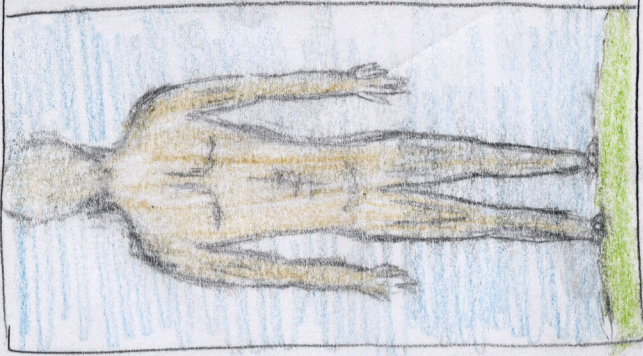
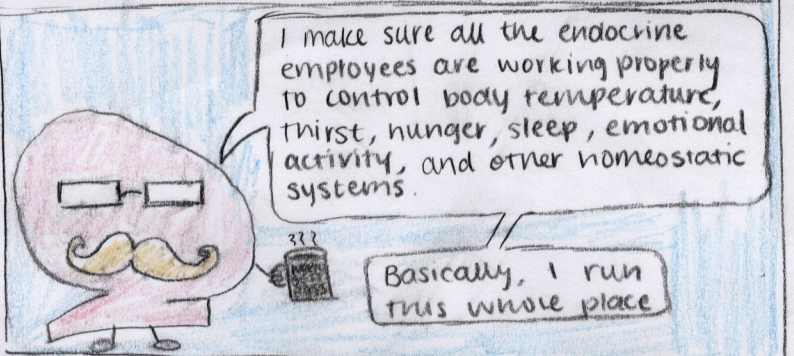


# IN THE Office...

THE EMPLOYEES OF MARK'S BODY INC. ARE HARD AT WORK IN THE ENDOCRINE DEPT.



UNDER THE WATCHFUL EYE OF MR. HYPO THALAMUS, THE ENDOCRINE DEPT HAS BEEN RUNNING SMOOTHLY



And I'm the pituitary gland, Assistant Manager of the Endocrine system

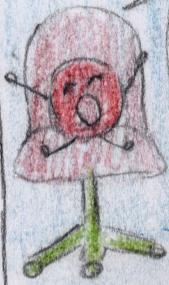
Assistant TO the Manager



Yeah, yeah. Anyways, Mr. Thalamus relays information to me, which I communicate to all the other employees. I can also detect how much stimulation the glands need based on the level of hormones in the body.

I am the pineal gland.

**\*YAWN\***



I produce melatonin, which is a hormone that modulates the wake/sleep patterns and photoperiodic (seasonal) functions.

Don't worry guys, the Thyroid is here!



Forget about everyone else! I'm the most important one. I produce two main hormones from iodine: triiodothyronine (T<sub>3</sub>) and thyroxine (T<sub>4</sub>). These hormones control the speed of the body's metabolism!

The hypothalamus and pituitary gland work together to maintain I<sub>3</sub> and T<sub>4</sub> balance.

Hey, I am the thymus! Now that Mark is an adult, I don't do much, but I did a lot of work when we were going through puberty. I produce thymosine, which stimulates the development of disease fighting T-cells.



PANCREAS



I'm the best at multitasking. Not only do I play a role in the endocrine system, but I can also pay an essential role in turning food into fuel for your cells!

I have two parts! The cortex and the medulla! They both produce hormones to regulate metabolism, immune system, blood pressure and response to stress.

Oh, by the way, I'm the adrenal gland!

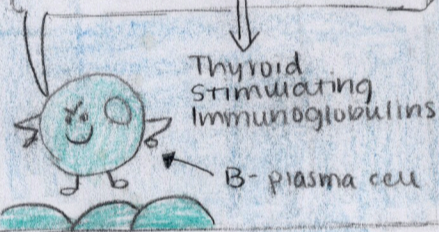


ALL WAS WELL IN THE OFFICE... UNTIL:

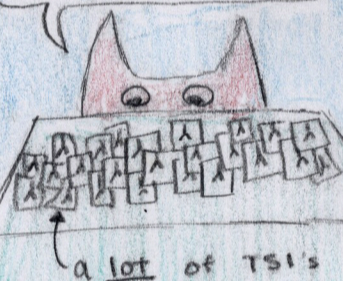


IN THE IMMUNE DEPARTMENT

Listen up guys, the thyroid is so cocky, so let's play a little prank. Everyone send your TSI's to him.



I have soooooo much hormone to make.



I better get to work.



What's wrong with me? I have lost ten points, am sweating compulsively, have chest pain, feel weak, have trouble seeing, and had diarrhea this morning!

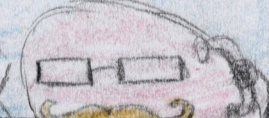
WHAT'S GOING ON DOWN THERE?

Why are the eyes, muscles, and heart having problems!?

I think the thyroid gland is producing too much hormone

Well, then Mark is going to need some anti-thyroid medicine and some beta-blockers.

BRAIN, CEO



WHAT ARE YOU DOING UP THERE?!! My heart is beating and pumping blood so fast! The respiratory system is yelling at me for making them contract so often!



Ugh! I think I'd need to talk to the thyroid gland. Sorry!



Thyroid, I need to speak to you. RIGHT NOW.

WHY ARE YOU PRODUCING SO MUCH HORMONE?!?



Well, umm... I got a bunch of TSI's that said Mark needs a bunch of hormone, so I just started to make it, I'm so sorry...

Those pesky immune cells! The TSI's are from those good-for-nothings! Remember, the immune system isn't in charge of how much hormone you make, I AM. Only produce when you get a TSH (thyroid stimulating hormone) work order. A TSI is the immune system trying to prank you! Don't EVER do that again ok?

yes sir.

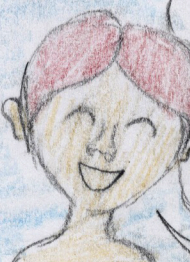
AT THE DOCTOR'S OFFICE:

I think you have Grave's Disease because your thyroid is producing more hormone than necessary. Have some beta blockers and anti-thyroid medicine!



Sounds good doc!

LATER...

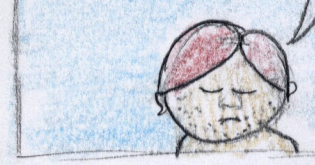


That medicine made me feel so much better! My heart rate, breathing, and eyes are all back to normal!

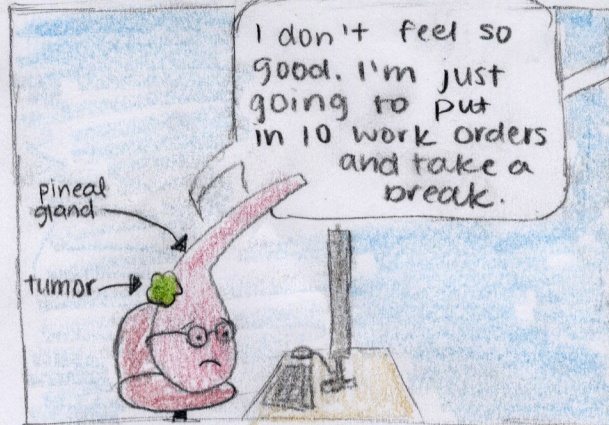
AND ALL WAS WELL IN MARK'S BODY INC.

# UNTIL...

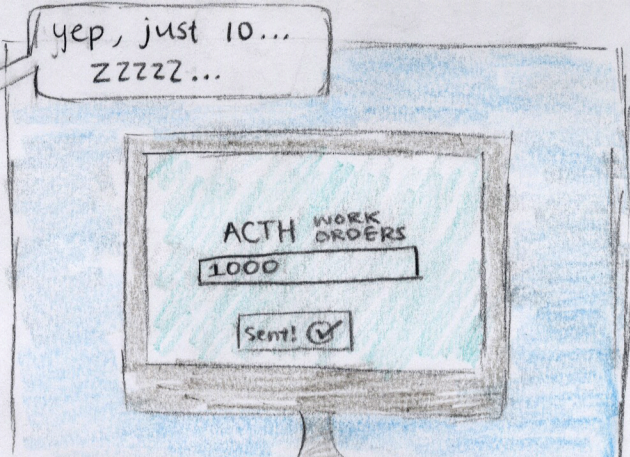
Oh no! I feel sick again! I have stretch marks, a moon face, and have gained weight!



earlier...



I don't feel so good. I'm just going to put in 10 work orders and take a break.



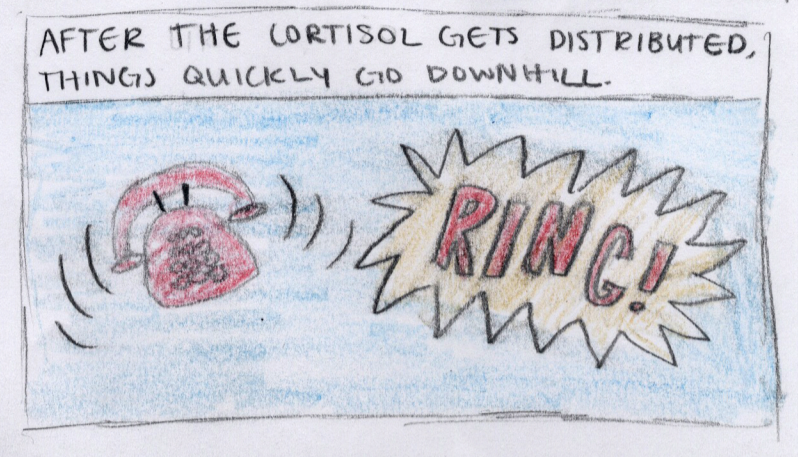
yep, just 10... ZZZZZ...



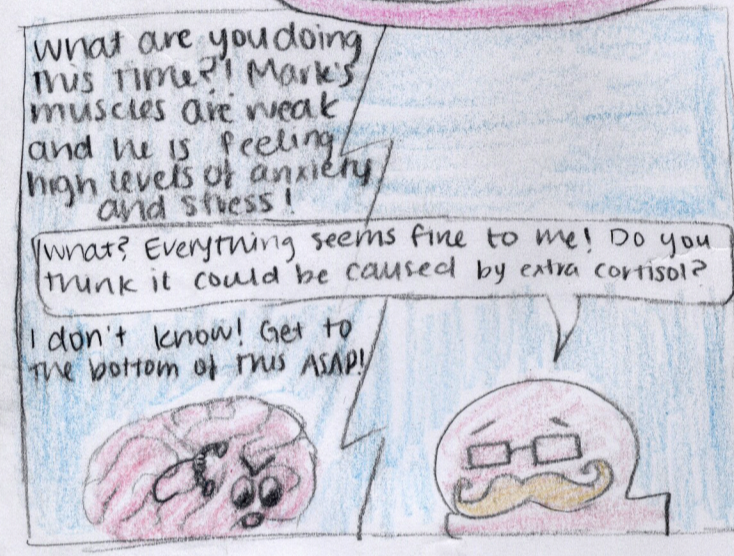
Holy cow! I wonder why I am getting 1000 ACTH work orders for cortisol! I guess the body just needs a LOT of cortisol



Better get going.



AFTER THE CORTISOL GETS DISTRIBUTED, THINGS QUICKLY GO DOWNHILL.



What are you doing this time?! Mark's muscles are weak and he is feeling high levels of anxiety and stress!

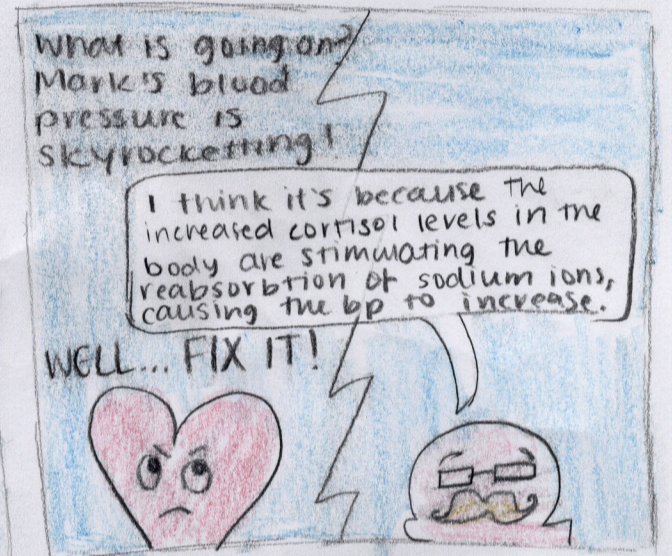
What? Everything seems fine to me! Do you think it could be caused by extra cortisol?

I don't know! Get to the bottom of this ASAP!



What is going on? Mark is having erectile dysfunction and irregular facial and body hair!

I'm sorry, I think one of my employees is making too much cortisol I'll get to the bottom of it.

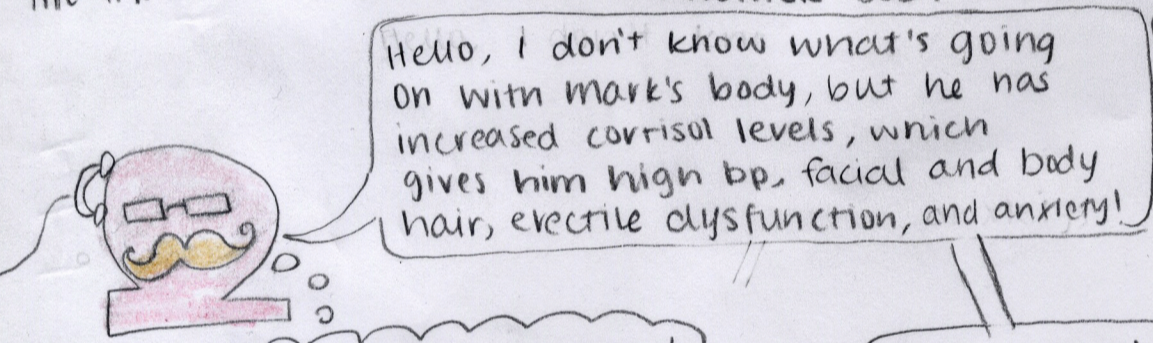


What is going on? Mark's blood pressure is skyrocketing!

I think it's because the increased cortisol levels in the body are stimulating the reabsorption of sodium ions, causing the bp to increase.

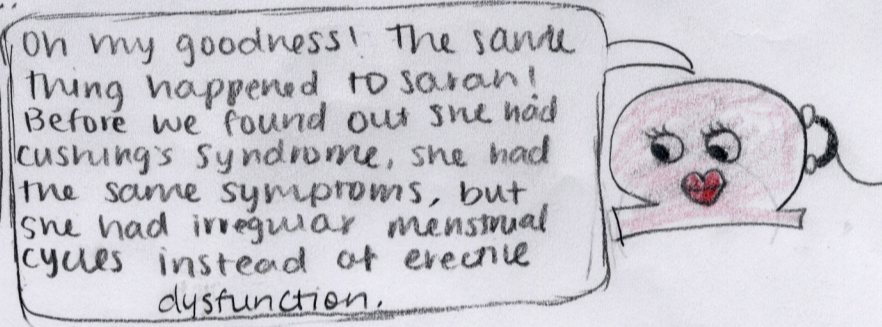
WELL... FIX IT!

THE HYPOTHALAMUS DECIDES TO CALL ANOTHER BODY FOR HELP...



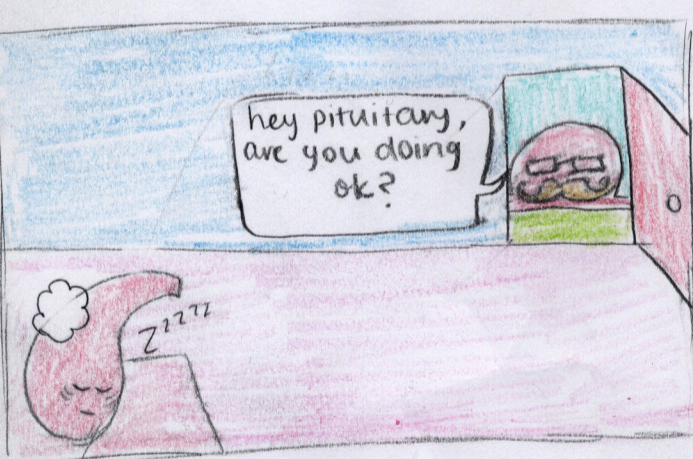
Hello, I don't know what's going on with Mark's body, but he has increased cortisol levels, which gives him high bp, facial and body hair, erectile dysfunction, and anxiety!

Cushing's disease is caused by a pituitary tumor...



Oh my goodness! The same thing happened to Sarah! Before we found out she had Cushing's Syndrome, she had the same symptoms, but she had irregular menstrual cycles instead of erectile dysfunction.

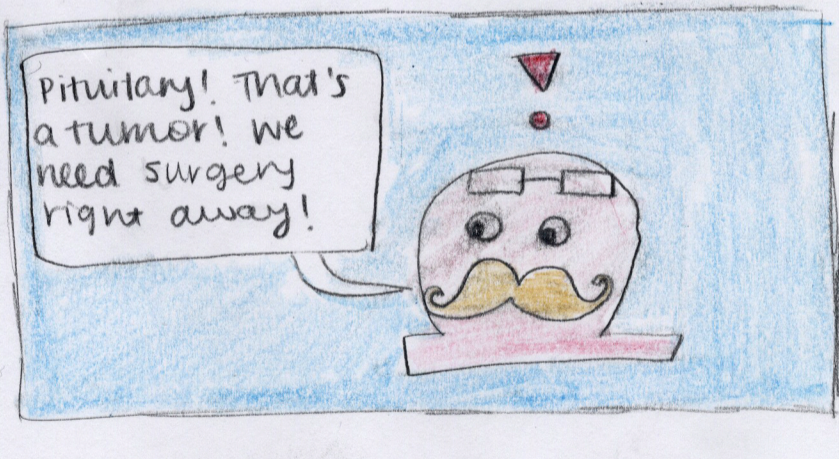
Oh, that must be because Sarah has ovaries instead of testes!



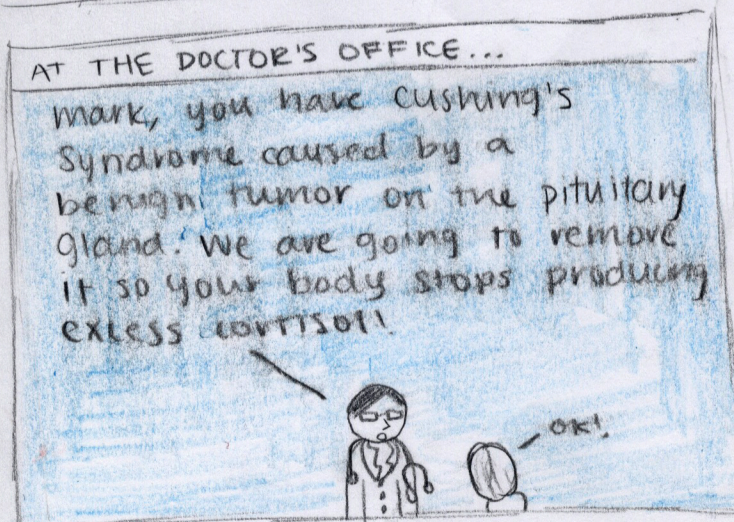
hey pituitary, are you doing ok?



not really, I've been feeling bad... and there's this weird bump on me.



Pituitary! That's a tumor! We need surgery right away!



AT THE DOCTOR'S OFFICE... Mark, you have Cushing's Syndrome caused by a benign tumor on the pituitary gland. We are going to remove it so your body stops producing excess cortisol!

OK!



Hey everyone! I'm back and better than ever!

yayy!

and from then on, the Endocrine Department lived happily ever after.

THE END!