

OPTIMAL HEALTH

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“Live Long And Prosper”

After hearing of the passing of Leonard Nimoy, aka ‘Spock’ of Star Trek, we began pondering at the ISM Clinic about what it takes to “live long”:

Dr Carolyn said “It’s all about gut health.”
Shawna countered “Stress is what kills us.”
Dr Marian said “It’s HervK and the balance of Th1 and Th2 immune states.”
Kelly stated that “Hormones are at the core.”
Ally felt that “Biochemical balance and homeostasis are essential.”
Bob pointed out the benefits of “a glass of great scotch”.

In fact, they’re all right! At ISM, after 20 years of working with thousands of people battling various health conditions, we know only too well how marvelously complex the human immune system is and how unique each of us is in the way our bodies handle health challenges.

Hence, we are dedicating the next three issues of this newsletter to the question of how to live long, and why some people do and others don’t. In this month’s issue: ‘Why Me?’, ‘Why Am I Still Sick?’, and ‘Our Central Control of Health – the Immune System’. We also provide a look at ‘A New Model of Personalized Health’.



We don’t want you to come away from this series feeling overwhelmed. Instead, I hope we persuade you to embark on a vigilant and consistent immune system empowerment program.

In the immortal words of Spock, “Change is the essential process of all existence”. It is ISM’s mission to continue to challenge, change and improve the concept of integrated healthcare so we may all “Live Long and Prosper”.

Kathryn O’Neill, CEO

Why Me?

Have you ever asked, 'Why am I sick'? Often when a person is diagnosed with a major chronic health problem, that person at least wonders, "How could this happen to me? It came so suddenly." Medicine can rarely answer this question. For 90+ per cent of diseases, the cause is not known. And how can you cure a disease – permanently – if you don't know what caused it in the first place?

The fact of the matter is your illness did not come suddenly. The disease process started long before it was diagnosed – often as long as 10 or 20 years before you learn that you have the condition. Usually it begins when a critical mass of factors start you down the road to having a diagnosable disease. These factors can be any number and combination of things. It could be too many refined foods, excess amounts of saturated fats and fried foods, not getting enough vitamins and minerals, accumulation of toxins, not enough exercise, not enough rest, exposure to pollutants and chemicals, a weakened immune system, a high-stress life, genetic predisposition to the disease, chronic bacterial or viral infection, and other factors. Not any ONE of these things is THE reason for the sickness; rather it is the combination of factors and how your unique body make-up deals with them.

These combined factors merely set you on the road toward disease. Once you are on that road, there is still no guarantee that you will end up being diagnosed with the disease. You are kept going down the road by the initial factors being reinforced or continued, and perhaps by other factors being added. If the disease process continues uninterrupted, eventually it will come to a point where you will

be officially diagnosed with a disease. However, at any point along that road you can halt the process and usually even reverse it by addressing the factors that initiated it and/or reinforced it.

ISM believes that when the disease process originally started, you had fallen from 'optimum health'. Once a person has less than optimum health, common sense dictates that it must be addressed, even though the person has not yet been diagnosed with a disease and a medical doctor has pronounced him or her free of illness. Conventional medicine will not even recognize that a problem exists until the disease process is way down the road and clinical symptoms are being manifested that can be readily observed or tested in the lab.

Our body's health is dependent on the health of the cells we are made from. Millions of cells have been woven together in an intricate puzzle that creates human life. When some of these cells become unhealthy and die or replicate incorrectly the system starts to break down.

Symptoms are your body's way of telling you something is wrong. It is out of balance.

Just imagine your body is a city. When one little part stops working it can affect every other part – like a wreck on the highway or when the trash collectors stop working. If the problems are taken care of promptly and effectively these are minor blips in the life of the city, but if left untreated they can slow or cripple the city's ability to function properly.

Your body and its cells work in much the same way. While the body at all times tries to keep in

homeostasis (equilibrium), things are occasionally going to break. Small problems will occur with a cell's ability to function, repair itself or maybe even replicate. These problems can occur for many reasons:

- As we age, our health defenses directly drop.
- Chronic health conditions can be genetic or 'by chance' or more commonly the result of some environmental/ physical imbalance.
- The body's metabolism is made up of millions of different cell components interacting with the already complex immune system.
- The immune system itself is also made up of millions of different interactions at any one time.
- Lifestyle and stresses play a role.

- External factors like radiation from the sun, a toxic chemical inhaled from a hazardous cleaner, or exposure to pesticides will have an impact.

There is no human that is immune to sickness. If your body is in balance it corrects the problem in a timely manner, but if not, the system begins to deteriorate. A life out of balance will catch up with you eventually. The connection between illness and lifestyle doesn't happen overnight, in fact, illness is probably among the last signs of an enduring pattern in life.

When life puts you in a tough situation, don't ask, 'Why me?'; instead say 'Try me'. We are continually greeted by uncertainty and life hands us one challenge after the other. The only thing we can control is our reaction to these challenges.

Good health is not a given. It is a state of mind and body that is earned.

Why am I STILL sick?

"I eat a pound of kale every day. My cupboards are full of medicines and supplements. Why am I STILL sick?"

By the time we get sick, it's probably because we've been entrenched in a way of being for years or decades. So it does not logically follow that we can quickly put our house back in order with a few yoga twists, a drug to mask the symptoms and a couple of vitamins!

The truth is that we do not know the cause of most disease. There are so many variables involved at any one time that all a person can do is optimize their chances of prevention. When we do get sick, it is even more critical to do everything we can to optimize the body's

metabolic and immune strength resources. The body's protein demand increases with any trauma or stress because the body needs it to make immune cells and antibodies, to reduce inflammation and to mend the trauma. The body equally needs support to optimize medical outcome and protect itself from the side effects of pharmaceuticals and other interventions.

But not everyone will get sick or get healthy at the same rate. Why do some people heal, while others stay sick? Here are the biggest reasons:

Risky Behaviour

This just means indulging in something that increases your risk. It may be smoking, or drinking too much, or eating a very unhealthy diet. Some of us look after ourselves better than others. But some people look after themselves really well and still get sick, while others don't seem to look after themselves at all and never do. This is possibly where genetics and 'chance' enter into the picture.

Chance

Many changes in genes are accidental. Cells divide and each time they do, they have to copy their genetic code completely. Sometimes mistakes happen. Many of these mistakes are fatal to the cell and the daughter cells die. Other times the damage is repaired. Some changes don't make very much difference to how the cell works. But other times they may take that cell one step further along the road to disease.

Age

The longer we live, the more likely we are to gather enough genetic damage to experience a chronic health condition (cancer, cardiovascular, etc.). Most of us die of something else, such as old age or acute illnesses, before we get to that point. Further, like the rest of the functions of the body, the immune system activity decreases as we age. This relates to the decreased function of the immune system cells that no longer respond as rapidly and effectively against potential enemies.

Chronic stress

Stress, loneliness, isolation, depression and anxiety all suppress the immune system. The effects of chronic stress on both the physical and neuro (electrical) functioning of the immune

system are mediated by different hormones. Adrenaline is released in a situation of stress and noradrenaline released by nerve terminals that signal immune system organs. Prolonged activation of these systems produces an immunosuppressive effect because it diminishes antibody production and the activity of some immune cells, resulting in increased susceptibility to infectious diseases.

Toxins

Excessive exposure to toxic substances produces a harmful effect on immune function. In this sense, our environment contains many substances, which consumed at high levels, contribute to weakening. Some common examples are certain drugs, tobacco and alcohol intake. But it can also include cosmetics, plastics, water and air pollution and many household chemicals.

Physical inactivity

Lack of physical activity slows the cleaning of certain toxins and waste products generated by our own body as part of our normal metabolism. As you age, your body naturally loses muscle mass to the tune of about 1 percent a year after age 30; but when you are sedentary and ignore the need for regular muscle contraction to stimulate muscle growth, muscle wasting accelerates, and it can start much earlier in life.

Muscle wasting has two deadly side effects. First, with less muscle, your metabolism slows down. As your metabolism slows, you burn fewer calories and have less energy. Trapped in the inactivity, you gain fat weight. Second, the less muscle you have, the less sugar is burned from your blood. Thus, muscle wasting not only prevents fat burning, but also leads to a higher risk of diabetes and heart and kidney disease.

Fatigue

When we sleep, repair takes place, and new cells are created in all body systems including the immune system. Fatigue suppresses the activity of certain immune cells.

Drugs

Drugs of all types – over the counter, recreational (including alcohol), and prescription – can contribute to our immune load. Some can have minor side effects, some can cause organ strain, some can cause death. Between 210,000 and 440,000 patients each year who go to the hospital for care suffer some type of preventable harm, often drug related, that contributes to their death. That makes medical errors the third-leading cause of death in America, behind heart disease, which is first, and cancer, which is second.¹

Genetic predisposition

There are such things as cancer or diabetes or cardiovascular disease-prone families. These

families have a much higher incidence of health conditions than other families in the population. They probably have a change (mutation) in a gene that is crucial in the development of many different diseases. Often the younger someone is when they develop an adult cancer, the more likely it is that there are genetic factors at work.

But how much are we pre-destined to a fate dictated by our genes? Researchers have found that while heritable factors do influence the immune system somewhat, non-heritable factors are more important.² Ultimately, it is going to depend on the individual.

Infection

Infectious diseases and autoimmune disorders are two of our biggest killers. The immune system has to respond well to infections but not so robustly that it causes autoimmunity. It's always a balancing act.

Our Central Control of Health—the Immune System

Our immune system is incredibly complex – no – *miraculously* complex, with diverse armies of white blood cells and signal-sending proteins coursing through our veins, ready to mount an attack on would-be invaders. Everyone's immune system is slightly different – a unique mixture of millions of these cells and proteins.

The strength of our immune system 'hardware' to fight off disease varies considerably from person to person, and is affected by all the factors discussed above, making it weaker and thus more prone to the development of various diseases.

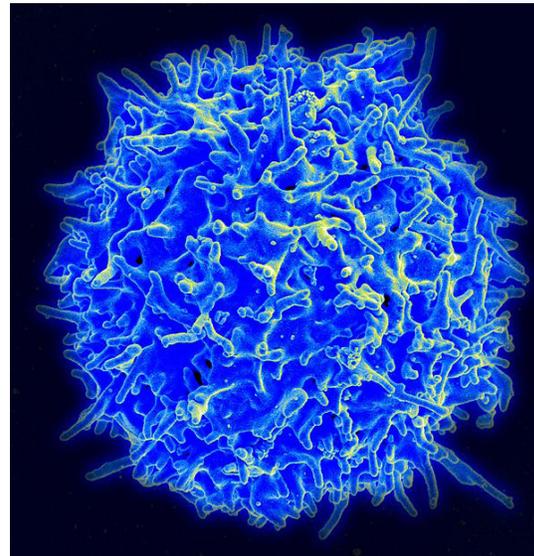
The ideal state of the immune system is one of balance, where immune reactions are strong

enough to clear tumors and infections, and yet controlled enough to prevent responses towards self or harmless antigens (substances that cause your immune system to produce antibodies). As coordinators of immune activity, the balance of T-cells is critical to maintaining this disease-free state.

The key difficulty in maintaining a balance of immune activity is the mechanism by which T-cells recognize antigens. Elaborate processes, only partially understood, have therefore needed to evolve in order to create immune balance. Despite the evolution of complex immune tolerance mechanisms, some individuals do develop immune pathologies.

These can occur due to an overly active immune system, producing autoimmunity or allergy, or an ineffective immune system, resulting in a failure to control infections or cancers. While these immune pathologies can occur due to simple genetic traits, the vast majority are complex, with the interaction of multiple genetic and environmental effects.

Because the immune system is resilient, it can meet many challenges, but there is a limit to how many problems it can handle all at once. The 'straw that breaks the camel's back' could be a stressful situation, a virus, or a smoke-filled room, depending on your vulnerabilities. Each of us is biochemically unique, which explains why our reactions to both immune challenges and medical treatments are not completely predictable.



Scanning electron micrograph of a human T cell

A New Model of Personalized Health

At ISM, after spending over two decades in clinical health care, we are still amazed by how sparse the evidence is on which medical decisions are based.

"Science is not static but rather constantly evolving."

Conventional medicine today is actually applied science, simply because what is accepted as "scientific" today is discarded by medical practitioners tomorrow in the light of newer evidence. Hormone replacement therapy for women after menopause is an example of a once widely implemented treatment that we have now largely abandoned.

Medicine is the application of certain sciences (molecular biology, biochemistry, medical physics, histology, cytology, genetics,

pharmacology, neuroscience) to – ultimately – individuals. Each individual is the product of a unique, lifelong sequence of social, cultural, economic, and psychological (as well as physical, chemical, biological, and genetic) influences. To this day, we don't really know why some people get sick and others do not. We don't even fully understand what causes over 90% of the diseases we can now diagnose.

By focusing on what can readily be quantified, today's conventional medicine ignores what cannot be quantified, such as the social or environmental determinants of health and disease. Science prefers to isolate and understand one thing at a time. For political and economic reasons, it's safer for medical research to stick to the limited agenda of what's easily measured. Medicine's historical desire for the respectability that comes with being

a science gets in the way of discovering what could actually make us healthier.

We don't know how, when or even if medical science is going to change. But, we have to get smarter about how we try to improve our true health. We need to move away from a healthcare system that cares more about profiting from the narrow agenda of scientific

medicine and towards a system that cares about improving health.

ISM believes the next wave of quality healthcare improvement will be a move away from homogenized care and a move toward personalizing it, with the help of individualized approaches such as ISM Aminomics.

"Optimal Health" is written and produced by staff, associates and friends of Immune System Management Inc.

It is our philosophy that diverse health care modalities can work in conjunction with each other as part of a unified team rather than in competition. Such an integrated approach ultimately will lead to safer and more effective health care.

Optimal Health will act as a gathering place and forum for comments and articles from medical professionals, educators and researchers from all health care specialties to the ultimate benefit of both the patient and the health care provider. We aim to share up-to-date news, information and diverse views for the growing integrative, alternative and complementary medicine movement, particularly as it applies to cancer and other chronic diseases.

Your comments and article contributions are welcome.
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- 1 Journal of Patient Safety: September 2013 - Volume 9 - Issue 3 - p 122-128
 - 2 Cell Volume 160, Issues 1-2, p37-47, 15 January 2015
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