BREAKING NEWS

Recent and Significant Changes in Medical Science Affect Your Health.

Your Doctor Hasn't Been Told.

From Rebel Logic Media

For most of modern medicine, the human body meant the male body. The female body was treated as his body with different reproductive parts. Until 1993, U.S. medical research was not even required to include women. And when researchers did include women, they often tested them only in the week of her cycle when her hormones are lowest: the week she looks most like him. Put plainly: women were not studied. The drug doses and the warning signs your doctor learned were set mostly on men.

In 2016 the National Institutes of Health finally made it official: sex is a biological variable in every system of the body, not just the reproductive one, and researchers now have to account for it. But that rule covers research, not your doctor's office. No rule requires the new findings to be taught to practicing doctors or requires a doctor to keep up with changes outside their specialty. On average, it takes about 17 years for research to become routine care. Start that clock in 2016: 2016 plus 17 is 2033.

So here it is, outright. The science on how a woman's body actually works exists now. It lives in research labs, medical journals, and a handful of books. It is not in the standard checkup, and it is not in most drug dosing charts. Almost none of it is being used on the women walking into a doctor's office this week. Outside the research community, the only way to get it is to find one of the few scientists who wrote it up for the public. And you can't book an appointment with a book.

THIS IS NOT A PAPERWORK DELAY. IT IS LIFE-THREATENING. AS DR. STACY SIMS PUTS IT, WOMEN ARE NOT SMALL MEN.

Here are five changes in the science, and what each one changes for you.

1. The body is one connected system, not a box of parts.

WHAT'S NEW

Your body is run by messages: nerve signals and hormones, constantly traveling between organs. Science used to say only a handful of glands made hormones. Now we know almost every organ is in the conversation. The brain is an organ, and it is the main hormone control center. Your body fat makes estrogen. Your muscles send chemical signals to your brain and the rest of the body when you use them. Your gut makes most of your body's serotonin, a chemical that helps regulate mood and sleep. Your heart makes a hormone that controls blood pressure. Even your bones make a hormone that affects blood sugar and memory.

The brain sends the orders. The sex hormones carry them through the whole body. In men, or those born XY, the lead sex hormone is testosterone. In women, or those born XX, estrogen leads the first half of the month and progesterone leads the second half.

NOTE: This is set by chromosomes before birth. The XY pattern builds testes, which make mostly testosterone. The XX pattern builds ovaries, which make mostly estrogen and progesterone. With rare medical exceptions, that is biology, not the authors' opinion.

WHAT IT CHANGES

Nothing in your body breaks alone. A problem in one part sends signals to the others. But medicine is still organized by body part: one specialist for the heart, another for the gut, another for the brain, another for hormones, each reading one gauge. Nobody's job is to read the whole dashboard. If your symptoms cross specialties, you may have to be the one who connects them.

2. Sex hormones run the whole system, in both sexes.

WHAT'S NEW

Testosterone, estrogen, and progesterone have docking stations (receptors) in the brain, heart, blood vessels, bones, muscles, liver, gut, skin, and fat. Both sexes make all three, in different amounts. Testosterone builds red blood cells, muscle, and bone, and helps run the brain, heart, and blood sugar, in both sexes. Estrogen helps the brain's power plants (mitochondria, the tiny energy factories inside cells) turn sugar into fuel. It keeps blood vessels flexible, slows bone loss, and helps muscles use insulin. Progesterone turns into a brain chemical that works on the same calming switches as anti-anxiety medicine, and it protects deep sleep. Even his bones depend on estrogen: his body makes it from his testosterone, and men who can't make estrogen lose bone.

WHAT IT CHANGES

When his testosterone runs low, he loses muscle, drive, energy, and mood, and low testosterone in men is linked to heart disease, type 2 diabetes, depression, and bone loss. When her estrogen runs low, at any age, her brain burns fuel less efficiently, blood vessels stiffen, bone loss speeds up, belly fat and insulin resistance rise, sleep and temperature control break down, joints ache, and memory slips. When her progesterone runs low, she loses her calm-down and sleep chemistry: anxiety climbs, sleep breaks up, and periods can turn heavy or irregular.

In both sexes, this usually gets mis-filed under "getting older," "nerves," or "attitude." It is what happens to a body when its operating chemistry runs low. Much of what we were taught to accept as normal aging is a hormone supply problem, and low hormone supply can often be helped, at any age.

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3. He runs on one clock. She runs on two.

WHAT'S NEW

Both bodies run on a daily clock. His main hormone follows it: testosterone peaks in the morning, falls through the day, and rebuilds during sleep. Cut his sleep and you cut his testosterone: one week of five-hour nights dropped young men's testosterone by 10 to 15 percent. Her body runs a second clock on top of the daily one, roughly a month long. In the first half, estrogen leads: she builds, recovers fast, and handles hard training and blood sugar well. In the second half, progesterone leads: her core temperature rises, her heart rate climbs, she burns more fuel, breaks down more protein, handles sugar less well, and sleeps lighter.

WHAT IT CHANGES

His body resets every night, if he gets the sleep. Hers is not the same machine every day of the month. Diet rules, workout plans, sleep advice, a single blood test, even the timing of some medicines: if it ignores which week of her cycle she is in, it is reading half her data. And the working world runs on his clock: the same hours, the same schedule, every day of the month. Her schedule rarely gets to bend with her. The Shop Manual shows how to work with both clocks, and its credits point to the researchers who wrote the full plans.

4. An automatic system decides if you are safe, before you do.

WHAT'S NEW

Both bodies have an automatic nervous system, the autonomic nervous system, that reads danger and safety below conscious thought, faster than the thinking brain. It has two main modes: an alarm mode (fight or flight) and a rest-and-repair mode. Its longest nerve, the vagus nerve, runs from the brain to the heart, lungs, and gut. This system sets heart rate, breathing, blood pressure, digestion, immune response, healing, and sleep. It also runs sex, for both. His erection runs on the calm side of the system, which is why stress and fear can shut it down. Her arousal has a gas pedal and a separate brake, and the brake responds to stress and her surroundings.

WHAT IT CHANGES

Nobody can order the alarm off, not her and not him. While the alarm is running, the body puts healing, digestion, sleep, and sex on hold, in both models. That takes safety to fix, not willpower. Dismissing the alarm doesn't turn it off. You have to fix what tripped it.

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5. Chronic stress hits the body twice.

WHAT'S NEW

Cortisol, the main stress hormone, is built for short emergencies. It dumps sugar into the blood and puts repair, digestion, and reproduction on hold. When stress never lets up, the body takes two hits. Hit one: cortisol itself breaks down muscle and bone, stores fat deep in the belly, keeps blood sugar high, and wears down sleep. Hit two: the brain shuts down the hormones that protect against all of that. In him, testosterone production drops, and an

enzyme (aromatase) turns more of what is left into estrogen. In her, the brain can stop ovulation; progesterone is made after ovulation, so it falls first, and if the stress keeps going, estrogen falls too. Now the damage is running with the protection switched off.

WHAT IT CHANGES

Stress is not an attitude. It is a chemistry change with a price, for both. In him, it looks like fatigue, a short fuse, lost drive, and a growing belly. In her, it looks like anxiety, sleepless nights, worse PMS, and irregular cycles. Both get treated as a mental problem instead of a hormone supply problem. What sets off the alarm is personal. What the alarm does to the body is not. Chronic stress eases when the load gets lighter and the threat is gone. Small daily doses of connection help keep it from building in the first place.

What All of This Changes

When medicine calls a woman's symptoms "atypical," it means "not like his," and that word can get her killed. Her heart attack more often comes with jaw, back, or neck pain, nausea, shortness of breath, and crushing tiredness. Women under 55 have been sent home from the ER by mistake far more often than men, and heart attack patients sent home by mistake were nearly twice as likely to die. Across 86 drugs, women had bad side effects nearly twice as often. When women had higher drug levels in their blood, 96 percent of the time they also had more side effects: doses set for his body, given to hers. In 2013, more than 20 years after the sleeping pill Ambien went on the market, the FDA cut the recommended dose for women in half, because women clear it more slowly and enough was left in their blood the next morning to impair driving. About 4 out of 5 people with autoimmune disease are women. Almost 2 out of 3 Americans with Alzheimer's are women. About 9 in 10 women with serious sleep apnea have never been diagnosed, because the checklist was written around his symptoms. Her body is not a variation on his. It is its own design, with its own normal.

And his body is more than the simple machine the old manual made it out to be. His hormones, his clock, and his alarm are tied into his heart, his blood sugar, his mood, and his lifespan, and most of that gets waved off as "just getting older."

Men and women are suffering, and some are dying, when there is science that would help them. This is not MORE complicated. It is the data, for the first time, for both. It is what Warren Farrell and John Gray describe in The Boy Crisis: when one sex loses, both sexes lose. Because sex hormones were filed under reproduction, nobody studied what estrogen and progesterone do for the rest of her body, and nobody mapped what testosterone does for the rest of his, until the current generation of scientists.

This does not replace your doctor. It gives you better questions to ask. Take it to your next appointment. Your doctor may be hearing it for the first time.

Same Parts. Different Factory Settings.

Men and women share most of the same parts. What's different is the settings: how much of each hormone, which clock it runs on, and how each system reacts. Those settings reach almost every system in the body. That's why so much of what was built and tested on him doesn't work the same way for her: the dose, the diet, the workout, the warning signs,

the sleep checklist. And men and women alike were taught the same wrong lesson: that her body runs like his.

That lesson didn't stay at the doctor's office. It came home with us. If you were both handed the same manual, each of you expects the other to run the way you do. He expects her to be the same person every day of the month. She expects him to talk it through while his alarm is still running. When the other one doesn't respond the way the manual says, it looks like they aren't trying. Most of the time, it's the manual.

EQUAL DOES NOT MEAN THE SAME. IT MEANS OF EQUAL IMPORTANCE.

Pop the Hood

So how does it play out in daily life, and what are the key things you need to know?

Well, nobody wants a biology class do-over. So we turned on the tunes and went to the auto shop instead. Head over to the Rebel Supply Shop at TheReasonRebellion.com and pop the hood by picking up a copy of the new Shop Manual. We hope we've made it entertaining.

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