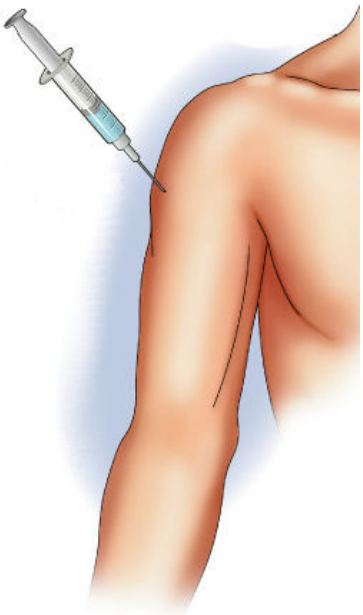
# Vitamin B12 Injections

Every person needs vitamin B12. A deficiency develops when the body does not get enough of it. One way to overcome this is by getting B12 shots (*injections*). A B12 shot puts the vitamin directly into muscle tissue. This avoids any problems your body might have in absorbing it from food or a pill.




In some people, the body has trouble using the vitamin correctly. This can cause a B12 deficiency. Not consuming enough of the vitamin can also cause a deficiency. Getting enough vitamin B12 can be hard for elderly people. Sometimes, they do not eat a well-balanced diet. And, the elderly are more likely than younger people to have medical conditions or take medications that can lead to a deficiency.

## WHAT DOES VITAMIN B12 DO?

Vitamin B12 does many things to help the body work right:

- It helps the body make healthy red blood cells.
- It helps maintain nerve cells.
- It is involved in the body's process of converting food into energy (*metabolism*).
- It is needed to make the genetic material in all cells (*DNA*).

## VITAMIN B12 FOOD SOURCES

Most people get plenty of vitamin B12 through the foods they eat. It is present in:

- Meat, fish, poultry, eggs.
- Milk and milk products.
- It also is added when certain foods are made, including some breads, cereals and yogurts. The food is then called fortified.

## CAUSES OF VITAMIN B12 DEFICIENCY

The most common causes of vitamin B12 deficiency are:

- Pernicious anemia. The condition develops when the body cannot make enough healthy red blood cells. This stems from a lack of a protein made in the stomach (*intrinsic factor*). People without this protein cannot absorb enough vitamin B12 from food.
- Malabsorption. This is when the body cannot absorb the vitamin. It can be caused by:
  - Pernicious anemia.
  - Surgery to remove part or all of the stomach can lead to malabsorption. Removal of part or all of the small intestine can also cause malabsorption.
- Vegetarian diet. People who are strict about not eating foods from animals could have trouble taking in enough vitamin B12 from diet alone.
- Medications. Some medicines have been linked to B12 deficiency, such as Metformin (a drug prescribed for type 2 diabetes). Long-term use of stomach acid suppressants also can keep the vitamin from being absorbed.
- Intestinal problems such as inflammatory bowel disease. If there are problems in the digestive tract, vitamin B12 may not be absorbed in good enough amounts.

## VITAMIN B12 DEFICIENCY SYMPTOMS

People who do not get enough B12 can develop problems. These can include:

- Anemia. This is when the body has too few red blood cells. Red blood cells carry oxygen to the rest of the body. Without a healthy supply of red blood cells, people can feel:
  - Tired (*fatigued*).
  - Weak.

- Severe anemia can cause:
  - Shortness of breath.
  - Dizziness.
  - Rapid heart rate.
  - Paleness.
- Other Vitamin B12 deficiency symptoms include:
  - Diarrhea.
  - Numbness or tingling in the hands or feet.
  - Loss of appetite.
  - Confusion.
  - Sores on the tongue or in the mouth.

## BEFORE AN INJECTION

To decide whether B12 injections are right for you, your healthcare provider will probably:

- Ask about your medical history.
- Ask questions about your diet.
- Ask about symptoms such as:
  - Have you felt weak?
  - Do you feel unusually tired?
  - Do you get dizzy?
- Order blood tests. These may include a test to:
  - Check the level of red cells in your blood.
  - Measure B12 levels.
  - Check for the presence of intrinsic factor.

## LET YOUR CAREGIVER KNOW ABOUT THE FOLLOWING:

- Any allergies. It is very important to know if you are allergic or sensitive to cobalt. Vitamin B12 contains cobalt.
- Any history of kidney disease.
- All medications you are taking. Include prescription and over-the-counter medicines, herbs and creams.
- Whether you are pregnant or breast-feeding.
- If you have Leber's disease, a hereditary eye condition, vitamin B12 could make it worse.

## VITAMIN B12 INJECTIONS

How often you will need a vitamin B12 injection will depend on how severe your deficiency is. This also will affect how long you will need to get them. People with pernicious anemia usually get injections for their entire life. Others might get them for a shorter period. For many people, injections are given daily or weekly for several weeks. Then, once B12 levels are normal, injections are given just once a month. If the cause of the deficiency can be fixed, the injections can be stopped. Talk with your healthcare provider about what you should expect.

For an injection:

- The injection site will be cleaned with an alcohol swab.
- Your healthcare provider will insert a needle directly into a muscle. Most any muscle can be used. Most often, an arm muscle is used. A buttocks muscle can also be used. Many people say shots in that area are less painful.
- A small adhesive bandage may be put over the injection site. It usually can be taken off in an hour or less.

Injections can be given by your healthcare provider. In some cases, family members give them. Sometimes, people give them to themselves. Talk with your healthcare provider about what would be best for you. If someone other than your healthcare provider will be giving the shots, the person will need to be trained to give

them correctly.

## HOME CARE INSTRUCTIONS

- You can remove the adhesive bandage within an hour of getting a shot.
- You should be able to go about your normal activities right away.
- Avoid drinking large amounts of alcohol while taking vitamin B12 shots. Alcohol can interfere with the body's use of the vitamin.

## POSSIBLE RISKS & COMPLICATIONS OF A B12 SHOT

Reactions to an injection are usually temporary. They might include:

- Pain at the injection site.
- Redness, swelling or tenderness at the site.
- Headache, dizziness or weakness.
- Nausea, upset stomach or diarrhea.
- Numbness or tingling.
- Fever.
- Joint pain.
- Itching or rash.

If a reaction does not go away in a short while, talk with your healthcare provider. A change in the way the shots are given, or where they are given, might need to be made.

## SEEK MEDICAL CARE IF:

- Pain, redness, swelling or tenderness at the injection site does not get better or gets worse.
- Headache, dizziness or weakness does not go away.
- You develop a fever of more than 100.5° F (38.1° C).

## SEEK IMMEDIATE MEDICAL CARE IF:

- You have chest pain.
- You develop shortness of breath.
- You have muscle weakness that gets worse.
- You develop numbness, weakness or tingling on one side or one area of the body.
- You have symptoms of an allergic reaction, such as:
  - Hives.
  - Difficulty breathing.
  - Swelling of the lips, face, tongue or throat.
- You develop a fever of more than 102.0° F (38.9° C).

## MAKE SURE YOU:

- Understand these instructions.
- Will watch your condition.
- Will get help right away if you are not doing well or get worse.

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