

Breastfeeding and Medication



Sodium Valproate in pregnancy

In the UK valproate is licensed for use for **epilepsy** and **bipolar disorder**. The Medicines and Healthcare Products Regulatory Agency (MHRA) regulates prescribing for the UK. Recent changes in prescribing regulations (4) means that valproate must no longer be used in any woman or girl able to have children unless there is no alternative and she has a pregnancy prevention programme (PPP) in place. For details see reference 4. It is hoped that the increased regulation will lead to many less children being born with Foetal valproate syndrome (10). It is imperative that any mother who is taking valproate should be using good contraception.

Definition

Foetal valproate syndrome (FVS), results when a foetus is exposed to sodium valproate. It is characterized by distinct facial abnormalities, congenital anomalies and developmental delay (especially in language and communication). (1)

Incidence

FVS is a rare disease (defined as one that affects fewer than 200,000 people worldwide). Recent evidence shows that the number of children born to mothers who took valproate during pregnancy in 2017 in the UK is roughly 250 children (2, 3). There are also similar problems associated with taking other anti-epileptic drugs, but they are less frequent and severe.

Signs and symptoms of FVS

Valproate is a highly teratogenic drug. Use in pregnancy leads to **physical** birth defects in 10 in every 100 babies (compared with a rate of 2 to 3 in 100 when mothers have not taken valproate) and **neurodevelopmental** disorders in approximately 30 to 40 in every 100 children (4). The **physical symptoms** of FVS vary but may include characteristic facial features (see Figure 1)(5), spina bifida,

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congenital heart defects, cleft lip and/or cleft palate, genital abnormalities, such as hypospadias and skeletal abnormalities.

Figure 1 Children exposed to valproate alone. (A) A boy aged 22 months. Note epicanthic folds, infraorbital grooves, long, shallow philtrum, and thin upper lip. (B) A girl aged 3 years 10 months, older sister of (A). Note medial deficiency of eyebrows, infraorbital grooves, short nose with anteverted nares, long, shallow philtrum, and thin upper lip. (C) A girl, aged 11 years 4 months. Note thin eyebrows, medial deficiency of eyebrows, flattened nasal tip, shallow philtrum, and thin upper lip. (6).



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The **neural developmental** disorders associated with valproate use in the mother during pregnancy include:

- Delays in development such as talking and walking later, lower intellectual abilities, poor language skills (speaking and understanding), and memory problems (6)
- The IQ in school-aged children (age 6 years old) is on average 7–10 points lower than children exposed to other antiepileptic drugs (7)
- A 3-fold increased risk of autistic spectrum disorder and 5-fold increased risk of childhood autism compared with the general population (8)
- Increased risk of attention deficit/hyperactivity disorder (ADHD) (9)

Investigations for FVS

There are no specific tests for FVS. The diagnosis is made by a pattern of physical, behavioural and cognitive problems in a child who has been exposed to valproate during pregnancy. The diagnosis usually needs to be made by an appropriately trained paediatrician. There is no automatic follow up pathway for exposed babies. If no abnormalities are obvious at birth the baby is usually discharged with instructions to be referred back if problems develop. However neurodevelopmental issues may be subtle and overlooked by generalist healthcare professionals. In addition, some neurodevelopmental issues, especially if mild, cannot be diagnosed until much later in childhood, at which point maternal medication history in pregnancy may either not be available or not considered. Universal follow up has been recommended (10) for all babies exposed to valproate, but this is not yet available.

Treatment

Although there is no treatment for FVS, early diagnosis and support can make a massive difference for the child and their family. Many of these children should qualify for special educational needs and disability services (SENDS), but unless they are identified and referred for detailed assessment they will not receive additional services.

Any harm to babies exposed in utero can be documented on a [Yellow Card](#) or women can self-refer to the [UK Epilepsy and Pregnancy Register](#)

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Patient support groups

Epilepsy Action: www.epilepsysociety.org.uk/

Epilepsy Society: www.epilepsysociety.org.uk/

FACSAware: www.facsaaware.net/

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[healthcare-bodies-launch-pragmatic-guidance-on-valproate-use.aspx](https://www.breastfeeding-and-medication.co.uk/healthcare-bodies-launch-pragmatic-guidance-on-valproate-use.aspx)

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