Hypomagnesemia, Low Blood Magnesium

Magnesium is a common ion (*mineral*) in the body which is needed for metabolism. It is about how the body handles food and other chemical reactions necessary for life. Only about 2% of the magnesium in our body is found in the blood. When this is low, it is called hypomagnesemia. The blood will measure only a tiny amount of the magnesium in our body. When it is low in our blood, it does not mean that the whole body supply is low. The normal serum concentration ranges from 1.8-2.5 mEq/L. When the level gets to be less than 1.0 mEq/L, a number of problems begin to happen.

SYMPTOMS

These following problems are worse if the changes in magnesium levels come on suddenly.

- Tremor.
- Confusion.
- Muscle weakness.
- Over-sensitive to sights and sounds.
- Sensitive reflexes.
- Depression.
- Muscular fibrillations.
- Over-reactivity of the nerves.
- Irritability.
- Psychosis.
- Spasms of the hand muscles.
- Tetany (where the muscles go into uncontrollable spasms).

CAUSES

- Receiving intravenous fluids without magnesium replacement.
- Loss of magnesium from the bowel by naso-gastric suction.
- Loss of magnesium from nausea and vomiting or severe diarrhea. Any of the inflammatory bowel conditions can cause this.
- Abuse of alcohol often leads to low serum magnesium.
- An inherited form of magnesium loss happens when the kidneys lose magnesium. This is called familial or primary hypomagnesemia.
- Some medications such as diuretics also cause the loss of magnesium.

DIAGNOSIS

This condition can be diagnosed by blood tests.

TREATMENT

- In emergency, magnesium can be given *intravenously* (by vein).
- If the condition is less worrisome, it can be corrected by diet. High levels of magnesium are found in green leafy vegetables, peas, beans and nuts among other things. It can also be given through medications by mouth.
- If it is being caused by medications, changes can be made.
- If alcohol is a problem, help is available if there are difficulties giving it up.

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