



UNDERSTANDING VERNAL KERATOCONJUNCTIVITIS (VKC)



Jumo provides age-appropriate resources for children and families to understand, manage, and own their health.

We produce award-winning content globally in more than 35 languages. Our signature comic line uses the Medikidz - illustrated superheroes - to explain complex medical information in ways that help readers successfully act on their physicians' instructions. In addition to comic books, we offer videos, animations, podcasts, and mobile apps.

To learn more about our educational resources, please visit:

JumoHealth.com



Kindly supported and funded by Santen UK
NP-VKC-UK-0040 January 2022

INTRODUCING **THE MEDIKIDZ**

The Medikidz are superheroes who live on Mediland, a planet shaped like the human body. They are experts in health and illness, and their mission is to teach you all about your body and how illness affects it.



PUMP Expert on: the heart and blood vessels



SKINDY Expert on: the skin and bones

ALSO FEATURING:

LUKA

The star of this book



THESE EYES
HAVE SEEN THINGS.

THINGS THAT MAKE THEM SMILE,
THINGS THAT MAKE THEM LAUGH AND
THINGS THAT MAKE THEM CRY.

BUT RIGHT
NOW, WHAT THESE
EYES SEE...

...is super lame! Look at
that, Sir Swims-a-lot. All of
my friends are outside playing
and I'm stuck inside!

And why? Because they
mowed the grass in the
park, which for me basically
means they unleashed a bunch
of tiny flying itch monsters
into the air that want nothing
more than to **ATTACK MY
EYES** like last time!

LAST TIME!

Of course, it's not
just the stuff in the air.
Even the bright sun
makes my eyes hurt!

It's all thanks to my
VKC... And I don't even
understand what **VKC**...

DEEP IN OUTER SPACE AT THE SECRET HEADQUARTERS OF THE MEDIKIDZ!

...is? Whoa, Pump? Skindy? The MEDIKIDZ!

VKC, which stands for vernal keratoconjunctivitis, is a form of severe eye disease diagnosed by a specialist. **VKC** can make your eyes feel pretty bad.

Boom! You have medical questions, we've got the answers.

This is obviously awesome... but I've got to ask, what's going on?

We saw you feeling down and needing answers!

And Luka, by the time we're done, you're not only going to understand your **VKC**, you're going to know what you can do about it too!

There's no better place to learn about the eye than in an eye!

Next stop, **MEDILAND!**

What's Mediland?

Mediland is a giant planet that looks and works just like the human body.

**INSIDE THE EYE
OF MEDILAND!**

Luka,
welcome to
the eye.

This place is...
this place is... I
mean... WHOA!

Okay, let's
get started. So, to
understand **VKC**,
you have to first
understand the
different parts of
the eye.

VKC affects
the parts called the
CORNEA and the
CONJUNCTIVA.

The **CORNEA** is
the clear, curved part
at the front of the eye
that covers the iris
and pupil.

The **CONJUNCTIVA**
is a thin, clear layer that
covers the surface of the
eye and lines the inside
of the eyelids.

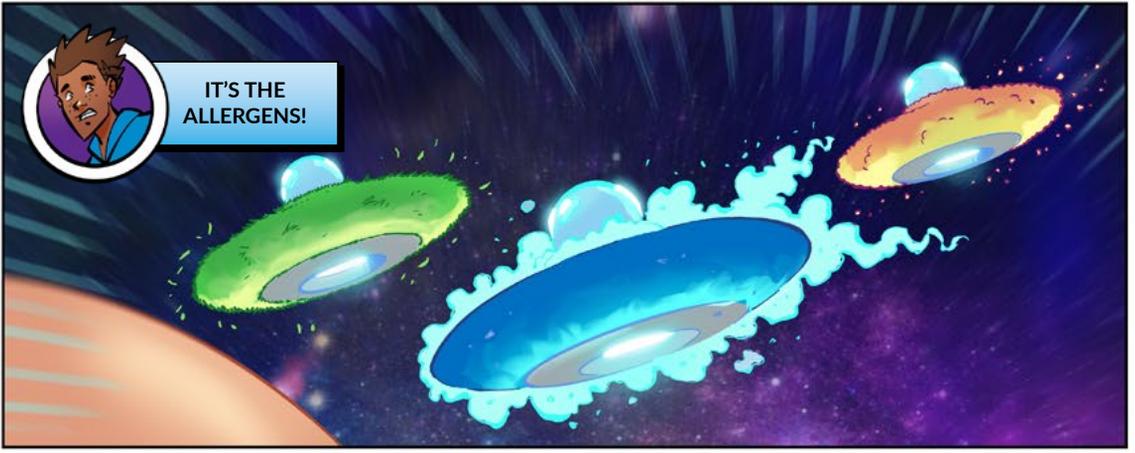


PROXIMITY ALERT!
PROXIMITY ALERT!

UNIDENTIFIED
FLYING OBJECTS
INCOMING!

Whoa, are
those spaceships?
Are we about to
be invaded by
aliens?

We're definitely
about to be invaded,
but by something far
worse than aliens...



IT'S THE ALLERGENS!

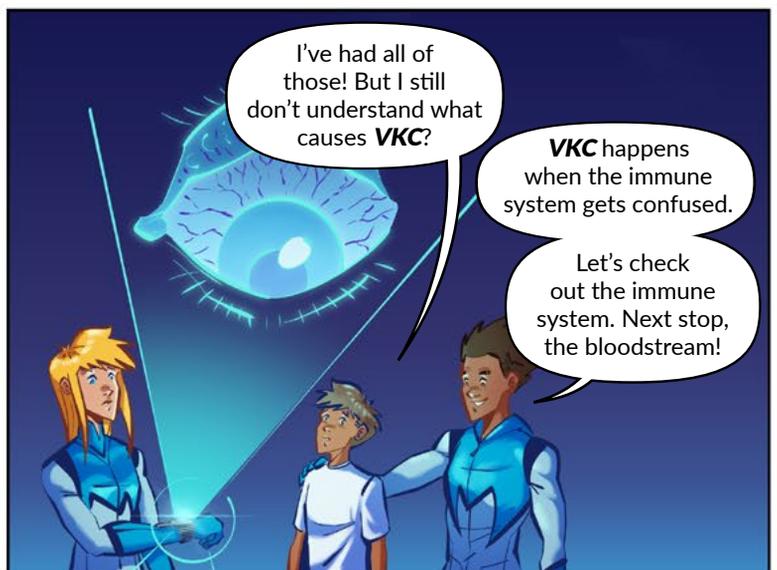
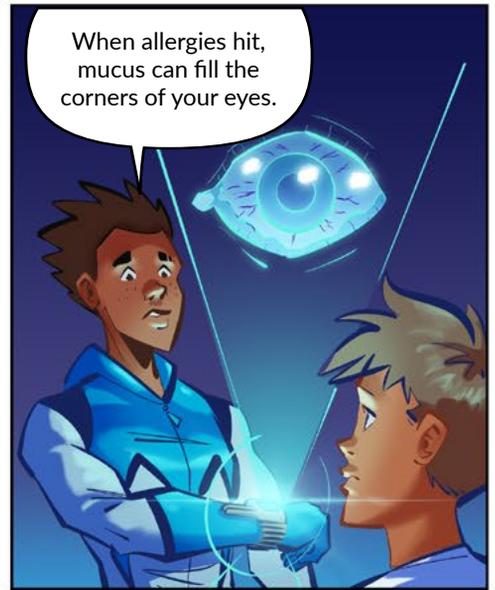


ALLERGENS ARE THINGS LIKE DUST MITE AND POLLEN THAT TRIGGER OR CAUSE ALLERGIES.

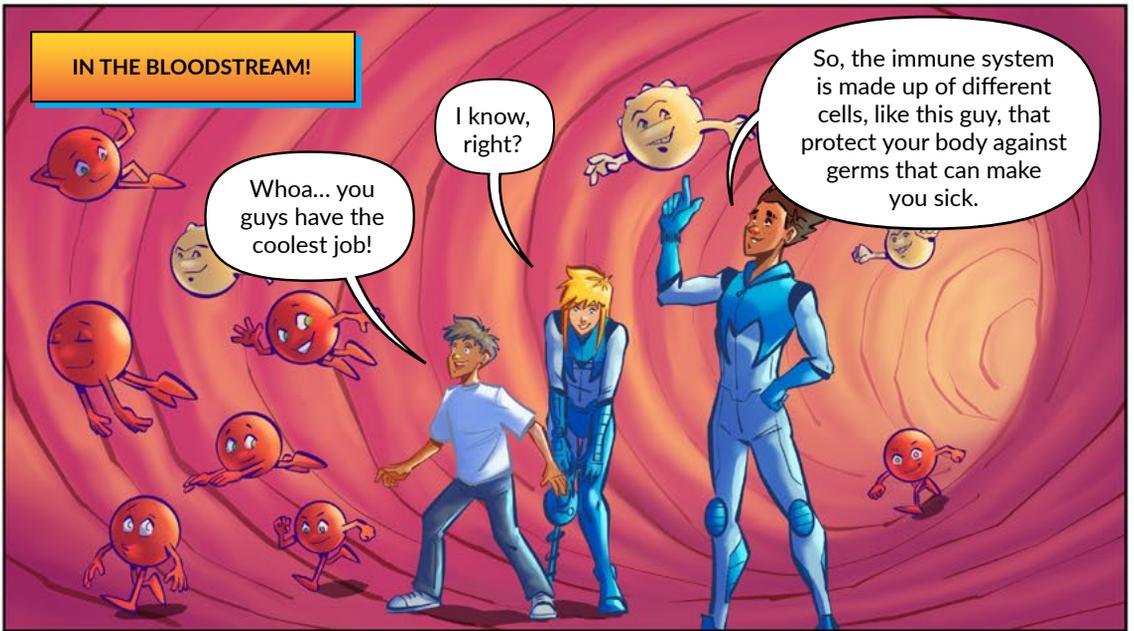
Well, we were going to just tell you about what sort of symptoms kids with **VKC** often have... but it looks like you're going to get a front row seat.

Yeah, because like you, Mediland also has **VKC**!





IN THE BLOODSTREAM!



Whoa... you guys have the coolest job!

I know, right?

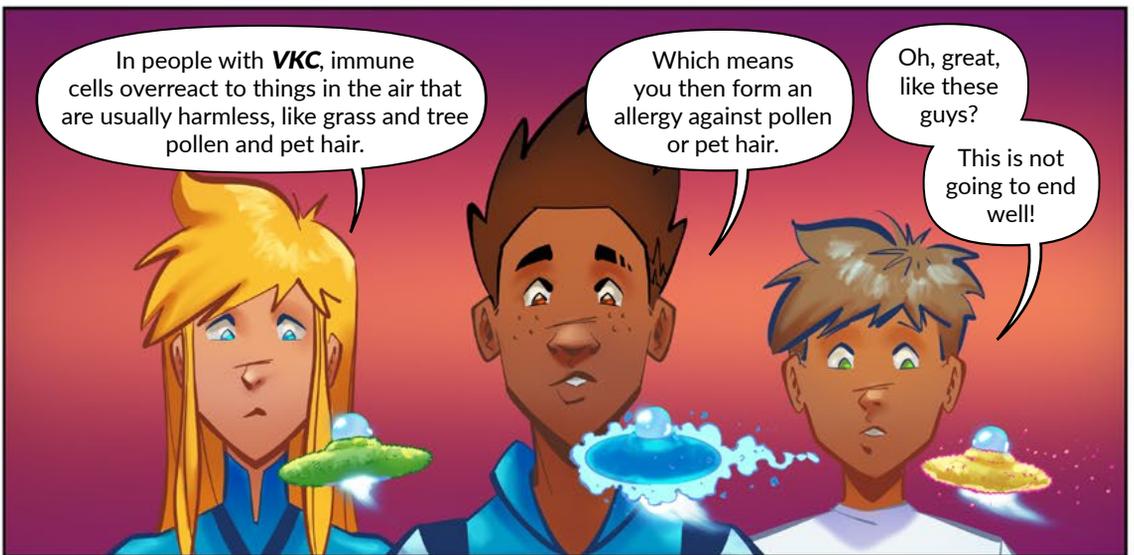
So, the immune system is made up of different cells, like this guy, that protect your body against germs that can make you sick.

In people with **VKC**, immune cells overreact to things in the air that are usually harmless, like grass and tree pollen and pet hair.

Which means you then form an allergy against pollen or pet hair.

Oh, great, like these guys?

This is not going to end well!

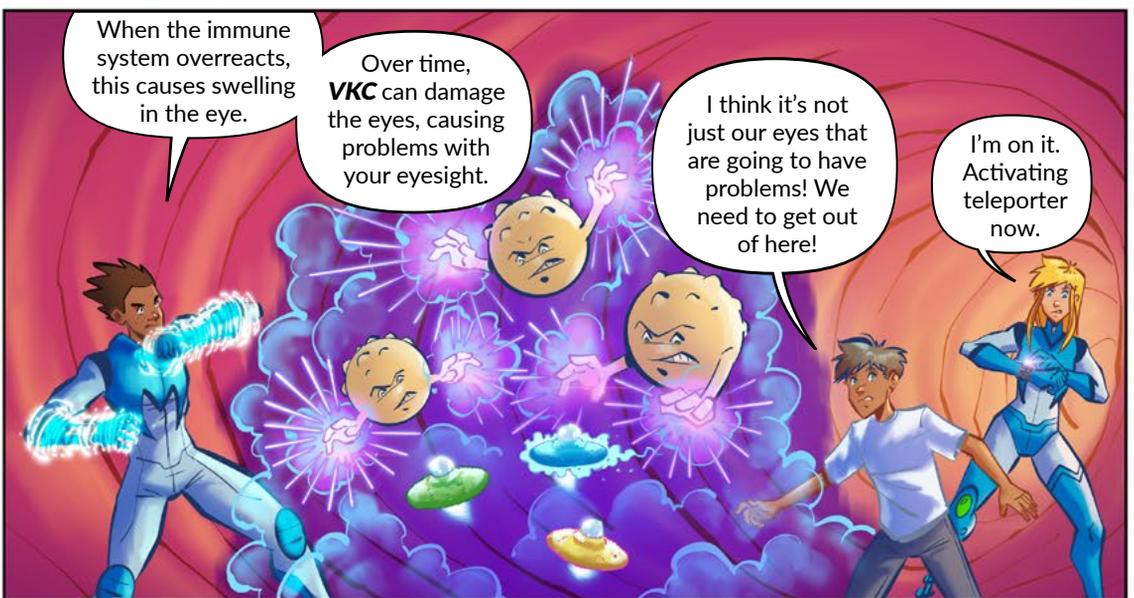


When the immune system overreacts, this causes swelling in the eye.

Over time, **VKC** can damage the eyes, causing problems with your eyesight.

I think it's not just our eyes that are going to have problems! We need to get out of here!

I'm on it. Activating teleporter now.



BACK AT MK HQ!

Whew, glad we got out of there. Things were getting bad!

Speaking of bad, symptoms can sometimes feel worse when you wake up in the morning. You may not even be able to open your eyes first thing.

Yeah, and going outside, swimming, or playing with your pet can also bother your eyes.

If your eyes bother you a lot, it may cause you to have problems with schoolwork and reading.

Umm, yes! There have totally been times I couldn't even read my text books because my eyes were so bad.

Symptoms of **VKC** are usually more common in the spring and summer when there is a lot of pollen. But some people can have symptoms during the winter too.



TRIGGERS

(things that cause symptoms of VKC)

Spring and summer
pollen, grass, trees



Hot weather, sun,
bright light



Pets, dust, smoke



Salt water, chlorine



WHAT YOU CAN DO

• Stay inside when the grass has just been cut and pollen counts are high.



• Rinse your eyes with saline (salt water) drops after going outside



• Wash your face with water



• Wear sunglasses or a hat with a visor



• Stay in the shade if you can



• Wash clothes and bed sheets in hot water



• Wash hands, face and hair often



• Vacuum regularly



• Wear goggles at the pool or beach

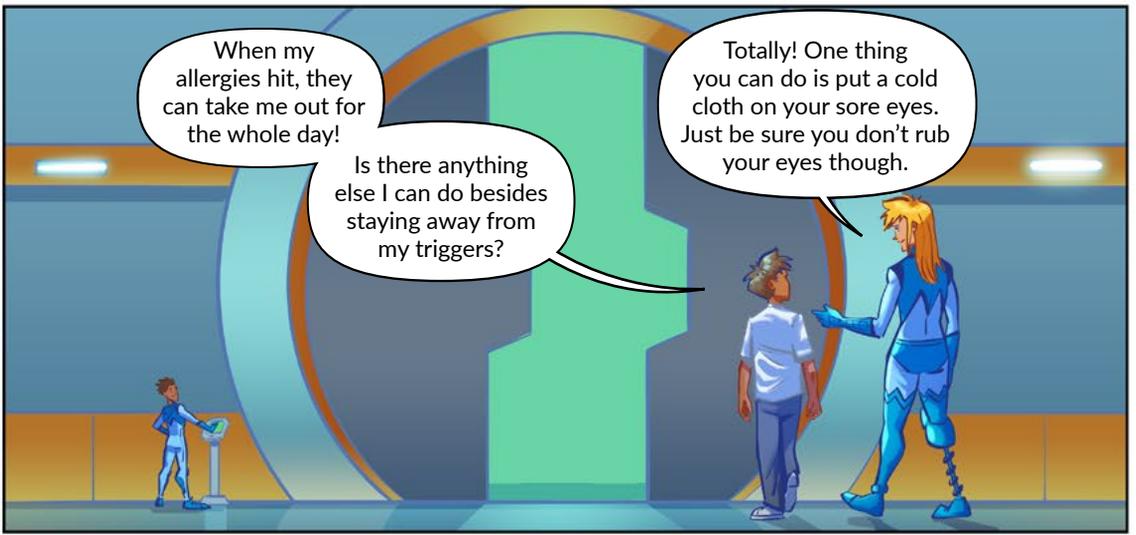


• Wash your face with water and flush your eyes with saline drops



Things like dust mites, pollen and pets can trigger your allergy. Hot weather and sunlight can make it worse too.

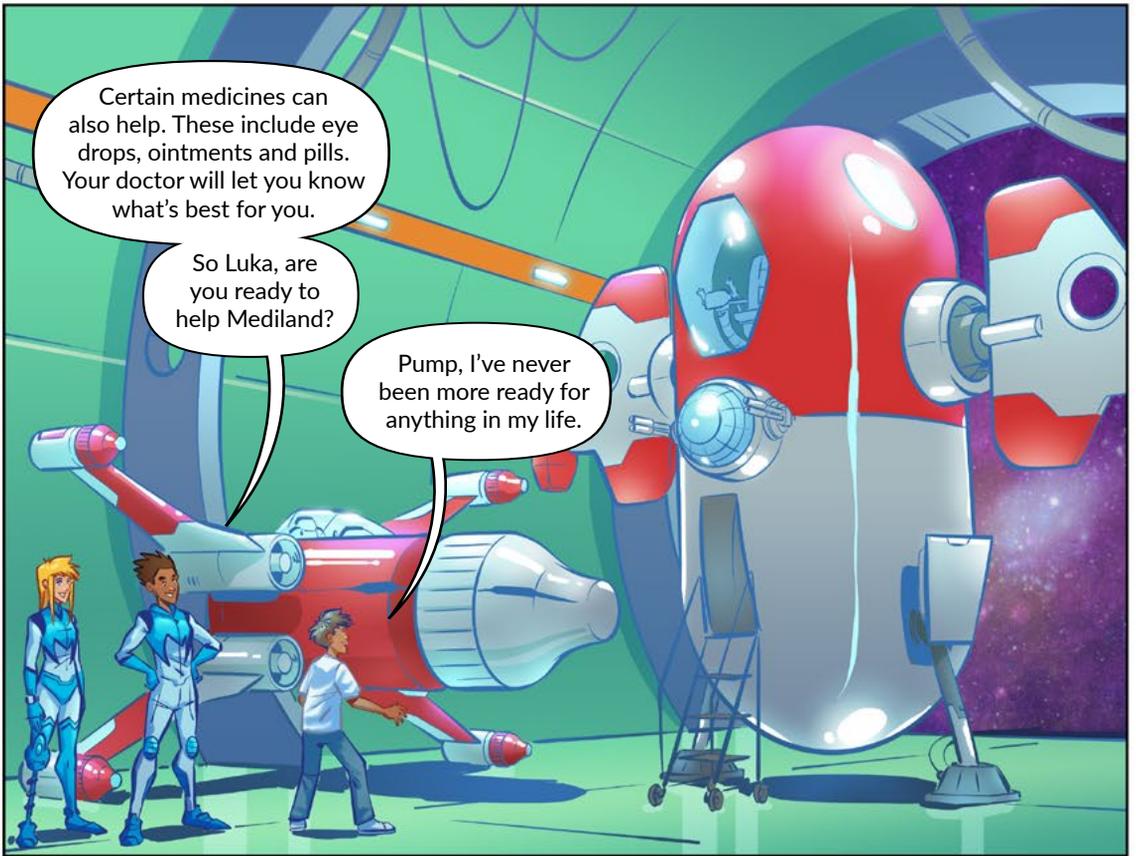
Learning what your triggers are, avoiding them as best you can, while regularly taking your medicine, will help keep your allergies from getting too bad.



When my allergies hit, they can take me out for the whole day!

Is there anything else I can do besides staying away from my triggers?

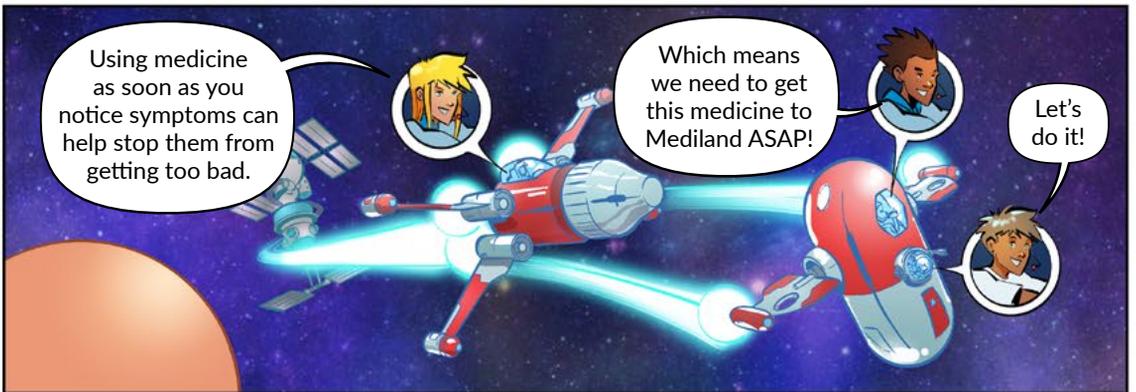
Totally! One thing you can do is put a cold cloth on your sore eyes. Just be sure you don't rub your eyes though.



Certain medicines can also help. These include eye drops, ointments and pills. Your doctor will let you know what's best for you.

So Luka, are you ready to help Mediland?

Pump, I've never been more ready for anything in my life.



Using medicine as soon as you notice symptoms can help stop them from getting too bad.

Which means we need to get this medicine to Mediland ASAP!

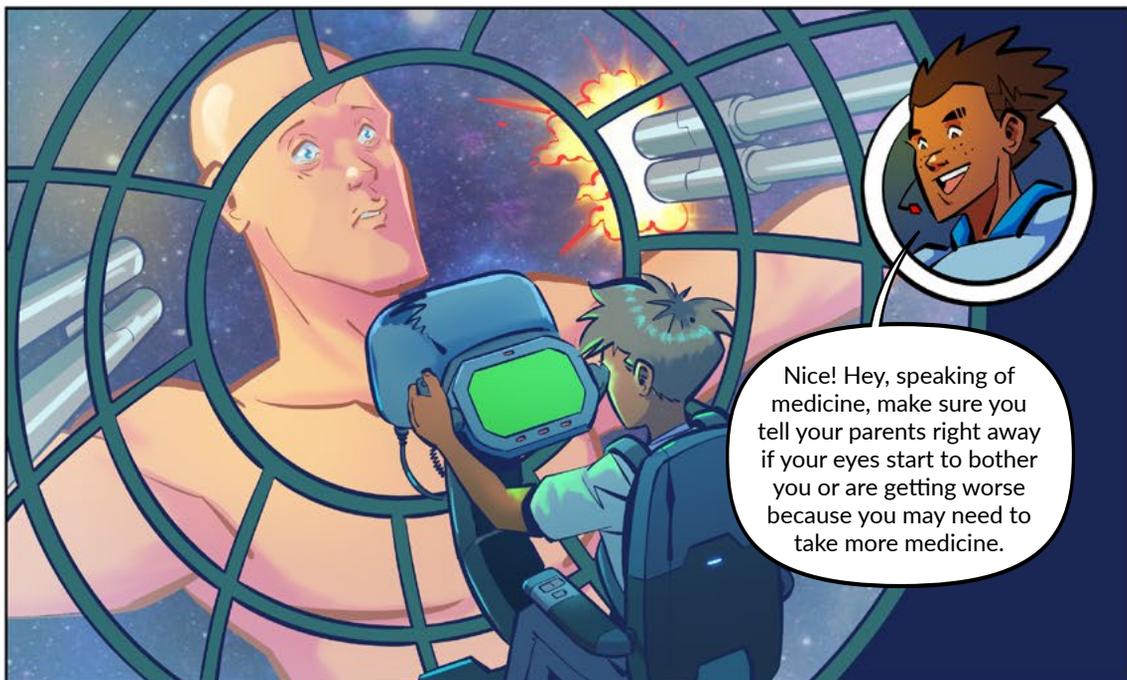
Let's do it!

A FEW MOMENTS LATER
OUTSIDE MEDILAND!

Sometimes doctors recommend taking medicine in early spring before symptoms start, or even all year round, depending on your triggers.

It's very important to take your medicine every day as your doctor tells you to.

Things are different on Mediland, but it's really important when you use your eye drops to hold the dropper bottle close to the eye and gently let one drop trickle onto the inside of the lower eyelid.



We did it! Mediland's eyes are looking so much better.

Yup, for now. The longer you have **VKC**, the greater the chance of it coming back every year.

And if not taken care of, **VKC** can hurt your eyes and you may have problems seeing clearly.

BACK AT MK HQ!

Now, the good news is that most kids start to feel better in their teen years. But in the meantime, it's super important to stick with your treatments to protect your eyes.

Yeah, most kids are able to keep their symptoms under control and still do what they love by avoiding their triggers and taking their medicines.

I feel like I've learnt a lot! But one thing I still don't get... why me? Why did I get **VKC** in the first place?

The truth is, we don't know what causes it. We just know it happens more in kids and young adults.

Yeah, and it usually happens more in boys and people with family members who have allergies.

You may want to ask your parents if anyone else in your family has asthma, eczema, hay fever or any other allergies.

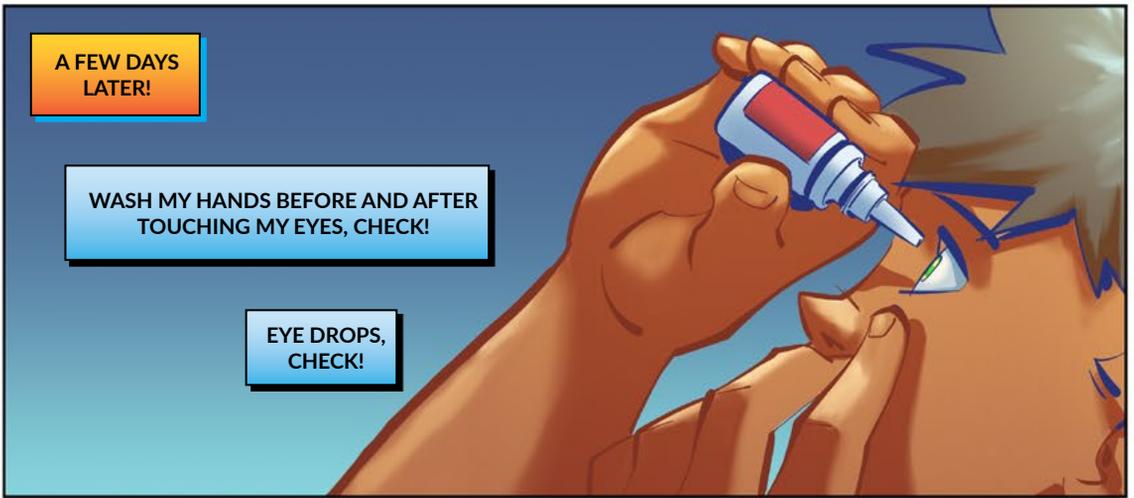
Remember, because it's caused by allergies, **VKC** isn't contagious. You didn't get it from anyone and you can't give it to anyone.

Yeah, that's important because sometimes people may mistake it for a contagious eye infection or dry eye.

But the most important thing to remember is that as long as you do as your doctor says, take your medicines and protect your eyes from triggers...

...there's no reason why you can't have just as much fun as all your friends!

Thanks Medikidz!



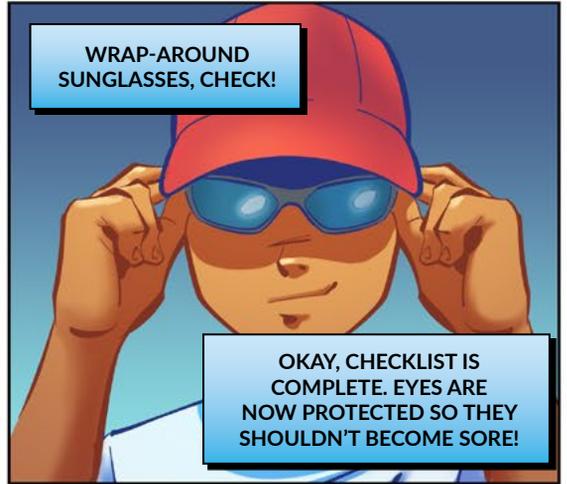
A FEW DAYS LATER!

WASH MY HANDS BEFORE AND AFTER TOUCHING MY EYES, CHECK!

EYE DROPS, CHECK!



HAT, CHECK!



WRAP-AROUND SUNGLASSES, CHECK!

OKAY, CHECKLIST IS COMPLETE. EYES ARE NOW PROTECTED SO THEY SHOULDN'T BECOME SORE!



IF THEY START TO FEEL BAD I'LL COME BACK IN. BUT IF NOT, THEN THERE'S ONLY ONE THING LEFT TO DO...

...and that's to have fun with my friends. Check, check and check!

THE END!

EDITOR IN CHIEF

Columba Quigley, MD

WRITTEN BY

Erica Salerno-Sabastiani, PhD

Shawn deLoache

PEER REVIEWER

Dr. Annegret Dahlmann-Noor (PhD, FRCOphth, FRCSEd), DipMedEd)

Dr Abdul-Jabbar Ghauri FRCOphth

Amena Warner RN. SN. (PG Dip) Allergy

ART EDITOR

Tom Hunt

ARTWORK BY

Robert Deas (Inks)

Kris Chua (Colors)

UNDERSTANDING VERNAL KERATOCONJUNCTIVITIS (VKC)

ISBN 978-1-64455-499-9

The health information contained herein is provided for educational purposes only and is not intended to replace discussions with your health care provider. All decisions regarding patient care must be made with a health care provider, considering the unique characteristics of the patient.



Medikidz, Jumo Health and its motion logo, In My Words, and In My Shoes are registered trademarks of Medikidz USA, Inc. All other trademarks are the property of their respective owners.

Medikidz USA, Inc. (D/B/A Jumo Health)

110 E 42nd Street, Suite 810

New York, NY 10017

© 2019 Medikidz USA, Inc. All Rights Reserved.

www.JumoHealth.com