



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;

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UNDERSTANDING CROHN'S DISEASE



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.

ALSO FEATURING:

RAJ

The star of this book



ABACUS The Medikidz' guardian



AXON Expert on: the brain and nerves



CHI Expert on: the lungs and respiratory system



GASTRO Expert on: the digestive system

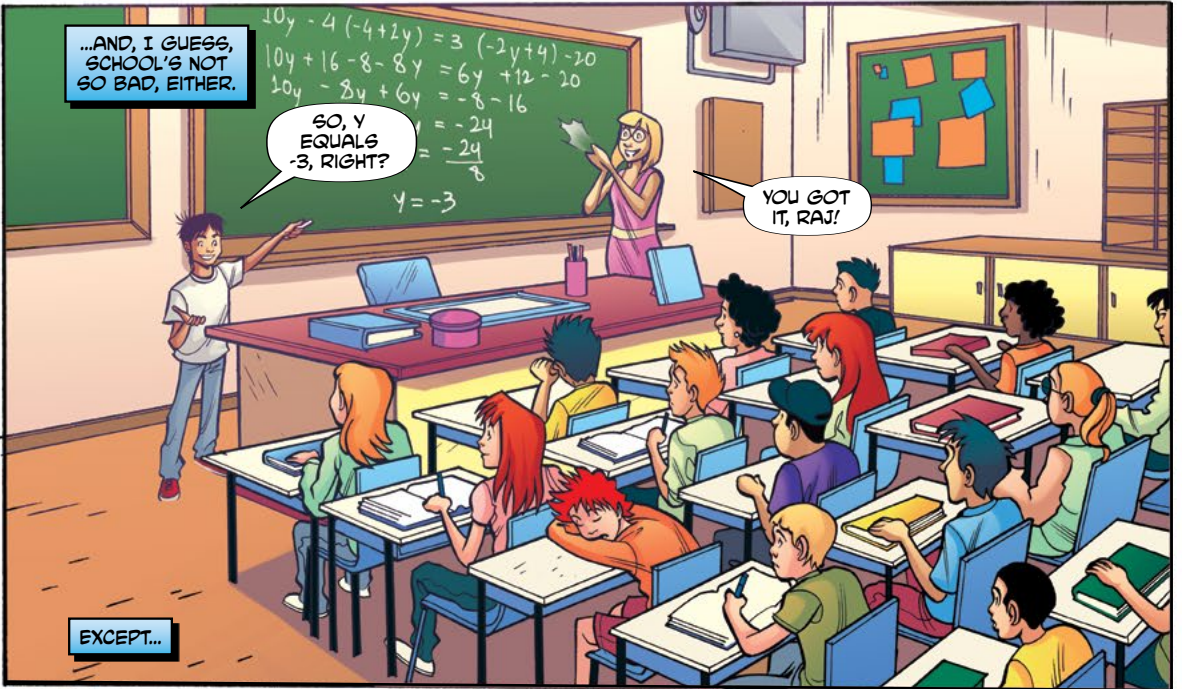
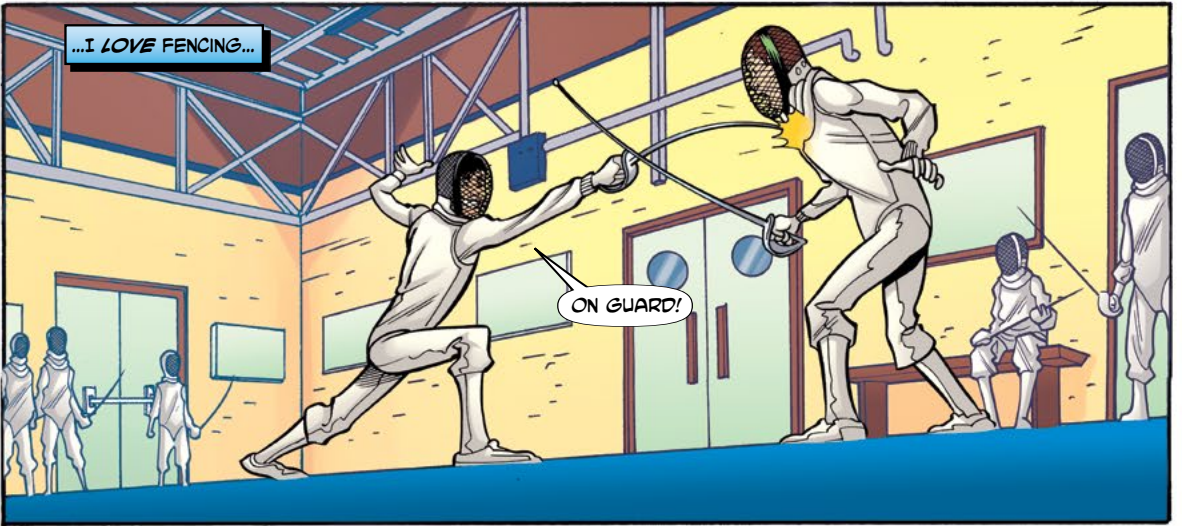


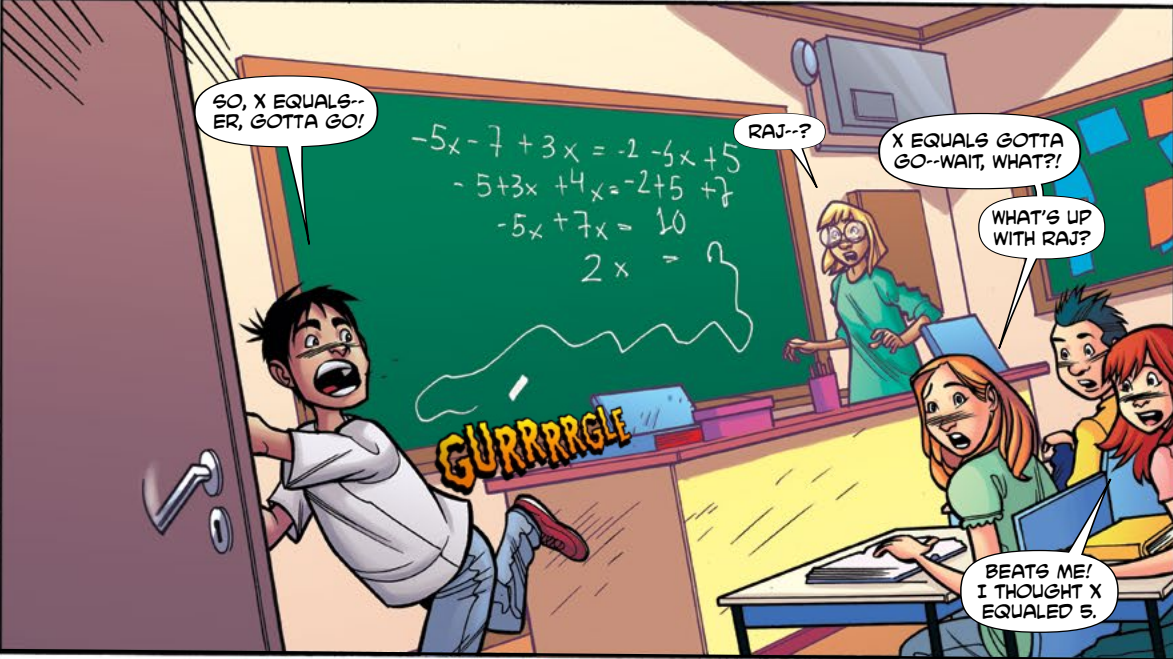
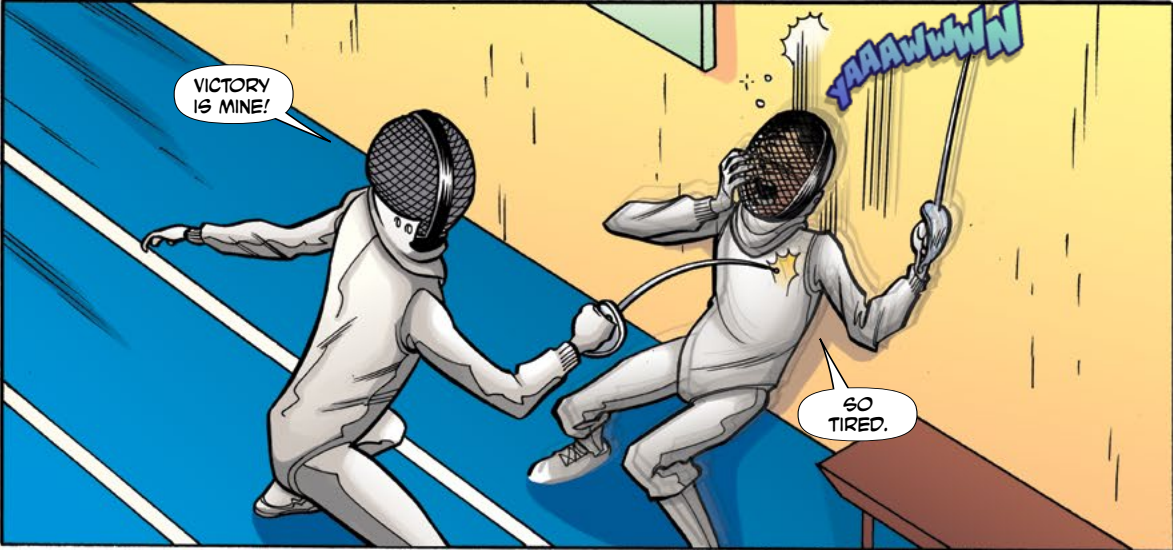
PUMP Expert on: the heart and blood vessels

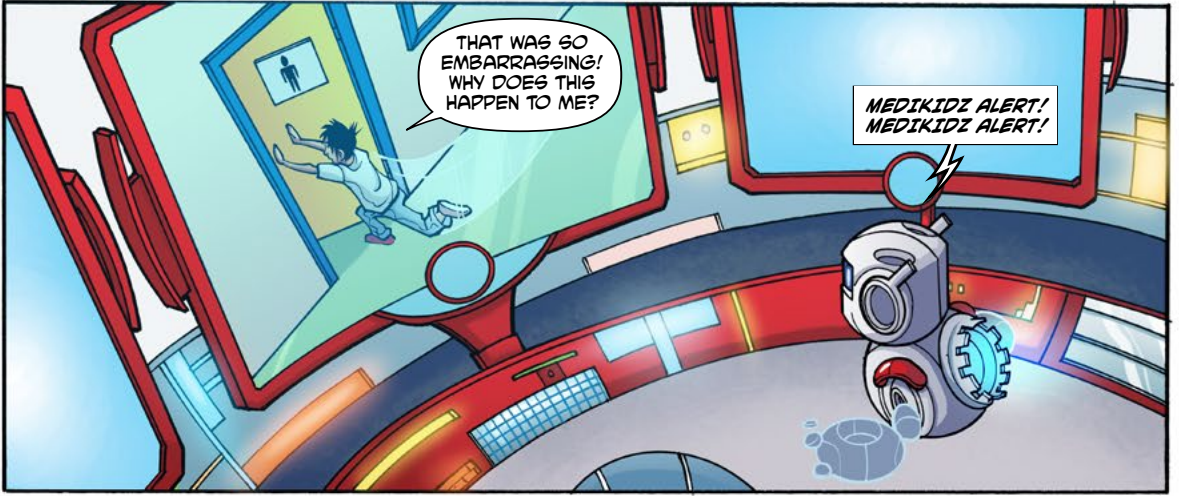


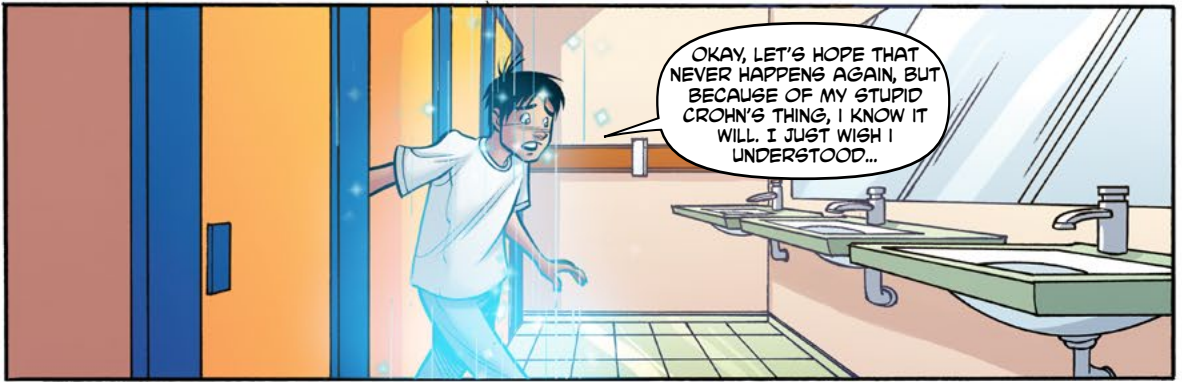
SKINDY Expert on: the skin and bones











OKAY, LET'S HOPE THAT NEVER HAPPENS AGAIN, BUT BECAUSE OF MY STUPID CROHN'S THING, I KNOW IT WILL. I JUST WISH I UNDERSTOOD...



... WHY?

DON'T WORRY, RAJ, WE CAN HELP WITH THAT!

WHOA, THE **MEDIKIDZ!**

WE'RE GOING TO TEACH YOU EVERYTHING YOU NEED TO KNOW ABOUT CROHN'S DISEASE!



OKAY, TEAM, WE'VE GOT A LOT OF GROUND TO COVER, SO LET'S GET TO IT. AXON, GET US DOWN TO MEDILAND.

COORDINATES SET, ACTIVATING TELEPORTER.

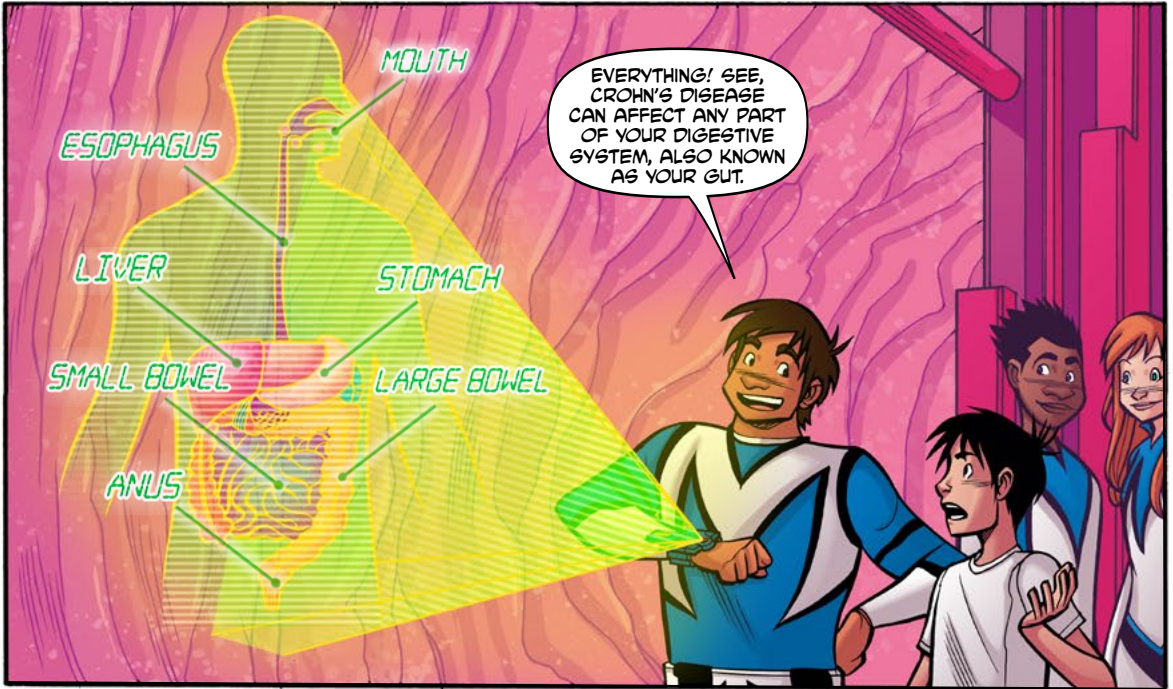
PSST, WHAT'S MEDILAND?

OH, IT'S A GIANT PLANET THAT'S SHAPED LIKE A HUMAN BODY, AND WORKS LIKE ONE TOO! YOU'RE GOING TO LOVE IT!

IN THE STOMACH...

WELCOME TO THE STOMACH!

WHOA, THIS PLACE IS CRAZY! BUT WHAT DOES THE STOMACH HAVE TO DO WITH CROHN'S DISEASE??



EVERYTHING! SEE, CROHN'S DISEASE CAN AFFECT ANY PART OF YOUR DIGESTIVE SYSTEM, ALSO KNOWN AS YOUR GUT.

ALL THE FOOD THAT YOU EAT IS MASHED UP IN THE STOMACH. THEN IT'S READY TO GO TO YOUR SMALL AND LARGE BOWELS.

IF WE DON'T MOVE, I THINK WE'RE GOING TO BE MASHED UP FOOD BITS OURSELVES...

...AND THOUGH I'M SURE I'D TASTE DELICIOUS, I STILL THINK WE SHOULD GET OUT OF HERE!

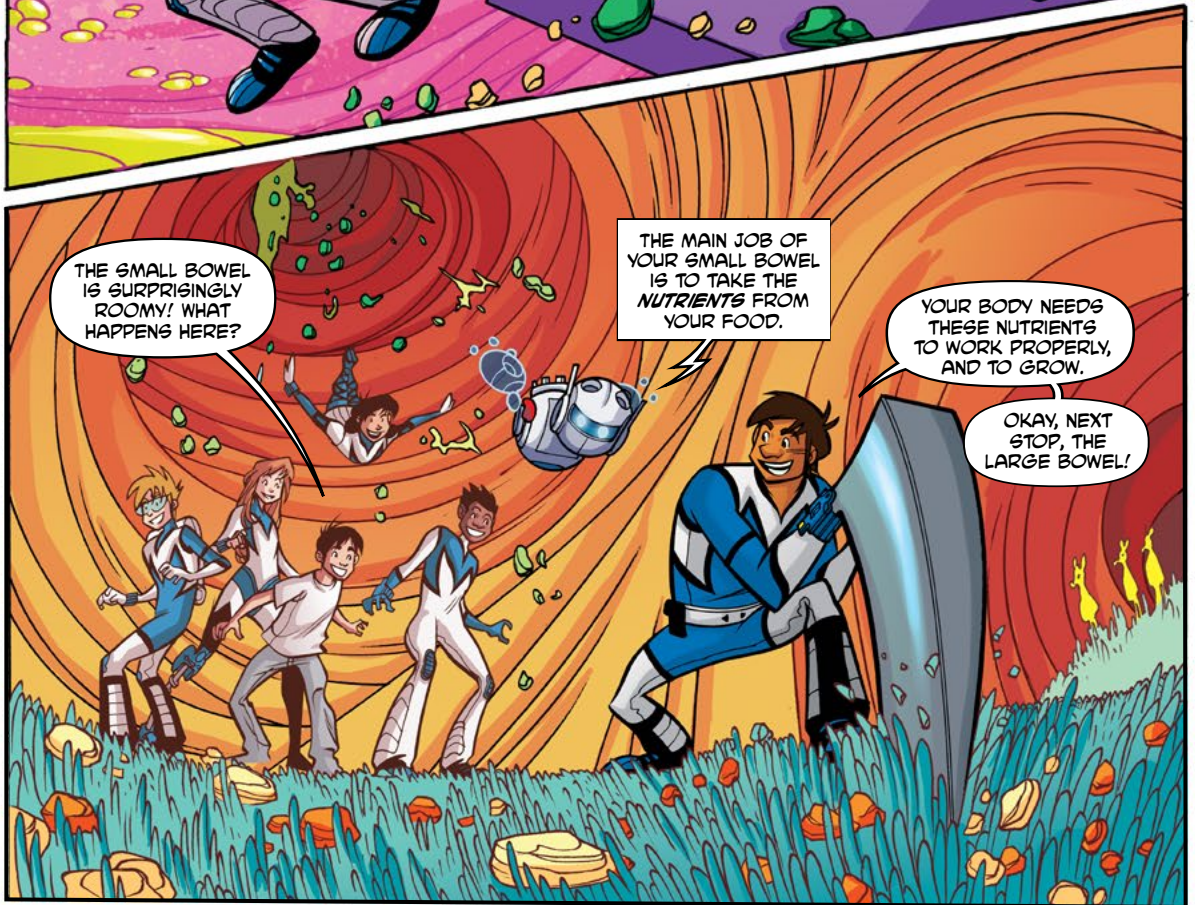




THIS WAY TO THE SMALL BOWEL.

I DON'T WANT TO BE FOOD MUGH!

OH COME ON, THIS IS THE FUN PART!

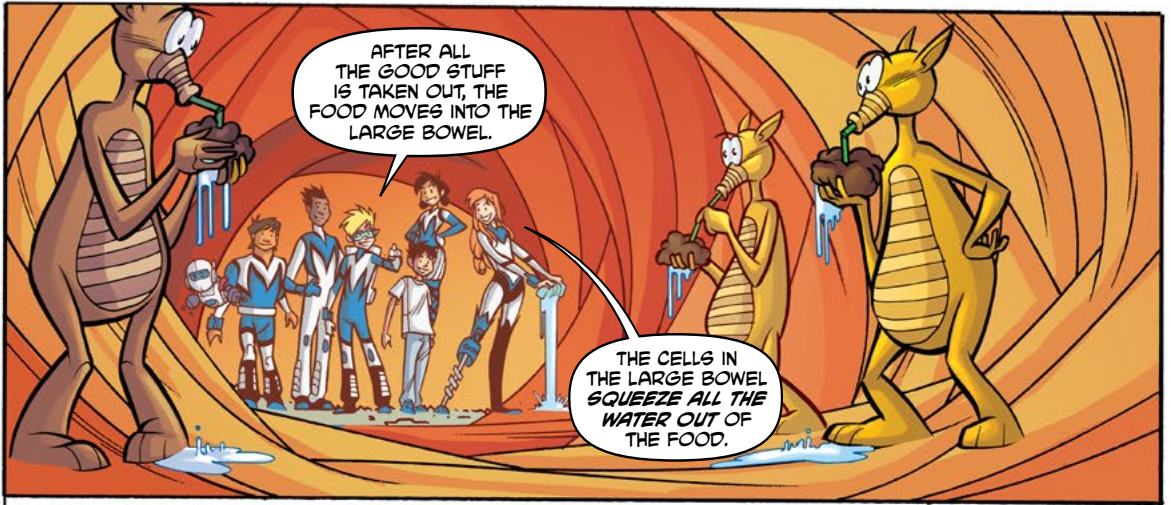


THE SMALL BOWEL IS SURPRISINGLY ROOMY! WHAT HAPPENS HERE?

THE MAIN JOB OF YOUR SMALL BOWEL IS TO TAKE THE *NUTRIENTS* FROM YOUR FOOD.

YOUR BODY NEEDS THESE NUTRIENTS TO WORK PROPERLY, AND TO GROW.

OKAY, NEXT STOP, THE LARGE BOWEL!



AFTER ALL THE GOOD STUFF IS TAKEN OUT, THE FOOD MOVES INTO THE LARGE BOWEL.

THE CELLS IN THE LARGE BOWEL SQUEEZE ALL THE WATER OUT OF THE FOOD.



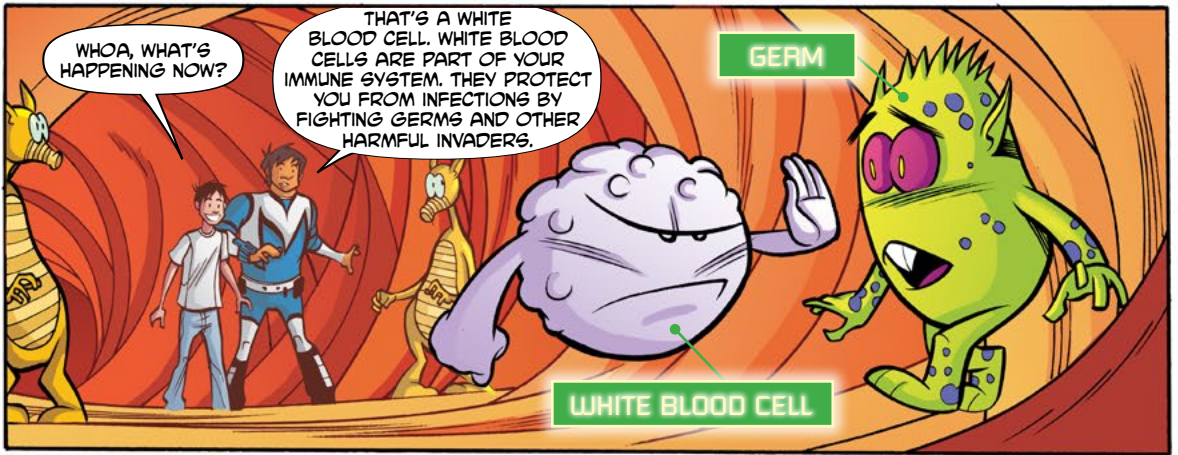
ONCE THAT'S DONE, EVERYTHING LEFT IS SQUISHED TOGETHER TO MAKE POOP!



THE MUSCLES IN THE BOWEL WALL MOVE YOUR POOP TOWARD YOUR BOTTOM.

AH, THEY GROW UP SO FAST! I REMEMBER WHEN HE WAS JUST A TINY BIT OF DEHYDRATED FOOD MUSH.

ERR, DOES THAT CELL KNOW THAT HE'S CRYING OVER POOP?!

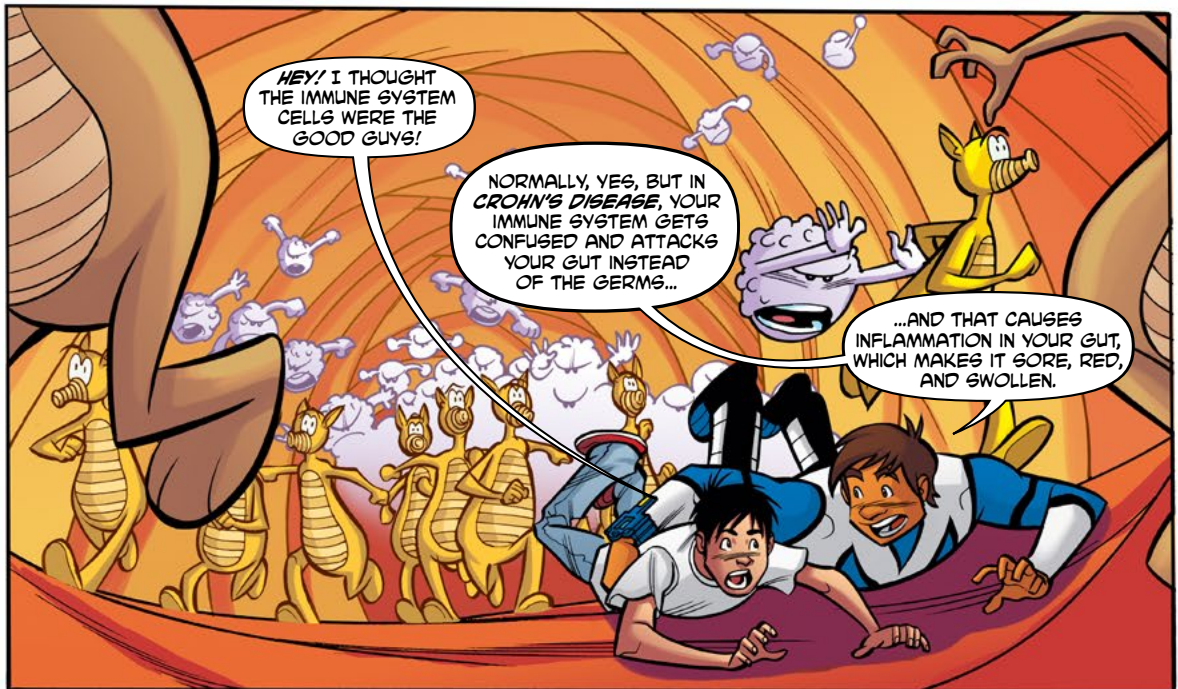


WHOA, WHAT'S HAPPENING NOW?

THAT'S A WHITE BLOOD CELL. WHITE BLOOD CELLS ARE PART OF YOUR IMMUNE SYSTEM. THEY PROTECT YOU FROM INFECTIONS BY FIGHTING GERMS AND OTHER HARMFUL INVADERS.

GERM

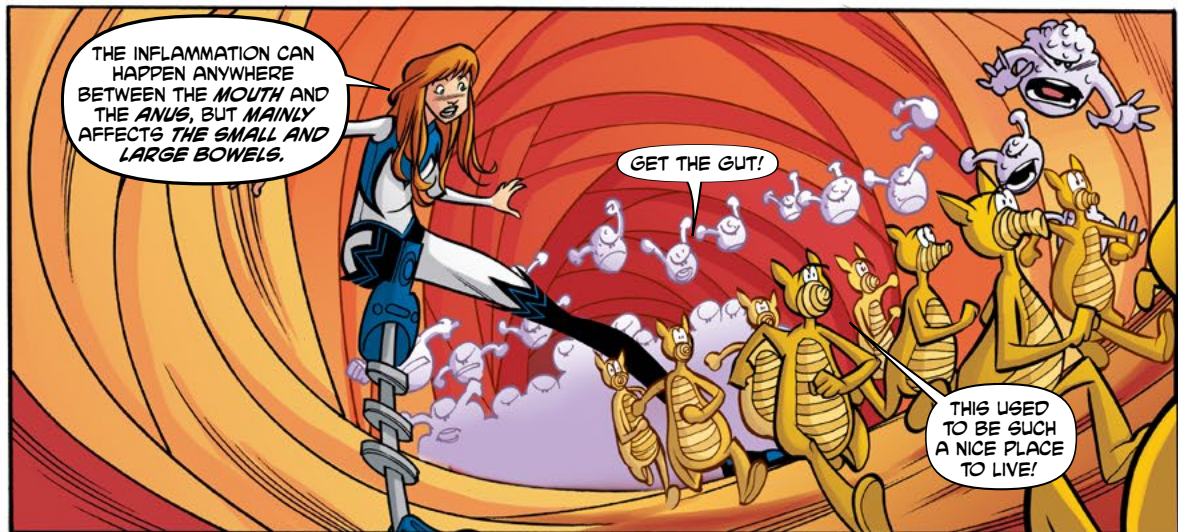
WHITE BLOOD CELL



HEY! I THOUGHT THE IMMUNE SYSTEM CELLS WERE THE GOOD GUYS!

NORMALLY, YES, BUT IN *CROHN'S DISEASE*, YOUR IMMUNE SYSTEM GETS CONFUSED AND ATTACKS YOUR GUT INSTEAD OF THE GERMS...

...AND THAT CAUSES INFLAMMATION IN YOUR GUT, WHICH MAKES IT SORE, RED, AND SWOLLEN.



THE INFLAMMATION CAN HAPPEN ANYWHERE BETWEEN THE *MOUTH* AND THE *ANUS*, BUT *MAINLY* AFFECTS THE *SMALL* AND *LARGE* BOWELS.

GET THE GUT!

THIS USED TO BE SUCH A NICE PLACE TO LIVE!



THESE ATTACKS CAN LEAD TO PROBLEMS CALLED SYMPTOMS.

ONE SYMPTOM IS *DIARRHEA*. IT HAPPENS BECAUSE THE GUT CAN'T ABSORB WATER, SO THE WATER STAYS IN YOUR POOP AND MAKES IT RUNNY.

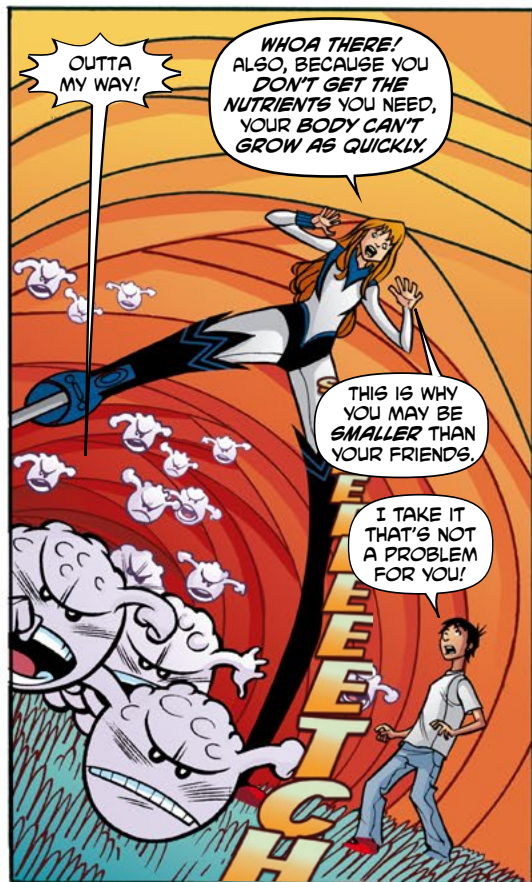
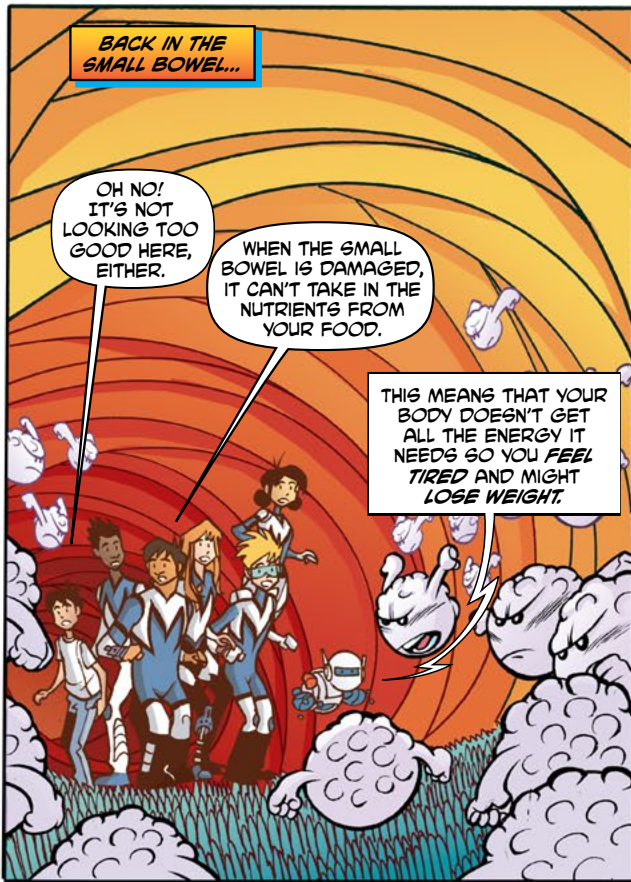
I CAN'T WORK UNDER THESE CONDITIONS! IT'S LIKE EVERYTHING'S BEEN TURNED UPSIDE DOWN!

THE DIARRHEA CAN CAUSE CRAMPS AND MAKE GOING TO THE TOILET PAINFUL.

YOU KNOW, I'M NOT SURPRISED, SEEING WHAT'S GOING ON IN HERE!

YOU MIGHT ALSO FEEL SICK AND NOT WANT TO EAT.

THINGS ARE GETTING PRETTY BUGY DOWN HERE. LET'S RETREAT TO THE SMALL BOWEL.



AT MEDI-HQ...

INTENSE!
IS THAT WHAT'S HAPPENING IN YOUR BODY? LIKE, ALL THE TIME?!

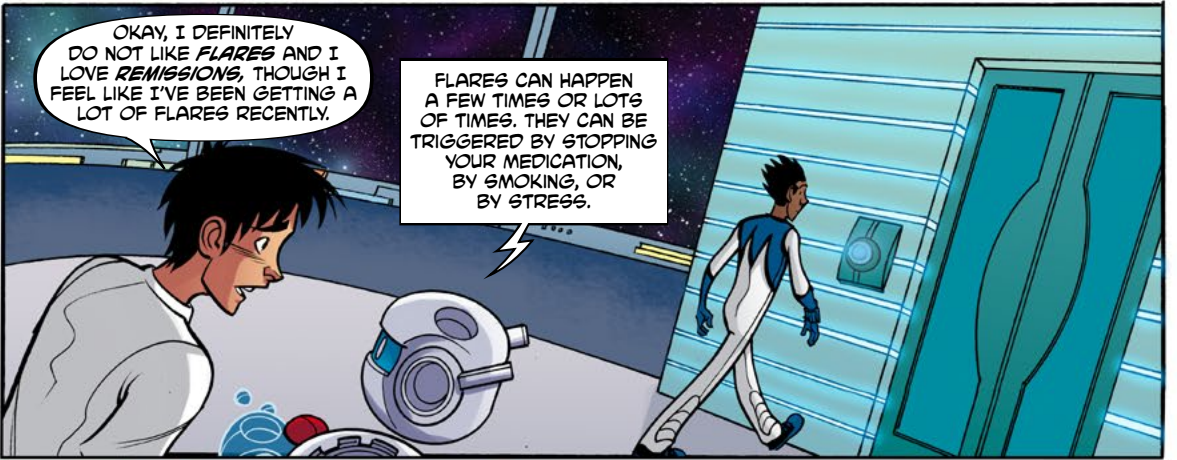
NAH, IT'S NOT LIKE THAT ALL THE TIME. IT'S ONLY THAT BAD WHEN YOU HAVE A **FLARE**. A FLARE IS WHEN THE IMMUNE SYSTEM ATTACKS THE GUT.

WHEN THE ATTACK STOPS, IT'S CALLED **REMISSION**. DURING REMISSION, THE BODY STARTS TO HEAL.



OKAY, I DEFINITELY DO NOT LIKE **FLARES** AND I LOVE **REMISSIONS**, THOUGH I FEEL LIKE I'VE BEEN GETTING A LOT OF FLARES RECENTLY.

FLARES CAN HAPPEN A FEW TIMES OR LOTS OF TIMES. THEY CAN BE TRIGGERED BY STOPPING YOUR MEDICATION, BY SMOKING, OR BY STRESS.

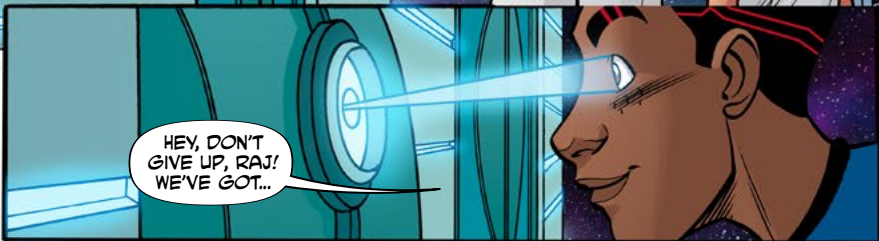


BUT SOMETIMES FLARES HAPPEN ON THEIR OWN WITHOUT ANY TRIGGERS. IT'S DIFFERENT FOR EVERYBODY.

SO IT'S HOPELESS! THE FLARES WILL COME AND GO AS THEY PLEASE AND I'LL HAVE TO KEEP RUNNING TO THE BATHROOM ALL THE TIME!



HEY, DON'T GIVE UP, RAJ! WE'VE GOT...





...TREATMENTS!
TREATMENTS ARE
USUALLY GIVEN AS PILLS,
LIQUIDS, OR INJECTIONS,
BUT IT'S A BIT DIFFERENT
ON MEDILAND! LOCK AND
LOAD, RAJ!

WE'RE GOING
TO SPLIT INTO
TEAMS AND
TAKE BACK THE
BOWELS.



BACK IN
THE BOWEL...

MEDICINES CAN
HELP REDUCE THE
IMMUNE SYSTEM
ATTACKS SO THE GUT
IS LESS RED, SORE,
AND SWOLLEN.

HEY, TEAM,
WE'VE GOT THEM
ON THE RUN HERE.



THINGS ARE
LOOKING A LOT
MORE CHILLED.

HOORAY!



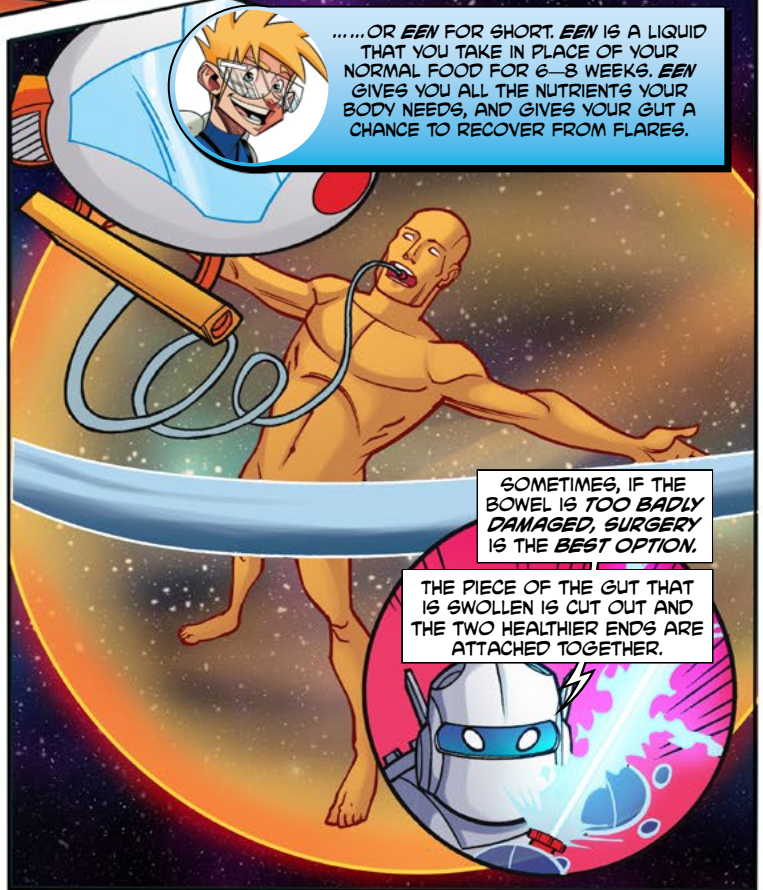
SOME MEDICINES STOP DAMAGE HAPPENING TO THE GUT, AND OTHERS REDUCE THE NUMBER OF FLARES.

BECAUSE EACH MEDICINE WORKS DIFFERENTLY, YOUR DOCTOR WILL DECIDE WHICH ONE IS BEST FOR YOU.

BE SURE TO TAKE YOUR MEDICINES EXACTLY THE WAY THE DOCTOR TELLS YOU.



THERE'S ANOTHER FORM OF TREATMENT CALLED *EXCLUSIVE ENTERAL NUTRITION*...



.....OR *EEN* FOR SHORT. *EEN* IS A LIQUID THAT YOU TAKE IN PLACE OF YOUR NORMAL FOOD FOR 6-8 WEEKS. *EEN* GIVES YOU ALL THE NUTRIENTS YOUR BODY NEEDS, AND GIVES YOUR GUT A CHANCE TO RECOVER FROM FLARES.

SOMETIMES, IF THE BOWEL IS TOO BADLY DAMAGED, SURGERY IS THE BEST OPTION.

THE PIECE OF THE GUT THAT IS SWOLLEN IS CUT OUT AND THE TWO HEALTHIER ENDS ARE ATTACHED TOGETHER.

BACK AT
MEDI-HQ...

THE MEDICINE IS WORKING!
MEDILAND IS ENTERING
REMISSION! THE BODY IS
ALREADY BEGINNING REPAIRS.

YES!

AWESOME JOB!

GLAD MEDILAND IS ON
THE MEND, BUT ONE THING I
STILL DON'T UNDERSTAND IS WHY
I GOT CROHN'S DISEASE IN THE
FIRST PLACE.

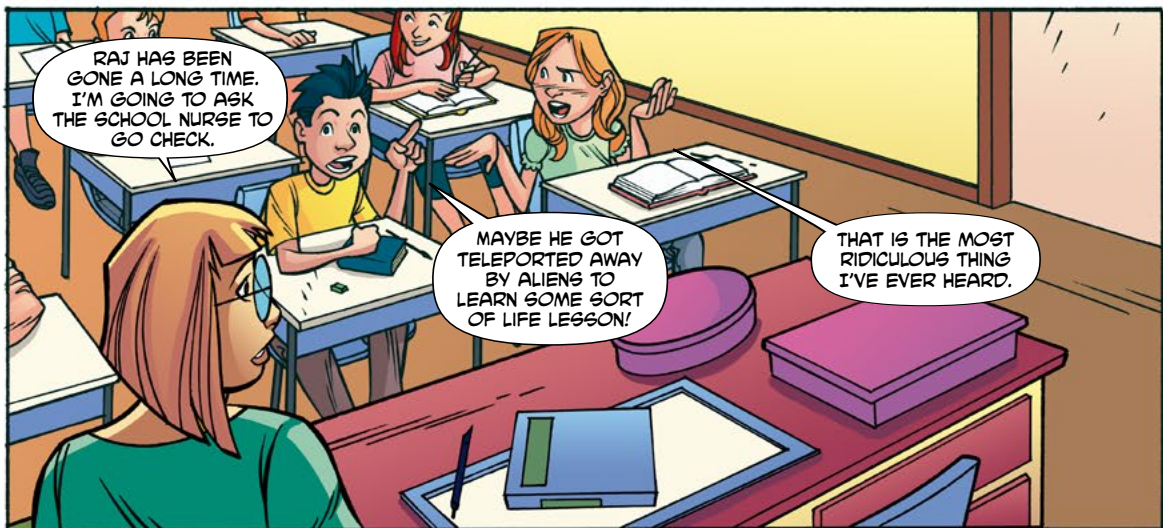
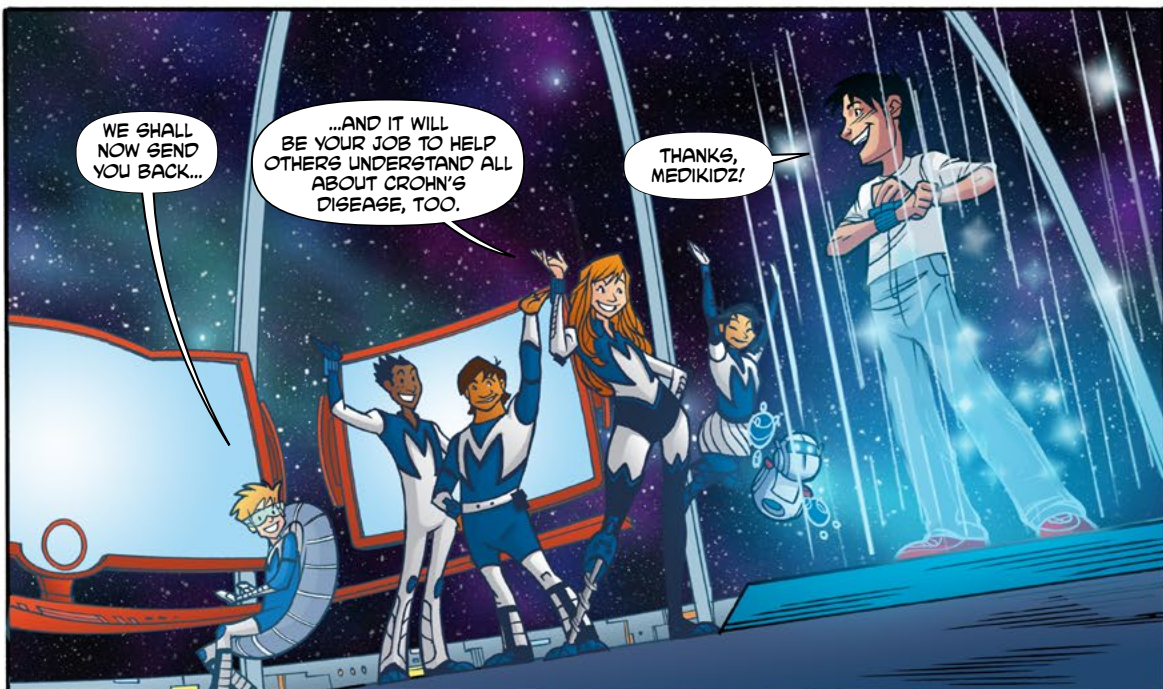
AN EXCELLENT QUESTION, ONE
SUPER GENIUSES LIKE MYSELF ARE
STILL STRUGGLING TO ANSWER! WE
AREN'T SURE WHY SOME PEOPLE
GET CROHN'S DISEASE.

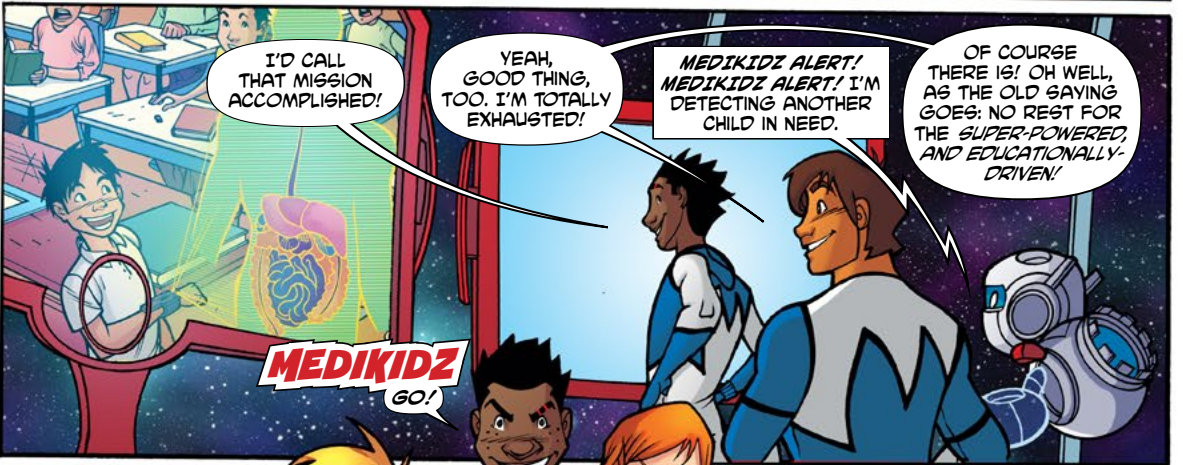
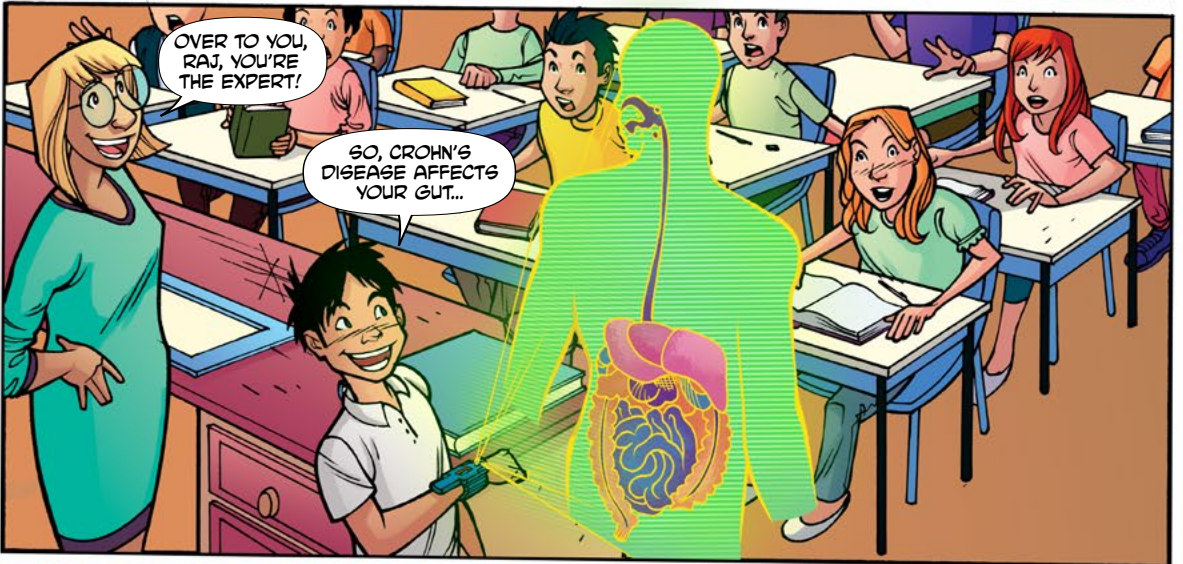
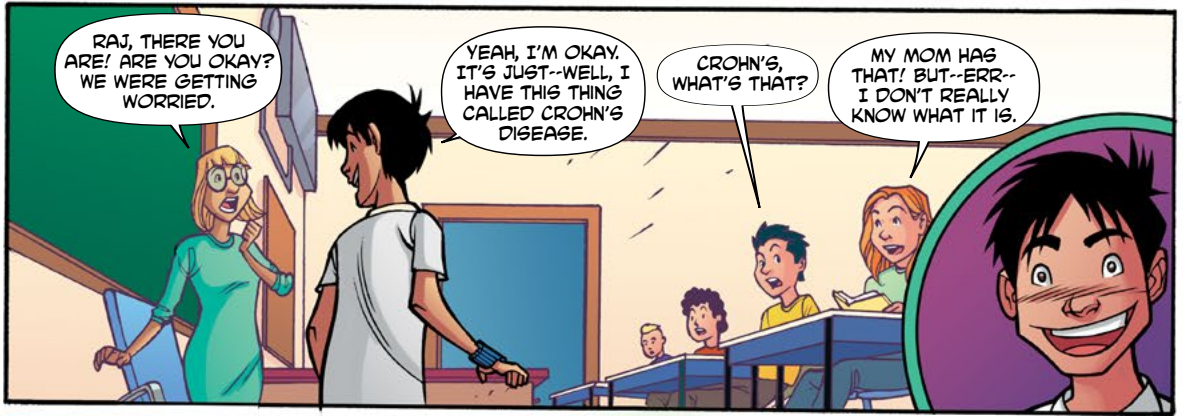
THE ONLY THING WE KNOW
FOR SURE IS THAT YOU'RE
MORE LIKELY TO GET IT IF
SOMEONE ELSE IN YOUR
FAMILY HAS IT, TOO.

SOMETIMES, I FEEL
REALLY DOWN, BUT NOW
THAT I UNDERSTAND WHAT'S
HAPPENING INSIDE OF ME, I
AM FEELING BETTER.

HEY, IF YOU EVER FEEL
WORRIED OR SAD, DON'T BE
SCARED TO TALK TO YOUR PARENTS,
DOCTORS, OR TEACHERS. THEY'RE
ALL THERE FOR YOU!

REMEMBER, YOU
ARE NOT ALONE.
ESPECIALLY NOW
THAT YOU'RE...





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