- Child 5–11 years: 5 mL 3 times a day
- Child 12–17 years: 5 mL 3 times a day, increased to 10 mL 3 times a day, dose to be increased gradually

Iron-deficiency anaemia (prophylactic)

▸ BY MOUTH USING ORAL SOLUTION

- Neonate: 1 mL daily, prophylactic iron supplementation may be required in babies of low birth-weight who are solely breast-fed; supplementation is started 4–6 weeks after birth and continued until mixed feeding is established.
- Child 1–11 months: 1 mL daily, prophylactic iron supplementation may be required in babies of low birth-weight who are solely breast-fed; supplementation is started 4–6 weeks after birth and continued until mixed feeding is established

● **UNLICENSED USE** Not licensed for prophylaxis of iron deficiency.

● **INTERACTIONS** → Appendix 1: iron (oral)

● **PRESCRIBING AND DISPENSING INFORMATION** *Sytron*® contains 207.5 mg sodium feredetate trihydrate, which is equivalent to 27.5 mg of iron/5 mL.

● **PATIENT AND CARER ADVICE**

Medicines for Children leaflet: Sytron (sodium feredetate) for the prevention of anaemia www.medicinesforchildren.org.uk/sytron-prevention-anaemia

Medicines for Children leaflet: Sytron (sodium feredetate) for the treatment of anaemia www.medicinesforchildren.org.uk/sytron-treatment-anaemia

● **MEDICINAL FORMS** There can be variation in the licensing of different medicines containing the same drug.

Oral solution

- **Sodium feredetate (Non-proprietary)**
  Iron (as Sodium feredetate) 5.5 mg per 1 ml SodiFer 190mg/5ml oral solution sugar-free | 500 ml £12.07 DT = £14.95
- **Sytron** (Forum Health Products Ltd)
  Iron (as Sodium feredetate) 5.5 mg per 1 ml Sytron oral solution sugar-free | 500 ml Ⓟ £14.95 DT = £14.95

1.3 Megaloblastic anaemia

Anaemia, megaloblastic

Overview

Megaloblastic anaemias are rare in children; they may result from a lack of either vitamin B_{12} or folate and it is essential to establish in every case which deficiency is present and the underlying cause. In emergencies, when delay might be dangerous, it is sometimes necessary to administer both substances after the bone marrow test while plasma assay results are awaited. Normally, however, appropriate treatment should not be instituted until the results of tests are available.

Vitamin B_{12} is used in the treatment of megaloblastosis caused by *prolonged nitrous oxide anaesthesia*, which inactivates the vitamin, and in the rare disorders of *congenital transcobalamin II deficiency* and *homocystinuria*.

Vitamin B_{12} should be given prophylactically after *total ileal resection*.

Apart from dietary deficiency, all other causes of vitamin B_{12} deficiency are attributable to malabsorption. There is little place for the use of low-dose vitamin B_{12} orally and none for vitamin B_{12} intrinsic factor complexes given by mouth. Vitamin B_{12} in large oral doses [unlicensed] may be effective.

Hydroxocobalamin p. 621 has completely replaced cyanocobalamin p. 621 as the form of vitamin B_{12} of choice for therapy; it is retained in the body longer than cyanocobalamin and thus for maintenance therapy can be given at intervals of up to 3 months. Treatment is generally initiated with frequent administration of intramuscular injections to replenish the depleted body stores. Thereafter, maintenance treatment, which is usually for life, can be instituted. There is no evidence that doses larger than those recommended provide any additional benefit in vitamin B_{12} neuropathy.

Folic acid below has few indications for long-term therapy since most causes of folate deficiency are self-limiting or will yield to a short course of treatment. It should not be used in undiagnosed megaloblastic anaemia unless vitamin B_{12} is administered concurrently otherwise neuropathy may be precipitated.

In *folate-deficient megaloblastic anaemia* (e.g. because of poor nutrition, pregnancy, or antiepileptic drugs), daily folic acid supplementation for 4 months brings about haematological remission and replenishes body stores; higher doses may be necessary in malabsorption states. In pregnancy, folic acid daily is continued to term.

For prophylaxis in *chronic haemolytic states*, *malabsorption*, or *in renal dialysis*, folic acid is given daily or sometimes weekly, depending on the diet and the rate of haemolysis.

Folic acid is also used for the prevention of methotrexate-induced side-effects in juvenile idiopathic arthritis, severe Crohn's disease and severe psoriasis.

Folic acid is actively excreted in breast milk and is well absorbed by the infant. It is also present in cow's milk and artificial formula feeds but is heat labile. Serum and red cell folate concentrations fall after delivery and urinary losses are high, particularly in low birth-weight neonates. Although symptomatic deficiency is rare in the absence of malabsorption or prolonged diarrhoea, it is common for neonatal units to give supplements of folic acid to all preterm neonates from 2 weeks of age until full-term corrected age is reached, particularly if heated breast milk is used without an artificial formula fortifier.

Folinic acid p. 600 is also effective in the treatment of folate deficient megaloblastic anaemia but it is normally only used in association with cytotoxic drugs; it is given as calcium folinate.

There is **no** justification for prescribing multiple ingredient vitamin preparations containing vitamin B_{12} or folic acid.

For the use of folic acid before and during pregnancy, see Neural tube defects (prevention in pregnancy) p. 688.

VITAMINS AND TRACE ELEMENTS › FOLATES

Folic acid

10-Mar-2020

● **INDICATIONS AND DOSE**

Folate-deficient megaloblastic anaemia

▸ BY MOUTH

- Neonate: Initially 500 micrograms/kg once daily for up to 4 months.
- Child 1–11 months: Initially 500 micrograms/kg once daily (max. per dose 5 mg) for up to 4 months, doses up to 10 mg daily may be required in malabsorption states
- Child 1–17 years: 5 mg daily for 4 months (until term in pregnant women), doses up to 15 mg daily may be required in malabsorption states

Folate supplementation in neonates

▸ BY MOUTH

- Neonate: 50 micrograms once daily.