How Chlorine Affects Our Health

by Howard Straus, Editor

Chlorine is ubiquitous in our environment from man-made sources. Its major problem is that ... it works. At least, it works to disinfect water and whatever is immersed in the water cheaply and effectively. If that were the only thing it did, it would be a great boon, but, alas, it is not.

In order to understand the effect that chlorine has on our physiology, one must start with two basic concepts: iodine is the activator of our thyroid, and chlorine and iodine have the same chemical valence, or value.

The first concept is important because our thyroid is the thermostat of our immune and energy-producing system. When we have an infection, our thyroid senses it and turns our “thermometer” up, giving us a fever. The fever weakens abnormal and infectious organisms and cells, which are less resistant to high temperatures than our healthy body cells. When the germs or invaders have been weakened, they are more easily prey to our defenses. The thyroid gland is activated by trace amounts of iodine, one of the less active of the elements known as “halogens.” If you are familiar with the periodic table of elements, you will know that the lighter the halogen, the more active it is, and the heavier, the less active. Activity determines which element is more aggressive in combining with other elements and compounds, so the more active element (chlorine) is more likely to combine with the same chemical than the less active (iodine).

In normal human activity, at least before technology, there was no major threat from chlorine, but now we have perfected the process of extracting cheap chlorine for many purposes. Chlorine is so effective a bleach that we use it in our laundry (Clorox and others), we use it in our public water systems, public swimming pools are heavily chlorinated, foot baths in public locker rooms, kitchen and bathroom cleansers contain chlorine for disinfection, and hot tubs must constantly be replenished with it since it evaporates so readily. Our lungs absorb chlorine gas directly into our bloodstream. Literally, anytime you can smell chlorine, you are ingesting it into your blood. This constant exposure to chlorine makes it a plentiful competitor to iodine for chemical partners in our thyroid.

When the iodine is pushed out of compounds from the places in the thyroid it should be, the thyroid loses some or all of its functions. Let’s look a little further at the functions and see if we really want to do without them.

The disease and infection-fighting fever was mentioned above. But that is not the only temperature regulation the thyroid does. When we turn in at night, the thyroid senses a lack of movement in our limbs and muscles, and turns the thermostat down by three quarters of a degree (F) or so. This helps us to sleep well instead of being full of energy all night. In the morning, the opposite effect helps us to wake up and get on with our physical and mental activities, turning the thermostat up that same three quarters of a degree. If the thyroid is not strong enough to increase our temperature to working levels, not only are we more susceptible to infection, but we also face difficulty in waking up to the day. We “just can’t seem to get going in the morning.” Recognize that? All day long, we need some kind of stimulation from mild drugs: coffee, sugar, cigarettes and so forth. Since the body burns fuel to provide the energy that we use, if we can’t produce enough energy, we are not burning the fuel fast enough, and begin to put on weight from the constant sugar input we use to boost our flagging energy. You will recognize the symptoms above as something like "hypothyroidism."

There is another, less obvious, function of the thyroid, and that is to send the liver hormonal signals to tell the liver to remove cholesterol from the bloodstream. This is more serious than the low body temperature or sweet tooth. If the thyroid is not strong enough to send out the appropriate signals, less cholesterol will be removed from the blood than is necessary, and we will start to get arterial plaque from the excess cholesterol floating around in our blood. Arterial plaque is a life-threatening problem, so we need to keep this in mind when deactivating our thyroid.

Now, which of the above functions of the thyroid are you willing to do without? The infection-fighting and cancer-fighting part? The energy production part? The effective thermostat part? The weight control part? Or the cholesterol control part? None of these are superfluous functions; all are necessary parts of our regulatory structure, and must be optimized, not destroyed. Yet, destroy them we do with our desire for a cheap disinfectant.

It is not easy to avoid chlorine, but it is highly worthwhile to do so. Don’t linger where the smell of chlorine can be detected. Get chlorine filters for your showerheads. Avoid public swimming pools and hot tubs. Use non-chlorine bleaches and cleansers. Avoid closed areas where chlorine is being used, and recognize it for a threat to your health and that of your family.