

DEFINITION

1. Beri-beri is a clinical syndrome resulting from dietary deficiency of vitamin B₁ (thiamine, aneurin). There are two main forms of the disease, known as **dry beri-beri** and **wet beri-beri**. Both forms may occur together.

CLINICAL MANIFESTATIONS

2. Dietary deficiency of thiamine produces symptoms in one to two months, the symptoms including anorexia, emotional disturbance, paraesthesia and altered sensation, weakness, dyspnoea, cardiac dysrhythmia and gastrointestinal upset.
3. **Dry or paraplegic beri-beri.** A peripheral neuropathy develops with loss or impairment of sensory, motor and reflex function, the distal parts being most affected. This is frequently accompanied by spontaneous aching in the extremities, cutaneous hyperaesthesia with burning and tingling in the limbs and tenderness of the soles of the feet and calves. There may be hoarseness of the voice.
4. **Wet or cardiac beri-beri.** Biventricular enlargement of the heart is associated with systemic venous hypertension, bounding arterial pulsation and peripheral oedema (high output cardiac failure). The oedema may be gross and involve not only the legs but also the trunk and arms, with puffiness of the face. Output of urine is reduced. The onset may be sudden if the deficiency is severe and the response to parenteral thiamine may be dramatic.
5. Acute deficiency responds well and quickly to thiamine replacement. Chronic states take longer to recover and there may be irreparable damage.

AETIOLOGY

6. Thiamine is widely available in fresh foods and cereals, with useful quantities in meat, legumes, green vegetables, fruit and milk. There is no effective body store. There is little or none in polished rice, sugar, alcohol, fat or refined foods and it may be readily lost in cooking.
7. Beri-beri is found in areas where polished rice is the staple diet and in chronic alcoholics, especially if liver function is impaired.

CONCLUSION

8. **Beri-beri** is a condition which occurs as a result of dietary deficiency of vitamin B₁. Two forms exist, one affecting the peripheral nervous system, the other the heart. Irreparable damage may occur with prolonged deficiency.

REFERENCES

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