

Pituitary Tumors

- The pituitary gland is located in your brain, just behind the bridge of your nose. It is about the size of a green pea and it controls many other glands in the body. It produces the following hormones:
 - Prolactin - important for breastfeeding.
 - TSH - signals your thyroid gland to make **thyroid hormone, which is VITAL for life!**
 - FSH & LH - signals your ovaries/testes to do their jobs
 - ACTH - signals your adrenal glands to make **cortisol, which is VITAL for life!**
 - Growth hormone - important when you're a child and still growing.
 - Vasopressin - signals your kidneys to regulate water balance.
 - Oxytocin - important for childbirth, and for bonding with baby.
- Tumors of the pituitary can be pretty common--if we did 1,000 random autopsies, we might find that up to 200 of those have a tumor in the pituitary gland--but they usually don't DO anything, so people never know they have one.
- When someone finds out they have a tumor, we have to figure out which type it is: secreting or non-secreting.
 - Secreting: Some of these tumors can MAKE hormones they're not supposed to, which cause many different kinds of symptoms. Even a very tiny tumor can make huge amounts of hormone. Some examples:
 - Cushing's Disease: this tumor makes too much ACTH, which causes weight gain, high blood pressure, diabetes, brittle bones, erectile dysfunction and excess hair growth.
 - Prolactinoma: this tumor makes prolactin, which causes nipple discharge, erectile dysfunction and irregular periods.
 - Acromegaly: this tumor makes growth hormone, which causes enlargement of hands/feet/skull, high blood pressure, heart problems and diabetes.
 - Other tumors can make too much TSH, LH, FSH, but they're quite rare
 - Non-secreting: Other tumors don't make hormones, but sometimes get so big, they squish the cells in the pituitary gland that are supposed to make the hormones. They also can get big enough to cause headaches or cause "tunnel vision."
- How do we treat tumors in the pituitary?
 - If the tumor is making hormones and/or it's big enough to affect your vision, it will be removed surgically.
 - One exception: tumors that make prolactin are treated with medicine called cabergoline or bromocriptine, and these medications work BETTER than surgery.
 - Some tumors aren't making hormones and are still small enough that they don't affect the optic nerves, so we will watch them and intervene if/when they grow.

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- What is panhypopituitarism?
 - This is a condition where either the tumor is big enough to squish the entire pituitary gland, or the surgery to remove it was unable to preserve the pituitary gland. It means that you don't make ANY of the hormones listed above. So we give them to you as medicines:
 - Levothyroxine: thyroid hormone; **necessary for life!**
 - Hydrocortisone: adrenal stress hormone; **necessary for life!**
 - Testosterone (men only): given as a topical gel or an injection.
 - Estradiol/progestrone: usually given as an oral contraceptive
 - Desmopressin: given anywhere from 1-3x/day to regulate water balance
 - There is no replacement for prolactin.
 - There is a replacement for oxytocin, but it is only used during labor and delivery.
 - Growth hormone is available for people who have not finished their growth cycle yet.
 - People with panhypopituitarism need to have a Medical Bracelet to notify first responders of their condition. You can get these online or at your pharmacy. **It's important so that if you are found unconscious, like after a car wreck, they will know to give you stress dose hydrocortisone and thyroid hormone to keep you alive.**

Resources

- Mayo Clinic section on "Pituitary Tumors" www.mayoclinic.org
- American Cancer Society
<https://www.cancer.org/cancer/pituitary-tumors/about/what-is-pituitary-tumor.html>

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