Understanding Hormone Receptors Transcript

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Why Synthetic Hormones Aren't the Same

So today I want to talk about why synthetic hormones aren't equivalent to natural ones. Many people believe that synthetic hormone in birth control or some hormone replacement therapies are basically the same as natural hormones, just made in the lab.

But that's not accurate and understanding why matters to your health. Hormones work by binding to receptors on your cells, like keys fitting into locks.

Natural estrogen, progesterone are the original keys that your body designed. Synthetic hormones like estradiol and versions of projestins are like copies of those keys, but they have slightly different shapes.

How Hormones Bind to Receptors

And when these synthetic keys fit into your cellular locks, they don't open the door quite the same way. They trigger patterns of gene expression. different patterns.

Gene expression is how your cells decide which instructions to follow, which proteins to make, and ultimately how you tissues function. Synthetic hormones change these instructions differently than natural hormones do.

So let's look at some specific tissues. So in your uterine lining, the endometrium, each type of synthetic hormone creates its own unique pattern of changes.

Different Effects on Gene Expression

Some create different patterns than others, but none of them matches natural progesterone effects. Your endometric response with different signals and with growth patterns and cellular changes, your liver shows some of the clearest differences.

Synthetic estrogens strongly affect how your liver produces clotting factors and metabolizes fats and proteins. This creates measurably higher risks of blood clots, defanthrombosis, and stroke compared to natural hormones.

Tissue-Specific Differences in the Endometrium and Liver

Your liver essentially goes into overtime mode, processing synthetic estogens, creating changes in your blood chemistry that natural estrogen doesn't produce to the same degree.

In your brain, synthetic hormones alter neurotransmitter production and function. Serotonin, dopamine, GABA, your brains mood and stress regulating chemicals, these all respond differently to synthetic progestins than to natural pro testosterone.

And this explains why many women experience mood changes, anxiety or depression when they're on hormonal birth control or hormone replacement therapy.

Brain and Mood Effects

It's not psychological, it's nor chemical. Your immune system also notices. So synthetic hormones change cytokine production and the proteins that are in your immune cells that we use to communicate and coordinate responses.

And this can affect inflammation levels throughout your whole body, influencing everything from joint pain to skin

health, the gut function. The breast tissue effects are particularly concerning.

Synthetic progestins bind not just to projesterone receptors, but also to other receptors in breast tissues.

Immune System and Inflammation Changes

This broader binding pattern creates stimulation that natural projesterone doesn't produce. Over years of exposure, this extra stimulation is linked to increased breast cancer risk.

Natural progesterone, when properly balanced, actually shows protective effects for breast tissue. The synthetic versions, they don't offer this protection.

And here's what this means practically. When you use hormonal contraception or synthetic hormone replacement therapy, your body is not experiencing the same hormonial environment it would naturally create.

Breast Tissue and Cancer Risk

Every tissue, every cell that has hormone receptors is responding differently. And for some women, these differences don't cause noticeable problems, but for others, they create symptoms that can range from mild to severe.

Understanding the differences empowers you to make informed choices.

Practical Takeaways and Health Resources

Birth control has real benefits for preventing pregnancy and managing certain conditions, But knowing how it differs from natural hormones helps you weigh those benefits against the potential risks for your specific situation.

If you want to dive deeper into how synthetic hormones affect your body and learn strategies to support your health, whether you're using contraception or not, I've created a comprehensive resource.

You can find the link in by just commenting help and we will send it to you because your Health deserves informed decisions based on complete information.