. And there are consequences if it stops. If water can't be released from the skin:

- It stays trapped within the skin
- The skin becomes weaker
- And less able to resist trauma

You know how your skin goes wrinkly when you're in the bath for too long? It's a bit like that. Imagine having to run, accelerate, decelerate and change direction on this weak wrinkly skin!

Reason 4: Vaseline attracts grit

Vaseline and other lubricants have a tendency to attract grit. It's a bad choice for desert, beach and trail runners; and for hikers. Avoid lubricants in any situation where dirt is likely to get into in the shoe.

If you have grit stuck to your skin, any rubbing that happens will quickly become an abrasive rub, not a smooth blister-free rub. This will increase the likelihood of abrasions and tearing of the blister roof.

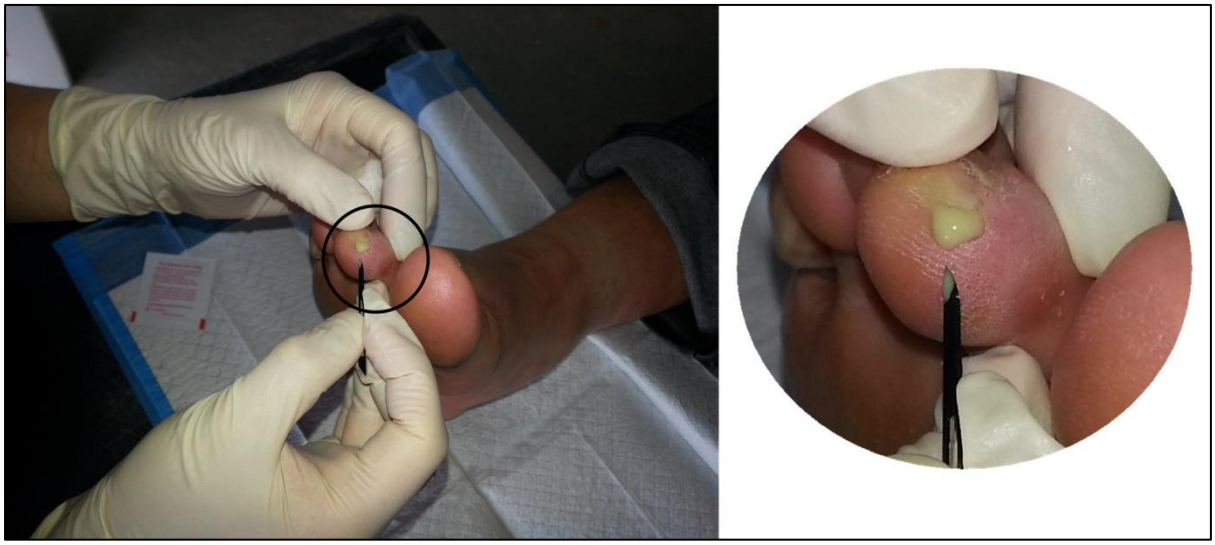
Lubricants attract grit which is abrasive to the skin

Reason 5: Vaseline retards adhesion

If you like to tape your feet, Vaseline will be a constant threat to the adhesion of that tape.

Not only that, if the worst happens and you get a blister, you won't be able to put a dressing over it – it just won't stick!

That leaves your blister more likely to get infected.



An infected blister – instead of clear blister fluid there is yellow pus

Conclusion

Reducing friction levels is one of the main aims of blister prevention. But using Vaseline to achieve this has five significant downsides. More often than not, these downsides will outweigh the benefits - causing more problems than it fixes.

Vaseline (Petrolatum Jelly)

How should I manage friction?

Managing friction levels remains one of the most important aspects to blister prevention (and treatment).

And yet it remains the most misunderstood and under-utilised strategy of all.

This will change the way you think about friction and blisters, forever!

> There's something you don't know about friction. And your feet need you to know this.

There's something you don't get about friction And your feet need you to know this!

Think back to your last foot blister …

That one on the back of your heel, under the ball of your foot or on your toe.

You treated it with a plaster. You know, to stop that friction.

But I bet you think friction is rubbing.

It isn't.

Friction is about grip.

High friction means two surfaces grip together.

Low friction means they don't … they're slippery.

There is high friction in your shoe. There just is.

This means your skin grips your sock; and your sock grips your shoe.

They all grip together so your foot doesn't slide around in there.

But with every step you take, your bones move under your skin.

And everything between skin and bone is pulled and stretched.

This pulling and stretching is what causes blisters. We call it shear.

And it needs high friction to get anywhere near blister-causing.

You can stop blisters in the first place by cutting friction levels – this is smart!

But if you miss the blister prevention boat …

You'll want to know how to heal that blister fast

And make it hurt less.

The answer is not a blister plaster.

The answer is to cut friction levels (ie: add something slippery).

Make it less grippy (more slippery) where your blister is.

Because if you don't, that pulling/stretching continues at the blister base while it's trying to heal, making it hurt more. And taking longer to heal.

Most people don't know to do this

Because they're caught up with thinking friction is rubbing

But by making it less grippy (more slippery), just where the blister is, I can get runners back up and on their feet again, with even the worst blisters!

So how can you cut friction levels?

Pick one of these:

- Other lubricants
- Powders
- Antiperspirants
- Tapes (maybe)
- Moisture-wicking socks

- Double socks
- ENGO Blister Prevention Patches

All of these cut friction levels. Some work better than others. In other words, some don't get friction down low enough … for long enough.

And so when friction inevitably rises, everything grips together again. And you're back to square one.

Some of these work brilliantly, keeping friction very low for a very long time.

My favourites (in order) are ENGO Blister Patches, 2Toms BlisterShield powder and Armaskin double-socks.

So if you've got a blister, make no mistake. You still need to put a plaster over it. To protect the fragile blister roof and painful blister base.

But to truly be effective at treating it, you will need to cut friction levels. So your blister can heal quickly and hurt less.

Figure out which of these friction-cutting strategies is right for you. Right for your feet, your shoes, your event and your lifestyle. And have it handy for when you next get a blister. You'll thank me!

Your next move

Figure out which friction-cutting strategy (or combination of strategies) is right for your feet, your shoes and your lifestyle. And have it handy for when you next get a blister.

Better still, use it to prevent your blister in the first place!

www.blisterprevention.com.au/how-to-prevent-blisters

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Disclaimer

This document is not designed to provide diagnosis or treatment recommendations for your specific condition. Please consider it as general information on friction blister management for educational purposes only. It is not a substitute for medical or professional care. If you believe you have any other health problem, or if you have any questions regarding your health or a medical condition, you should promptly consult your physician or other healthcare provider.