Period PIECES

Hormonal Myths of the Menstruating Woman

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Hormones are complex and interdependent chemical messages in your body that drive many of its actions, from emotion to appetite to menstrual cycle. And while it seems hard to believe, it is not so very long ago that women's hormones and menstrual cycles were not thoroughly studied, leaving both medical professionals and women with limited understanding of how these systems even worked. Symptoms brought by female patients to their doctors, sadly, were often dismissed as made-up or as overreactions to normal bodily processes, which, ironically, were the very processes that were not fully understood.

Fortunately, research has been more robust in recent years, although there still remains a conventional lack of understanding that has allowed some hormonal myths to persist in the media, in our education systems, and even within our families. Here are five hormonal myths commonly associated with menstruating women, and the *actual facts* of the matter.

MYTH #1: YOU'RE TOO YOUNG TO HAVE A HORMONE PROBLEM

You are never too young to experience hormonal imbalance. An adult may experience imbalances at any point, while a teen may experience hormonal issues around the debut of menstruation. One increasingly common condition is *polycystic ovary syndrome (PCOS)*, an endocrine and metabolic disorder. PCOS is a condition that warrants careful attention to your period and often requires blood work or an ultrasound.

To be diagnosed with PCOS, you must exhibit at least two out of three criteria:

1. Polycystic ovaries showing on ultrasound
Despite the name, having PCOS does not necessarily mean you have polycystic ovaries. Conversely, having multiple cysts on your ovaries does not always mean you have PCOS, as the criteria for diagnosis has evolved over the years. (In 2003, the "Rotterdam Criteria" expanded on the 1990 definition put forward by the National Institute of Health, and while there are talks about a name change for PCOS, none has been decided upon at the time of writing.)

In teens, investigation of the ovaries is not always definitive as ovaries will often present as polycystic for up to eight years after their periods begin, or when reproductive maturity is reached. Therefore, tracking periods and noting symptoms of high androgens is essential for diagnosing PCOS in teens.

2. High androgen levels
Although androgens are often referred to as "male" hormones, they are present in both sexes. Our bodies need androgens for the reproductive process, and for the essential functioning of our muscles and bones, cognition, and emotional well-being. When the androgen level is higher than it should be, the result is *hyperandrogenism*, which can be a marker of PCOS.

Physical signs and symptoms of potentially elevated androgens include:

Severe acne This can cause inflammation and scarring, and is resistant to treatment. Typically, more than 11 lesions may be present on the face.

Hirsutism A condition that causes excess terminal hair growth in females in areas characteristic of male hair growth. Growth is usually seen on the face, chest, back, abdomen, thighs, and upper arms.

Alopecia The thinning of hair around the scalp, which is more typical in adults.

Teens will usually demonstrate symptoms of severe acne and hirsutism, while adults may demonstrate all three.

3. Irregular or no periods *(anovulation)*
The frequency of the menstrual cycle can be variable, but it's important to pay attention to patterns that warrant further exploration:

Within the first year of menstruation	Cycles should not be outside the 19 to 90 day range.
After 2 years of menstruation	Cycles should not be shorter than 21 days or longer than 45 days.
After 3 years of menstruation	Cycles should not be shorter than 21 days or longer than 35 days, or there should be no fewer than 8 cycles per year.
No menstruation	If teen is 15 years old and has begun breast development in previous 2-3 years.

If a teen or adult meets any of the above criteria, PCOS should be considered and assessed.

PCOS is more than just a period problem. Because it's considered a metabolic condition, it is also associated with an increased risk of diabetes and heart disease, making it incredibly important, from a preventative standpoint, to determine if you have PCOS. If you are experiencing any of the above symptoms, please see your health care provider.

MYTH #2: PERIOD PAIN IS NORMAL

Period pain is common, but for the most part isn't normal—especially if it's severe. You may notice cramping in your lower pelvis or back before or during the first couple of days of your period. This pain will usually go away with a pain reliever and doesn't affect your day-to-day life.

Severe pain is a different issue. This type of pain may feel like a stabbing, burning, or throbbing, and can be experienced between periods. It may not go away with pain relievers and may affect your quality of life, causing you to stay home from school or work.

One of the most common causes of severe period pain is *endometriosis*, which occurs when endometrial tissue normally lining the interior of the uterus is found on its exterior. While typically diagnosed in adult females, new research indicates that it can also occur in teen girls, although it is much more difficult to assess as they are more likely to experience non-cyclical pelvic pain and their endometrial lesions often differ from those found in adults. Getting properly diagnosed as early as possible is key to combatting endometriosis and protecting future fertility.

Pain and periods don't necessarily go hand-in-hand. It's important to never minimize your menstrual pain and instead to seek out the advice of a health care professional. While pain may not always be indicative of endometriosis, there are a number of other causes of painful periods, like ovarian cysts, infections, and *adenomyosis* (a benign but painful condition where the uterine lining breaks through its muscle wall) that, once properly diagnosed, can be addressed and improve your quality of life.

MYTH #3: THE PILL WILL FIX YOUR PERIOD

Like all pharmaceuticals, there's an appropriate time and place to use the birth control pill. The pill has been an empowering drug for women's rights and contraceptive use. Furthermore, it's the first line treatment for many common conditions including PCOS, endometriosis, *premenstrual dysphoric disorder (PMDD)*, and PMS.

The pill doesn't fix your period, it stops it. It contains *ethinyl estradiol* and *progestin*, which are different than your body's own estradiol and progesterone. While these synthetic hormones might fit into your body's hormone receptors, they don't have the same effects as your own hormones do, and instead *prevent* hormone production. Ovulation stops and cervical fluid thickens, affecting sperm movement and endometrial development. The "periods" that you experience while taking birth control pills are not true periods because ovulation is suppressed. Rather, they are considered "withdrawal bleeds" that are the result of a temporary halt in taking the pill, usually every 21 to 28 days.

Taking the pill can mean relief from uncomfortable symptoms, specifically if you are suffering from the above-mentioned disorders. In PCOS, the pill will decrease androgen production. In endometriosis, it may stop the pain. In PMS, it may regulate mood and physical symptoms. However, the pill is considered a temporary fix, as once intake is stopped, the symptoms may return. As well, the pill comes with a range of side effects, including, but not limited to, nutritional deficiencies, microbiome disruptions, and changes in quality of life. Education about the pill is important to ensure you're making the right choice for your body and needs.

MYTH #4: EVERY WOMAN HAS PMS

I'm sure you've been asked, "Are you PMS-ing?" at least once. Yet true premenstrual syndrome (PMS) is a considerably rare condition, happening in just 5-8% of women. There are about 150 symptoms associated with PMS that include psychological, physical, and behavioural manifestations.

Although vast, common symptoms include:

> Joint/muscle/back pain
> Breast tenderness or pain
> Abdominal swelling or bloating
> Headaches
> Changes in appetite, overeating, or food cravings
> Fatigue or lack of energy
> Mood swings
> Irritability, anger
> Sleep disturbances, restlessness
> Anxiety or depressed mood

PMS involves recurring (for at least two cycles in a row) symptoms during the two weeks before your period starts and ceasing around the end of your period. They may have a negative influence on your daily functioning as well as cause you distress, but should not be happening throughout the month.

More than PMS

PMS can sometimes be quite severe, and may actually present as *premenstrual dysphoric disorder (PMDD)*, which affects 2-5% of women. The predominant difference between the two is PMDD exhibits extreme behavioural and psychological symptoms. In order to be diagnosed with PMDD, you must be experiencing at least one of these:

> Mood swings
> Feeling suddenly sad or tearful
> Increased sensitivity to rejection
> Irritability, anger, or increased conflicts
> Depressed mood
> Feelings of hopelessness and self-deprecating thoughts
> Anxiety, tension, feelings of being keyed up or on edge

And at least one (or more) of these symptoms must also be present:

> Decreased interest in usual activities
> Difficulty concentrating
> Lethargy, fatigue, lack of energy
> Changes in appetite, overeating, specific food cravings
> Hypersomnia or insomnia
> Feeling overwhelmed or out of control
> Physical symptoms such as breast tenderness, swelling, joint or muscle pain, bloating sensation or weight gain

Like PMS, these symptoms must be present at least two weeks before the start of your period, and terminate around the same time as your period. Improvement should be seen once your period ends. Conditions whose symptoms mimic those of PMDD (such as chronic fatigue syndrome, fibromyalgia, irritable bowel syndrome, and migraine disorder) must be ruled out.

If you think you have PMS or PMDD, it's important to track your symptoms during an entire two month period to better understand when you experience symptoms and when you don't.

MYTH #5: YOU'RE ALWAYS FERTILE

Each month your body prepares for pregnancy, but in order for a potential pregnancy to happen, you must ovulate. Ovulation is the only time of your cycle where you have the ability to get pregnant: you are fertile a few days before, and a few days after, ovulation. Men, on the other hand, are continuously fertile and sperm can live up to five days in the female reproductive tract, which explains how you can conceive even if you have sex before you ovulate.

Ovulation typically occurs mid-cycle, when there is a spike of luteinizing hormone, causing your ovary to release an egg, which then has the potential to be fertilized by sperm.

If you use a period app, it's likely that the app is labelling the middle of your cycle as your ovulation date. However, that may not always be accurate. Therefore, it's best to pay attention to your body's ovulation clues:

Cervical fluid changes throughout the month depending on where you are in your cycle. At the beginning, you may not notice any fluid at all; as you approach day 7, it may present as white and sticky; around day 12 or 13, it may present as clear and stretchy; and after ovulation, you may not notice any. The clear and stretchy fluid, which may resemble egg whites, is considered the most fertile as it nourishes sperm and allows it to travel to the cervix.

Cervical position and condition also change throughout the cycle. Around ovulation it may be soft (like your lips), higher up, open (to allow the passage of sperm), and wet (because of cervical fluid). During the beginning and end of your cycle, it's usually hard (like the tip of your nose), low, closed, and not as wet. You can check these characteristics yourself, knowing that around ovulation the high position might make your cervix hard to reach.

Basal body temperature (BBT), brought on by progesterone production, will rise after ovulation has happened. BBT must be taken before you get out of bed in the morning. The rise in temperature may as little as 0.4 to 0.8 degrees.

Knowing what signs to look for and paying attention to clues your body is providing are invaluable tools for maintaining good health. Not only will you become more in tune with your body, you will also be better equipped to identify when you should seek health support. When we listen to what our bodies are saying and actively seek counsel from our health care provider when something seems amiss, we help to dispel the myths that have prevented a fuller understanding of how our reproductive system works and how best to serve it. Doing so ensures a higher level of care, not just for ourselves, but for women everywhere. •