



ROYAL CHILDREN'S HOSPITAL  
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# Community

## PAEDIATRICS

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# Vitamin K

*Vitamin K has been given routinely to newborn infants in Australia for several decades. It has been administered by intramuscular injection soon after birth to prevent haemorrhagic disease of the newborn (HDN), a rare but potentially fatal bleeding disorder which may present in the first few months of life.*

*It has become so routine that doctors and nurses rarely felt the need to obtain informed consent, and parents often were not aware of the administration of the vitamin K injection. HDN has been virtually unknown in this country, so that this has been regarded as an important and successful public health measure.*

In August 1992 there appeared a report in British Medical Journal (Vol 305, 8 August 1992, pages 341-346) suggesting that children given intramuscular vitamin K had a two fold risk of cancer compared to those given Vitamin K orally or those not given it at all. Concern about these findings led to the establishment of an expert panel representing the Australian College of Paediatrics, the National Health and Medical Research Council, and the Royal Australian College of obstetricians and gynaecologists. The committee made interim recommendations that intramuscular Vitamin K be discontinued and replaced by 3 oral doses (see below).

There has been considerable debate about both the interpretation of the results of the original study, and about these recommendations. While it is good scientific practice always to confirm results with repeated studies (another way to state this is that it is unwise to act on the basis of a single report), nevertheless the results of this one study cannot be ignored.

From a public policy point of view, decisions sometimes need to be made on evidence that is uncertain and/or incomplete. The weight of medical opinion is that the recommendations, (which are interim in nature) are appropriate given the evidence presently available.

The expert committee took into account that:

- A non-invasive form of prophylaxis generally was to be preferred rather than injection.
- An alternate regime for preventing HDN must be effective and practical.
- A single oral dose of vitamin K may not be effective at protecting against late onset HDN, which has very significant mortality and morbidity (half the survivors have brain damage due to intracranial haemorrhage).

### ***The recommendations are as follows:***

1. Vitamin K is required in the first six weeks of life to prevent rare but potentially fatal bleeding disorder, and is effective when given by intramuscular or repeated oral doses.

● *A number of articles on this topic will be published in the June 1993 issue of the Journal of Paediatrics and Child Health, which is the official publication of the Australian College of Paediatrics and Australian Perinatal Society.*

2. All healthy full term infants could receive three oral doses of 1mg of vitamin K, instead of a single intramuscular dose at birth. The first oral dose should be given at birth and the second at the time of newborn screening (3 to 5 days of age). The third dose should be given in the fourth week, if practical, because the onset of the disease has been reported as early as 4 weeks of age fol-

lowing a single oral dose. There is evidence to suggest that the first two doses are the most important.

3. Until an oral preparation with a higher bioavailability becomes available, oral doses of 1mg should be used.

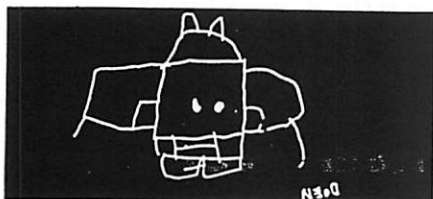
4. Infants who are pre-term, unwell or unable to tolerate or absorb oral vitamin K should receive 0.1mg intramuscular vitamin K at birth followed by further doses (0.1mg intramuscularly or 1mg orally) at the time of newborn screening (3 to 5 days of age) and in the fourth week of life. The route of the second and third dose should depend on the condition of the infant.

The community or maternal and child health nurse should be aware of this major change to what has been a long established procedure. There is already some confusion and uncertainty amongst some parents and the informed nurse has an important educational role to play in this important public health measure. ●

**Dr Frank Oberklaid**

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## **Atopic Eczema - Nursing Interventions**



*Atopic eczema is a common skin condition affecting about 3% of children. The specific cause of eczema has not yet been determined, but there is a strong genetic basis - with a family history of eczema, hayfever or asthma, the child is more likely to develop*

one of these. Approximately 85% of children will grow out of eczema by 5 years of age.

## Treatment Guidelines

### 1 Anti-Inflammatory Creams

(i) Cortisone cream (Hydrocortisone, betamethasone) in different strengths, if used carefully and sparingly, is safe for children and babies. Weak hydrocortisone is suitable for the face, and ideally should be used intermittently - 2 days on, 2 days off.

If any creams irritate the skin or cause blisters, stop their use, apply moisturiser and refer back to the doctor. This irritation is usually a flare up of the eczema rather than allergy. Sometimes a change of the cream (white) to an ointment base (greasy) will help the irritation.

(ii) Tar based creams (Icthammol) are usually used at night under bandages for eczema on limbs.

### 2 Control of Itching

This is important, as scratching damages the skin and may increase the risk of infection. It may also become a strong habit even when the itch is slight.

(i) Heat increases the itch - avoid overheating especially in bed; light, loose clothing, avoiding seams and contact with cotton tags is best. Keep fingernails short; use mittens if necessary, possibly made of satin and extending to the forearms.

Try not to give undue attention to scratching, but rather provide diversionary activity; this will help the child cope with the itch himself. Never scratch or rub the child's skin for him but rather involve him in activities that mean using his hands, thus hopefully distracting him from scratching.

(ii) Cool compresses can be used any time the skin is hot or the itch very uncomfortable, and cool compresses serve several purposes. The application of repeated WET compresses assist in the treatment of infection by gently cleaning the skin surface: they rehydrate the skin with moisturiser, and prevent further drying of the skin. They also protect the affected skin from trauma and contact with rough clothing.

Method: Dampen CHUX or soft cloths (old cotton shirts cut up are good) in cool water mixed with or without bath oil. Apply moisturising cream and/or ointment to the skin, gently without rubbing. Moisturising ointments are soothing when cool, so may be stored in the refrigerator.

Wrap the dampened cloths loosely and gently around the affected areas. Keep them in place with crepe bandages avoiding contact with the skin. Cloths can be washed and reused. Dressings can be used or changed as frequently as necessary to keep the skin cool, moist and comfortable.

### 3 Special Considerations

✓ If the skin is very dry add bath oil to the water.

✓ If the skin is raw, red and infected use Saline instead of water (available at any chemist or made up at home with cool boiled water).

✓ The older child (over 4 years) can be taught to get the dampened cloths and hold over an area that he starts to scratch, and to do the dressings himself. In acute stages frequent changes (3-4 hourly) is ideal but time consuming and may require enlisting help from other family members for a few days. Short term help from District Nursing may help get the family through the intensive care needed in the first few days.

4 Support the child with appropriate positive language.

as poor body image and low self esteem is not uncommon.

✓ Replace bandages with more attractive cotton materials eg. patterned or coloured.

### 4 Control of Dryness

1 Moisturising creams (eg. Sorbolene or paraffin) soothe dry skin and may be applied frequently.

2 Bathe or preferably shower, in cool water for 5 minutes at the most. Do not use soap: bath oils will clean as well as moisturise. If skin is very dry use moisturiser before and after the bath as well as bath oil in the water. If the child goes swimming apply oil before and after.

3 If the scalp is dry, shampoo only when necessary using a bland baby shampoo, or if scaly an anti dandruff shampoo diluted 1:5 parts with water.

4 Eczema can be worse in winter due to reduced humidity and dryness of a heated house. Keep bedroom ventilated at night to increase humidity.

### 5 Clothing

Clothing can be irritating to eczema especially when it has a prickly texture like wool. Avoid wool against the skin and skivvies which may be irritating to the neck.

Be aware of irritating seams on clothing. If the seams are harsh, turn the garment inside out so that the soft seams are against the skin. When the child is active, and the skin very hot clothing may be more irritating than usual.

### 6 Bedding

Soft cotton sheets are best and overheating at night may cause greater feelings of itchiness. Satin sheets, although expensive, are good because they are not abrasive when the child rubs against them.

## 7 Sleeping

Children often scratch more at night. If the child's eczema is causing restlessness and difficulty sleeping, the application of cool compresses/moisturisers/dressings can assist in reduction of the itch and getting to sleep. In addition, a sedative may be prescribed by the doctor for use at night until the eczema improves.

## 8 Detergents

These can aggravate eczema. Use LUX or Velvet soap detergents and always rinse twice.

## 9 Dummies

Dummies may aggravate eczema around the mouth, so their use should be kept to a minimum. Eczema seems to get worse when teething though

the cause is unclear. Treat the itchy skin as above. If the child is bottle fed protecting the skin around the mouth with moisturiser prior to the feed may help.

## 10 Diet

Some eczema seems to be related to diet, but needs to be assessed on an individual basis. Breast feeding should continue as long as possible.

## 11 Behavioural Difficulties

It is not uncommon for children to display behavioural problems related to self esteem, sleeping etc. Eczema may also be exacerbated at times of stress in the family; death of a family member, marital conflict, moving house, loss of job,

financial stress. Many parents may not realise that children are aware of conflict and distress even if they don't understand the cause. Discussion with parents about these links may help their understanding of the exacerbations of eczema. Once the eczema has flared up it will follow a course before it settles. Initial discussion around these issues may help, or parents may request referral to psychology services.

## 12 Immunisation

Children should continue to have triple antigen and polio immunisations. ●

Michele Meehan - 1993

## ◆ From the Literature ◆

### Readiness for Toothbrushing in Young Children

T. Ogasawara, T. Wantanabe & H. Kasahara. *Journal of dentistry for children* 59 (5) Sep/Oct 1992 pp 353-359.

*When is a young child ready for toothbrushing? In order to establish their readiness and the appropriate behaviours to teach, a team of Japanese dentists examined a group of 97 children aged between birth and six years.*

The group identified five steps to toothbrushing related to the children's developmental stages:

1. Children under 18 months of age were generally unable to brush their own teeth at all.

2. From eighteen months to about three and a half years, most children were able to brush the biting surface on the bottom teeth and the outside surface of the front teeth.

3. Between three and a half and four and a half, they were able to brush all the surfaces of the front teeth. Although they could reach all around the mouth with the brush by this age, they were not able to brush all areas adequately, especially the back teeth.

4. From four and a half the age of five, most children were unable to brush all surfaces adequately. The inside surfaces of the molars were the most difficult.

5. From the age of five, most children could brush all areas reasonably well.

There is a definite progression in children's mastering of the brushing technique, progressing from the easy-to-reach to the difficult. The authors recommend that caregivers finish off toothbrushing for children at least until the age of five, probably older. After that age they still need continuous guidance to establish and maintain the brushing habit.

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