# **Vitamin B12 Deficiency: Subacute Combined Degeneration**

### **BARD PROMPT:**

Patients with vitamin B12 deficiency may have decreased vibratory sensation to certain tuning fork frequencies. Tell me which frequency loss of vibratory sensation is the earliest tuning forks measure.

# **BARD RESPONSE:**

The earliest tuning forks measure for vitamin B12 deficiency is the 256 Hz tuning fork. This is because the 256 Hz tuning fork is the lowest frequency that can be detected by the human ear. Patients with vitamin B12 deficiency may have decreased vibratory sensation to this frequency, which can be detected by a doctor using a tuning fork.

Other frequencies that may be affected by vitamin B12 deficiency include 512 Hz, 1024 Hz, and 2048 Hz. However, the 256 Hz tuning fork is the most sensitive measure for detecting vitamin B12 deficiency.

Vitamin B12 is a nutrient that is essential for the proper functioning of the nervous system. A deficiency in vitamin B12 can lead to a number of neurological problems, including decreased vibratory sensation. If you are experiencing decreased vibratory sensation, it is important to see a doctor to rule out a vitamin B12 deficiency.

Here are some additional information about vitamin B12 deficiency:

- Vitamin B12 is found in animal products, such as meat, poultry, fish, eggs, and dairy products.
- Vegetarians and vegans are at an increased risk of vitamin B12 deficiency.
- Symptoms of vitamin B12 deficiency can include fatigue, weakness, pale skin, constipation, and numbness or tingling in the hands and feet.
- If you are experiencing symptoms of vitamin B12 deficiency, it is important to see a doctor to get a diagnosis and treatment.

Treatment for vitamin B12 deficiency usually involves taking oral supplements or injections of vitamin B12. With treatment, most people with vitamin B12 deficiency experience a reversal of their symptoms.

#### **BARD PROMPT:**

perception of tuning fork vibration is a test of presence or absence of peripheral neuropathy of B12 deficiency known as subacute combined degeneration (SCD). Physicians often use tuning fork vibration perception of patients suspected to have early signs of SCD. The two tuning forks available for physicians are rated at 128 vps and 256 vps. Which tuning fork will detect the earliest manifestation of SCD?

### **BARD RESPONSE:**

The 256 vps tuning fork will detect the earliest manifestation of SCD. This is because the 256 vps tuning fork is the lower frequency of the two, and patients with SCD often have decreased vibratory sensation to lower frequencies.

A tuning fork is a small metal instrument that vibrates when struck. The frequency of vibration is determined by the size and shape of the tuning fork. The 256 vps tuning fork vibrates at a frequency of 256 cycles per second. This is the lowest frequency that can be detected by the human ear.

Patients with SCD often have decreased vibratory sensation to lower frequencies. This is because vitamin B12 is essential for the proper functioning of the nervous system. A deficiency in vitamin B12 can lead to a number of neurological problems, including decreased vibratory sensation.

If a patient with SCD is unable to feel the 256 vps tuning fork, it is a sign that they may have early SCD. The doctor may then order further tests to confirm the diagnosis.

Here are some additional information about subacute combined degeneration (SCD):

- SCD is a neurological disorder that is caused by a deficiency in vitamin B12.
- Symptoms of SCD can include fatigue, weakness, pale skin, constipation, and numbness or tingling in the hands and feet.
- If SCD is not treated, it can lead to permanent neurological damage.
- Treatment for SCD usually involves taking oral supplements or injections of vitamin B12. With treatment, most people with SCD experience a reversal of their symptoms.

# **BARD PROMPT:**

How long can a patient with newly detected SCD go before administrating vitamin B12 in therapeutic doses before the SCD becomes permanent?

## **BARD RESPONSE:**

The time it takes for SCD to become permanent depends on a number of factors, including the severity of the deficiency and the patient's overall health. In general, however, most patients with SCD can reverse the damage if they are treated within a few months of diagnosis. If a patient with SCD is not treated, the damage to the nervous system can become permanent. This can lead to a number of problems, including:

- Numbness and tingling in the hands and feet
- Weakness
- Difficulty walking
- Vision problems
- Memory problems
- Mood disorders
- Dementia

If you have been diagnosed with SCD, it is important to start treatment as soon as possible. Treatment usually involves taking oral supplements or injections of vitamin B12. With treatment, most people with SCD experience a reversal of their symptoms.

Here are some tips for preventing SCD:

- Eat a balanced diet that includes plenty of fruits, vegetables, and whole grains.
- Choose lean protein sources, such as fish and chicken.
- Limit your intake of processed foods and sugary drinks.
- Get regular exercise.

• If you are a vegetarian or vegan, talk to your doctor about taking a vitamin B12 supplement.

If you are concerned that you may have SCD, talk to your doctor. They can order blood tests to check your vitamin B12 levels. If you are diagnosed with SCD, they can help you develop a treatment plan.

### **BARD PROMPT:**

Is a 256 vps tuning fork a lower frequency than a 128 vps tuning fork

## **BARD RESPONSE:**

No, a 256 vps tuning fork is a higher frequency than a 128 vps tuning fork. The frequency of a tuning fork is measured in cycles per second (cps). A 256 vps tuning fork vibrates at 256 times per second, while a 128 vps tuning fork vibrates at 128 times per second. Therefore, the 256 vps tuning fork has a higher frequency than the 128 vps tuning fork.

The frequency of a tuning fork is determined by its size and shape. A larger tuning fork will vibrate at a lower frequency than a smaller tuning fork. A tuning fork with a wider prong will also vibrate at a lower frequency than a tuning fork with a narrower prong.

**EDITOR To clarify** 

# **BARD PROMPT:**

Is a 256 vps a lower vps than 128 vps?

## **BARD RESPONSE:**

No, 256 vps is a higher frequency than 128 vps.

Vps stands for vibrations per second. A higher vps means a higher frequency.

256 vps is twice as high as 128 vps. This means that a 256 vps tuning fork will vibrate twice as fast as a 128 vps tuning fork.

## **BARD PROMPT:**

Are you sure that your statement "This is because the 256 vps tuning fork is the lower frequency of the two, and patients with SCD often have decreased vibratory sensation to lower frequencies." is correct?

### **BARD RESPONSE:**

No, I am not sure that my statement "This is because the 256 vps tuning fork is the lower frequency of the two, and patients with SCD often have decreased vibratory sensation to lower frequencies." is correct.

In fact, it is the other way around. The 256 vps tuning fork is the higher frequency of the two, and patients with SCD often have decreased vibratory sensation to higher frequencies. I apologize for the error. I am still under development, and I am always learning. I will try my best to provide you with accurate information in the future.

#### **BARD PROMPT:**

What is vitamin B12 neuropathy?

#### **BARD RESPONSE:**

Vitamin B12 neuropathy is a type of neuropathy that is caused by a deficiency in vitamin B12. Vitamin B12 is essential for the proper functioning of the nervous system, and a deficiency can lead to damage to the nerves. This damage can cause a variety of symptoms, including numbness, tingling, weakness, and pain in the hands and feet. In severe cases, vitamin B12 neuropathy can lead to permanent disability.

The most common cause of vitamin B12 neuropathy is pernicious anemia. Pernicious anemia is an autoimmune disorder that prevents the body from absorbing vitamin B12 from food. Other causes of vitamin B12 neuropathy include:

- Gastric surgery
- Celiac disease
- Crohn's disease
- Ileal resection
- Long-term use of proton pump inhibitors or H2 blockers
- Strict vegetarian or vegan diet

If you are experiencing symptoms of vitamin B12 neuropathy, it is important to see a doctor. They can order blood tests to check your vitamin B12 levels. If you are diagnosed with vitamin B12 neuropathy, treatment usually involves taking oral supplements or injections of vitamin B12. With treatment, most people with vitamin B12 neuropathy experience a reversal of their symptoms.

Here are some tips for preventing vitamin B12 neuropathy:

- Eat a balanced diet that includes plenty of fruits, vegetables, and whole grains.
- Choose lean protein sources, such as fish and chicken.
- Limit your intake of processed foods and sugary drinks.
- Get regular exercise.
- If you are a vegetarian or vegan, talk to your doctor about taking a vitamin B12 supplement.

If you are concerned that you may have vitamin B12 neuropathy, talk to your doctor. They can order blood tests to check your vitamin B12 levels. If you are diagnosed with vitamin B12 neuropathy, they can help you develop a treatment plan.

### **BARD PROMPT:**

What is b12 madness?

### **BARD RESPONSE:**

B12 madness is a term used to describe the neuropsychiatric symptoms that can occur as a result of vitamin B12 deficiency. These symptoms can include:

- Confusion
- Delirium

- Hallucinations
- Mania
- Depression
- Irritability
- Memory problems
- Paranoia
- Suicidal thoughts

B12 madness is a serious condition that can lead to permanent damage to the brain if it is not treated. Treatment for B12 madness involves taking vitamin B12 supplements or injections. With treatment, most people with B12 madness experience a reversal of their symptoms. The most common cause of B12 madness is pernicious anemia. Pernicious anemia is an autoimmune disorder that prevents the body from absorbing vitamin B12 from food. Other causes of B12 madness include:

- Gastric surgery
- Celiac disease
- Crohn's disease
- Ileal resection
- Long-term use of proton pump inhibitors or H2 blockers
- Strict vegetarian or vegan diet

If you are experiencing any of the symptoms of B12 madness, it is important to see a doctor. They can order blood tests to check your vitamin B12 levels. If you are diagnosed with B12 madness, treatment usually involves taking oral supplements or injections of vitamin B12. With treatment, most people with B12 madness experience a reversal of their symptoms.

#### **Editorial note:**

Dr. Victor Herbert, a renowned physician and expert in the field of nutritional anemias used to be invited to Grand Rounds to comment on various anemia patients. His ace in the hole was he would carry a 256 Hz (vps) tuning fork around in his bag of tricks, knowing that most physicians carried a 158 Hz (vps) tuning fork. Dr. Herbert knew that he could detect signs of SCD before they would become apparent to the average physician presenting the Grand Rounds case for his comments. (NOTE: during the first year of medical school in the early days, Lilly Pharmaceuticals gave the incoming new students a black bag containing a 128 Hx tuning fork and a rubber brain stem.)