Normal Labs, Terrible Health: The Immune Pattern Your Doctor Can't See Transcript

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Introduction: Immune Exhaustion and Chronic Illness

Heavy metal exposure suppresses natural killer's cell function while promoting chronic immune activation. The body is trying to protect itself, but the constant effort depletes its resources.

Chronic infections beyond viruses matter too. Lyme disease and its co-infections, dibesia, bartonella or leuka can create exactly this immune pattern.

These organisms are masters at invading the immune system. I'm Dr. Vesmair Phan, a physician on a mission to help you break free from symptom management and step into a life of thriving health.

Together, we will uncover simple, powerful ways to prevent disease, restore energy and take control of your health naturally. If you're ready to stop managing illness and start building vitality, you are in the right place.

Your prescription for vitality starts now. Something kept nagging at me about a case I couldn't figure out. A man in his early 60s, stage 3 kidney disease, crushing fatigue that had been going on for years, catching every cold that came within a mile of him.

His doctors had run all the standard tests. His basic blood work? completely normal. White blood cells, red blood cells, everything within range. He'd been told there was nothing specifically wrong with his immune system.

And yet, he woke up every morning feeling like he hadn't slept. Brain fog so thick he struggled to get through his work day. And a gut feeling literally and figuratively that something was deeply off.

I kept asking myself, what if his lab work was telling us what was happening on the surface, but missing what was happening underneath? What if there was a pattern his doctors weren't looking for?

Because they didn't know to look.

Case Study: Normal Labs, Persistent Symptoms

That question sent me down a path that changed how I think about immune function, chronic illness and why so many people with kidney disease feel terrible even when their numbers look fine.

discovered is something I now see constantly in my practice and I want to take you through what I found, the science behind it, the hidden triggers that cause it and why this matters so much for kidney health specifically.

Because if you've ever had blood work come back normal while you're struggling with exhaustion, frequent illness, or symptoms no one can explain, this might be the missing piece you have been searching for.

So here's what we are taught in conventional medicine. You run a CBC, a complete blood count. You look at the white blood cells. If they are in the normal range, the immune system is functioning.

Maybe you look at the differential, the percentages of different cell types, neutrophils, lymphocytes, monocytes. If everything falls within standard parameters, you move on.

That's the framework I was trained in. And for acute infections, for obvious immune deficiencies, it works well. But here's where it gets interesting.

That's CBC. It's like looking at a company's total employee count and concluding the business is healthy. You have 100 employees, great. But what if 90 of them are in one department completely overworked and burning out, while

another critical department is down to 10 people who essentially have given up?

The total number looks fine. The reality is a company is in crisis. This is what's happening in the immune systems of many people with chronic illness.

The total lymphocyte count appears normal. But when you actually look at who's doing what inside that number, when you run what's called immune cell subset testing, you find something completely different.

When I started discovering inpatient after patient was a specific pattern, their T-cells, the adaptive immune cells that remember past infections and mount targeted long-term responses, were working overtime, percentages well above normal range.

Meanwhile, their natural killer cells, NK cells, the first responders that immediately neutralize threats, were depleted, sometimes severely. This led me to ask a different question.

What happens when your immune system's first line of defense essentially stops showing up? Stay with me here because this is where the pieces start coming together.

Your immune system isn't one thing. It's two coordinated systems that have evolved over millions of years to protect you. Understanding how they work and how they fail is essential to understanding why you might feel terrible despite normal lab work.

Your innate immunity is ancient.

Why CBC Misses Immune Dysfunction

It is a system we share with insects, plants, and even sea sponges. It doesn't learn or remember. It simply recognizes broad patterns that signal danger and responds immediately.

Your natural killer cells are part of this system. They patrol your body constantly, looking for cells that have been infected by viruses or that have become abnormal like cancer cells.

When they find a threat, they don't wait for instructions. They release chemicals called porphyrins and enzymes that punch holes in the target cell and trigger its death.

Fast, efficient, no prior experience needed. Your adaptive immunity is newer. Evolutionary speaking, it only appeared about 500 million years ago in jawed vertebrates.

This is your T-cell and B-cell system. It's slower to respond initially, but it learns when your T-cell encounters a pathogen for the first time, they develop a targeted response specific to that threat.

And they remember. That's why you don't get chickenpox twice. Your adaptive immune system remembers it and responds immediately if it ever shows up again.

In a healthy immune system, these two work in concert beautifully. When a virus enters your body, your innate immunity, including those natural killer cells, holds the line.

They attack immediately, buying time. Meanwhile, your adaptive immunity is analyzing the threat, developing targeted antibodies and preparing a precision response.

Within days to weeks, your adaptive system takes over with its specialized attack and the infection is cleared. But what if innate immunity gets exhausted?

What if the first responders have been fighting so long against so many threats that they have essentially collapsed? Your adaptive immune system tries to compensate.

It's not designed for this role, but it doesn't have a choice. So your T-cells start working overtime, staying activated indefinitely, trying to cover for a depleted front line.

They're producing inflammatory signals constantly. Cytokines like interleukin 6, TNF alpha interfere on gamma because they are in a state of perpetual alert.

Now this creates a state I call chronic immune activation with innate depletion. Your body is simultaneously exhausted and inflamed. Your immune system is both overworking and underperforming and standard blood tests won't catch it because they are not designed to look at this level of detail.

And that's when I discovered something that changed how I see chronic illness and particularly how I see kidney disease. What causes this pattern? This was the question that kept pulling me deeper into the research.

Because understanding the cause is the only way to reverse it.

Innate vs Adaptive Immunity

The first culprit I started noticing was something most doctors don't think about, chronic viral reactivation. We're talking about viruses you probably contracted years ago, probably decades ago and forgot about it.

Epstein-Biovirus, EDV, which causes mononucleosis, CMV, HHV6, which almost everyone catches in childhood as Roseola. These are Herpes family viruses and here's what most people don't realize.

They don't leave your body ever. When you first get infected, your immune system fights the acute infection. You recover. But the virus doesn't get eliminated.

It goes dormant, hiding in your tissues. Epstein-Barr hides in your B cells. CMV helps in your myeloid cells. HHV6 can even integrate into your chromosomes.

They are kept in check by a healthy immune system, specifically by your natural killer cells and cytotoxic T cells, maintaining constant surveillance.

But when your immune system gets weakened by stress, poor sleep, another infection, nutritional deficiencies, or any number of factors, these viruses can wake back up.

Not dramatically enough to make you actually sick like you were during the initial infection, just enough to start replicating again, slowly and persistently.

Your NK cells try to keep them suppressed. They are working overtime, day after day, trying to contain a thread that never fully goes away. Eventually, they get exhausted from the chronic battle.

Their numbers drop, their function declines. Your T-cells take over, staying perpetually activated because the thread is still there. And you feel it as this vague, persistent unwellness that no one can explain, fatigue that doesn't improve with rest, brain fog susceptibility to every infection that comes along.

Research published in the Journal of Medical Virology found that people with chronic fatigue often have elevated antibodies to EBV early antigen, a marker of active viral replication, along with depleted natural killer, cell function.

The virus never fully went away, it's been simmering in the background, exhausting the immune system for years. But here's when it gets even more interesting.

Viral reactivation isn't the only thing creating this pattern. mold exposure kept showing up in my investigations. And I have to tell you, when I first started looking into this years ago, I was skeptical.

It sounded fringe, but the research is compelling, and what I have seen clinically is undeniable.

Chronic Viral Reactivation

When you live or work in a building with hidden water damage, and studies suggest up to 50% of buildings in the United States have some degree of water damage, you are breathing in mold spores and mycotoxins daily.

Mycotoxins are the toxic compounds that mold produces and they are incredibly small. They can penetrate deep into your lungs, enter your bloodstream and accumulate in your tissues.

Your innate immune system recognizes these as threats. Macrophages try to engulf the mold spores. Natural killer cells get activated. Inflammatory cytokines get released.

But here's the problem. If you are being continuously exposed, your immune system can't win. It's fighting a battle where the enemy keeps arriving faster than it can be eliminated.

Over time, the innate immune system gets exhausted and starts to dysfunction. A fascinating study in the journal Toxins found that mycotoxin exposure specifically depletes natural killer cell activity while increasing inflammatory markers.

The pattern is the same. depleted innate immunity, over-activated adaptive immunity, chronic inflammation. And many people have no idea they're being exposed.

The water damage might be behind a wall, under the flooring, in the HVAC system. There's no visible mold. They just know they feel terrible. And it gets worse the longer they stay in that environment.

Environmental toxins beyond mole play a huge role too. Heavy metals like mercury, lead, arsenic and cadmium accumulate in your tissues over years from dental amalgams, contaminated water, certain fish, occupational exposure, even some cosmetics and supplements.

These metals create persistent oxidative stress and inflammation. Your immune system recognizes them as threats and stays activated trying to protect you from something it can't eliminate without specific intervention.

Research from the journal Environmental Health Perspectives has demonstrated that heavy metal exposure suppresses natural killer cell function while promoting chronic immune activation.

The body is trying to protect itself but the constant effort depletes its resources. Chronic infections beyond viruses matter too. Lyme disease and its co-infections, dibesia, bartonella or leuka can create exactly this immune pattern.

These organisms are masters at invading the immune system, hiding in tissues and creating persistent low-grade infections. The immune system knows something is wrong, stays activated, but can't fully clear the threat.

Gut infections play a role as well. Chronic bacterial overgrowth, parasites, fungal overgrowth. Your gut contains about 70% of your immune tissue. When there is chronic infection or dysbiosis in the gut, it creates ongoing immune activation that affects your entire system.

Mold, Toxins, and Heavy Metals

Even chronic dental infections, root canals, harboring bacteria, periodontal disease, cavitations from old extractions can create this pattern of immune exhaustion.

The mouth is intimately connected to systemic health in ways we are just beginning to fully appreciate. And then there is something that might not seem like it belongs on this list, but absolutely does.

Chronic stress itself. When your stress response stays activated for months or years, and in our modern world, who doesn't? It directly impacts your immune function.

Cortisol, your main stress hormone, has profound effects on the immune system. In acute situations, cortisol is helpful. It modulates inflammation and helps your body respond to threats.

But when cortisol stays elevated chronically, it becomes destructive. Research published in Brain Behavior and Immunity found that chronic psychological stress specifically suppresses natural killer cell function while leaving the adaptive immune system activated.

Your body can't distinguish between running from a predator and running from deadline to deadline on four hours of sleep. The stress response is the same.

And the immune consequences are the same. What the research reveals is both simpler and more profound than I expected. This isn't one disease. It is a common pathway that multiple triggers lead to.

a final common pathway of chronic immune activation with depleted innate immunity and conventional medicine isn't testing for it. Now, why does this matter for kidney health specifically?

This is something I keep coming back to because it connects everything I see in my practice. The kidney doesn't exist in isolation. It's downstream of everything else happening in your body.

When your T cells are chronically activated, they don't just sit there being activated. They release inflammatory cytokines. chemical messengers that travel throughout your body and affect every organ system.

Interleukin 6, interleukin 1 beta, TNF alpha, interferon gamma. These are the signals of chronic immune activation and they have profound effects on kidney tissue.

These cytokines damage the endothelium, the lining of your blood vessels, including the incredibly delicate filtering units in your kidneys called chlomeruli.

Each kidney contains about a million of these microscopic filters. They're designed to handle normal blood flow and normal levels of inflammatory signals.

Chronic inflammation damages these structure and function over time. Inflammatory cytokines also generate oxidative stress, which is an imbalance between damaging free radicals and your body's ability to neutralize them.

Oxidative stress directly harms kidney cells, accelerates fibrosis, and impairs the kidney's ability to regenerate and repair. But here's something that took me even deeper into this rabbit hole.

Other Chronic Infections and Stress

The gut-immune kidney access. About 70% of your immune system is located in and around your gut. The gut-associated lymphoid tissue. When chronic immune activation is present, it almost always involves the gut.

The gut barrier becomes compromised, what's often called leaky gut or intestinal permeability. Bacteria and bacterial products that should stay inside your intestine starts leaking into your bloodstream.

One of these products is called lipopolysaccharide or LPS, a component of bacterial cell wall. When LPS enters the bloodstream, it triggers a massive immune response.

Your body treats it like an invasion because bacteria in the blood is supposed to be an emergency. This creates more inflammation, more immune activation, more cytokine production.

And where does a lot of this inflammatory burden end up? The kidneys. Your kidneys filter your entire blood volume about 40 times a day. Every inflammatory signal, every immune complex, every toxin that's circulating, your kidneys are exposed to all of it.

When systemic inflammation is elevated, kidney inflammation is elevated. When immune complexes are circulating, they can deposit in kidney tissue and cause damage.

This is why I see so many patients with kidney disease who also have gut issues. chronic infections, environmental exposures, and immune dysfunction. It's not a coincidence.

It's all connected through the immune system. A study published in Kidney International found that patients with chronic kidney disease have significantly altered immune profiles compared to healthy controls.

Specifically, they showed signs of chronic immune activation with reduced innate immune function. The researchers called it immunosenescence, premature aging of the immune system.

But I think it's often not aging at all. It's exhaustion from fighting chronic battles that were never identified or addressed. One case in particular has stayed with me.

The man I mentioned at the beginning, when we ran immune cell subsets on him, there it was. His CD3 T cells were at 94%, well above the normal range of 55 to 86%. His CD8 cytotoxic T cells were elevated at 42%, and the normal is 10 to 35. But his natural KS cells, 18. when they should have been at least 24 and ideally between 50 and 350. His immune system was running on fumes.

We went looking for what was driving this. What we found was chronic Epstein-Barr reactivation. His early antigen antibodies were elevated.

How Immune Activation Harms the Kidneys

indicating active viral replication, something his previous doctors had never tested for, and significant mold exposure from a basement leak that had been slowly spreading for over a year.

He had no idea. There was no visible mold, just dampness. He noticed occasionally and assumed it was normal. His body had been fighting these invisible battles for so long that his innate immune system had essentially given up.

Over six months, we addressed the mold remediation. He had to do some significant work on his home, including removing drywall and addressing the water source.

We supported his system in managing the viral reactivation with targeted antivirals and immune support. We rebuilt his gut barrier, which testing showed was significantly compromised.

And we specifically focused on restoring his natural killer cell function with targeted nutrients and medicinal mushrooms that have research behind them for innate immune support.

His natural killer cells came up to 95%, still not optimal, but a dramatic improvement. His T-cell percentages normalized. His energy returned. He stopped catching every illness that went around.

His brain fog lifted and his kidney function, which had been declining steadily for years, stabilized and actually improved by about six points of EGFR.

Now, I want to be very clear. His results won't be everyone's result. What works depends entirely on what's driving the pattern in each individual and kidney function improvement varies significantly from person to person.

Some people see dramatic changes, others more modest improvements. But what stayed with me from his case is how completely invisible this was on standard testing and how reversible it became once we knew what we were looking for.

There's another dimension to this that I think is important to understand. The autoimmune connection. When your

adaptive immune system is chronically over-activated, when T cells are working overtime trying to compensate for depleted innate immunity, something can go wrong.

The immune system can lose its ability to distinguish between foreign invaders and your own tissues. This is called molecular mimicry. Some pathogens have proteins that look structurally similar to proteins in your own body.

When your immune system develops a response against the pathogen, those antibodies can cross react with your own tissues. If the infection is cleared quickly, this isn't usually a problem.

But when the immune system is chronically activated, Against a persistent infection, the risk of autoimmunity increases. Epstein-Barr virus, in particular, has strong associations with autoimmune diseases.

Research has linked chronic EBV to lupus, multiple sclerosis, rheumatoid arthritis, and Sjogren's syndrome.

Patient Example: Testing and Recovery

The virus contains proteins that mimic human proteins and chronic immune activation against EBV can spill over into autoimmune attack. This matters for kidney health because many forms of kidney disease have autoimmune components.

IgN nephropathy, lupus nephritis, membranous nephropathy, these all involve the immune system attacking kidney tissue. When I see patients with these conditions, I always investigate for chronic immune activation patterns.

When we find elevated T cells, depleted natural killer cells, and underlying triggers that were never identified, addressing those triggers doesn't cure the autoimmune condition, but it can reduce the immune pressure, decrease inflammation, and help stabilize kidney function in ways that just treating the symptoms doesn't accomplish.

So here's what I want you to take from all of this. If you're dealing with chronic fatigue, recurrent infections, kidney concerns, autoimmune disease, or symptoms that don't make sense despite normal blood work, your immune system might be telling you a story that standard tests aren't capturing.

The first step is knowing this pattern exists and asking for the right testing. Request lymphocyte subset testing, sometimes called immune cell subset panels or T-cell panels.

This measures your CD3, CD4, CD8, CD19 and natural killer cells. Most doctors don't run this routinely. It's typically ordered by immunologists or when HIV or specific immune deficiencies are suspected.

But many physicians will order it if you explain why you're asking. If you find elevated T-cell percentages, especially CD3 above 86, CD8 above 35, and low natural killer cells, particularly absolute counts under 100 or severely concerning under 50, that's the pattern we are talking about.

The second step is investigating what's driving the chronic activation. That means looking at chronic viral infections, comprehensive EBV panels that include early antigen antibodies, along with CMV and potentially HHV6.

It means evaluating environmental exposures, urine mycotoxin testing if mold is suspected, provoked heavy metal testing if toxin accumulation is a concern.

It means assessing gut health, comprehensive stool testing, testing for intestinal permeability, and it means looking at chronic infections beyond viruses, Lyme and co-infections if there is any history of possible exposure.

This is detective work. It takes time and systemic investigation, but it's targeted detective work. You're looking for specific categories of triggers that are known to create this pattern.

The third step is supporting your immune system's recovery while you address the root causes. Your natural killer cells can rebuild. They respond beautifully to adequate vitamin D.

Autoimmunity and Kidney Disease

Most people with low natural killer cells have suboptimal vitamin D levels. And getting your levels up to 50 to 80 makes a significant difference. Zinc and selenium are essential for natural killer cell development and function.

Medicinal mushrooms like reishi, turkey tail, mitaki, and cordyceps have solid research behind them for supporting innate immunity. These aren't just folk remedies.

They contain beta-glucans and other compounds that specifically enhance natural killer cell activity. Supporting your mitochondria matters too. Immune cells are energy intensive.

When they are chronically activated, they are burning through ATP at an incredible rate. CoQ10, alpha lipoic acid, L-carnitine, B vitamins, and magnesium help give your immune cells the energy they need to function properly.

And addressing stress and sleep isn't optional. It's essential. Chronic stress directly suppresses natural killer cell function. Poor sleep prevents immune recovery.

These aren't luxuries. They are biological necessities for immune restoration. So here's what I keep coming back to. Your immune system isn't broken. It's exhausted from fighting battles it was never meant to fight alone for this long.

And when you give it the right support, remove the chronic triggers and address what's actually driving the dysfunction, it can recover. Your body has that capacity.

Your natural killer cells can rebuild. Your T-cells can calm down. The inflammation can resolve. The question is whether anyone is looking in the right places to help it.

There's still more I'm investigating about the connections between immune dysfunction and kidney disease.

Testing, Support, and Root-Cause Care

How the gut microbiome influences both. how specific infections create specific patterns of kidney damage, how environmental toxins accumulate in kidney tissue.

The more I learn, the more I see how interconnected these systems are and how addressing root causes can change outcomes that seemed fixed. If this episode raised questions about your own health or if you're dealing with kidney concerns and want a personalized approach that looks at your unique root causes including immune function, Chronic infections, environmental exposures, gut health, and all the factors that standard medicine often overlooks, we offer consultations at the Kidney Institute.

We'll dig deep into understanding what's really going on in your body, not just manage symptoms, but address the why behind your condition. Visit DrBiswa.com to learn more about how we can help you get to the bottom of what's really going on.

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