In one scientific study, 71% of patients with chronic pain were found to have vitamin D deficiency.

The vitamin D receptor is found in certain cells called nociceptors, which sense pain. One study in rats showed that a deficiency in vitamin D led to pain and sensitivity.

And a few human studies have shown that taking vitamin D supplements have helped people with chronic pain. Remember that aches and pains are your body's way of signaling there's something wrong.

Bone and lower back pain.

This would be a sign that you have a severe deficiency or have been deficient for a very long time. Pain results from a huge loss of calcium from the bone tissue, which takes time to develop. See your doctor at once.

Getting frequent infections.

Vitamin D directly interacts with the cells in your body that are responsible for fighting infection. Scientific studies have shown a link between low vitamin D levels and respiratory tract infections like colds, bronchitis, influenza, and pneumonia.

If you find yourself getting sick often, have your doctor check your vitamin D levels.

Slow wound healing.

Test-tube studies suggest that vitamin D increases the levels of compounds in your body that are responsible for forming new skin during wound healing.

It was also found that people with lower vitamin D levels are more likely to have higher levels of inflammatory markers that can get in the way of proper healing.

If you notice you're not healing well from a wound or surgery, have your doctor check your vitamin D levels.

Mood changes like depression.

Scientists don't exactly know why vitamin D is associated with depression, but many depressed patients also have low vitamin D levels. The good news is, when you rectify the deficiency, the depression is also lessened a bit.

Hair loss.

Hair loss in women has been linked to low vitamin D levels, but there is little scientific research on this to date.

An autoimmune disease called alopecia areata causes severe hair loss from the head and other parts of the body. This disease is associated with rickets, which we already said was a symptom of severe vitamin D deficiency in children.

Low vitamin D levels may be a risk factor for the disease so have your doctor check your levels if you're losing hair.

How a Deficiency Affects You

The reality is, if your body isn't producing sufficient levels of Vitamin D, it can wreak havoc on your system.

This includes:

Heart Disease and High Blood Pressure:

A growing number of scientific studies are pointing to vitamin D deficiency as a risk factor for heart attacks, congestive heart failure, peripheral arterial disease (PAD), stokes, and high blood pressure. Vitamin D is known to help regulate blood pressure in the kidneys as well.

Bone Disorders and Osteoporosis:

Your bones are constantly being remodeled. However, as you age (especially if you're a woman during menopause) the breakdown rates exceed bone buildup rates. Over time, bone density declines.

Osteoporosis is one effect of long-term calcium and/or vitamin D deficiency. Bones also depend on the surrounding muscles for strength, and vitamin D is needed for proper growth and development of muscle tissue.

Diabetes:

Vitamin D helps your body regulate the amount of blood sugar levels in the pancreas. It also helps improve your body's sensitivity to insulin, which is the hormone your body makes to regulate your blood sugar levels.

Vitamin D can thus prevent insulin resistance, which can lead to diabetes.

Infections:

Before modern antibiotics were invented, some infections (like tuberculosis) were treated by having the patient get plenty of sunlight and take cod liver oil daily.

Several studies have shown a relationship between vitamin D deficiency and an increase in infections.

Autoimmune Disorders:

There is increasing evidence linking low levels of vitamin D in the body with some autoimmune disorders like multiple sclerosis (MS), rheumatoid arthritis (RA), inflammatory bowel disease, and systemic lupus erythematosus (SLE).

Patients with these disorders usually have lower levels of vitamin D than patients without an autoimmune disorder.

Certain Types of Cancer:

Vitamin D helps to keep abnormal cells from multiplying in breast and colon tissues, which can help prevent and maybe even treat breast and colon cancer, and possibly prostate cancer as well.

Pregnancy Complications.

A 2019 study showed a link between low vitamin D in pregnant women and the risk of preeclampsia and giving birth early. There may also be a link with gestational diabetes.

And women with low vitamin D are more likely to get bacterial vaginosis during pregnancy.

However, it's important to note that getting too much vitamin D may be associated with an increased risk of the child developing food allergies in the first two years of life.

Foods that Contain Vitamin D

Modern science often adds vitamins and/or minerals to processed foods. For example, Vitamin D is added to most dairy products and some grains.

But most vitamin D is found in animal products like fatty fish (tuna, salmon, mackerel) and beef liver.

Take a closer look at the levels in different foods and supplements;

- Cod Liver Oil – 1360 International Units (IU) per tablespoon.
- Cooked Trout – 645 IU in three ounces
- Cooked Swordfish – 566 IU in three ounces
- Cooked Salmon – 447 IU in three ounces

- Mushrooms (white, raw, sliced & exposed to UV light) – 366 IU in ½ cup
- Tuna (canned in water & drained) – 154 IU in three ounces
- Fortified Orange Juice – 137 IU in one cup
- Fortified Milk – 115 to 124 IU in one cup
- Fortified Soy, Almond, or Oat Milk – 100 to 144 IU in one cup
- Fortified Yogurt – 80 IU in six ounces
- Sardines (caned in oil & drained) – 46 IU in two sardines
- Scrambled Egg – 44 IU in one large egg
- Cooked Beef Liver – 42 IU in three ounces
- Egg Yolk – 41 IU in one large yolk
- Fortified Cereal – 40 IU in one cup
- Cheddar Cheese – 12 IU in one ounce
- Swiss Cheese – 6 IU in one ounce
- Portabella Mushrooms – 4 IU in ½ cup
- Fruits & Vegetables – 0 IU
- Grains & Cereals – 0 IU