Non-Bullous Ichthyosiform Erythroderma
(also called “congenital ichthyosiform erythroderma”)

What is it?
This is an extremely rare skin disorder characterised by abnormal scaling of the skin with underlying redness. It is estimated to occur in 1/300,000 births. Most affected individuals will be born as a “collodion baby”.

What does it look like?
The skin appears bright red (erythroderma) and has accompanying fine white or flesh coloured scales. The scaling often involves all of the skin although the skin on the face may show milder changes. In severe cases the lower eyelids are normally pulled down and outwards giving a red appearance. The condition appears in the first few days of life and usually lasts lifelong. The severity of NBIE varies quite considerably.

Are there different types of Non-bullous ichthyosiform erythroderma (NBIE)?
Yes there may well be. Certainly some individuals have a very persistent erythroderma whereas in others it fades significantly as they get older. Similarly the scaling varies in severity. It may be that the “diagnosis” of NBIE actually covers a number of different distinct conditions. This will only be clarified when we work out the underlying genetic causes.

What is it caused by?
It is caused by a genetic or inherited abnormality that affects normal skin shedding. As yet none of these gene/s have been identified but it is likely that they will in the next few years.

Psychological support/Counselling – Even the strongest individual will find severe ichthyosis difficult to cope with at times. Parental rejection, problems with schooling and making friends, and depression may all occur. Having a supportive GP and dermatologist is important. Professional counselling especially by those that deal with disfigurement can be very useful. Ask your doctor about locally available services. If depression is severe a course of medication can help one to get through a bad patch.

NBIE is very rare and you may feel that you are on your own. Fortunately the Ichthyosis Support Group exists in the UK, who will provide you with psychological support and practical information about how best to deal with this condition. This in many ways is the best information as it comes from people who have been through exactly the same problems that you are currently experiencing.

* A note on classification of the subtypes of ichthyosis.
Historically the different types of ichthyosis were described or named according to the actual appearance of the skin. This system is still used in the UK but it has its limitations and in fact some European and American dermatologists use rather different names. You may for instance come across the term “ichthyosis congenita types 1-4”. We feel this latter naming system further confuses the issue for patients and parents. In the future the best and indeed only way to classify these conditions is by working out the abnormal genes which are after all the key underlying problem. Until research has uncovered these causes we prefer to stick to the names used here.
How is it inherited?
NBIE is inherited in an “autosomal recessive” fashion. This means that each parent has normal skin but is a carrier for one single abnormal gene. One in four children will inherit 2 abnormal genes (one from each parent) and therefore develop the condition.

Is it catching or contagious?
No, absolutely not.

Can it be diagnosed pre-natally if I want to have another child?
Unfortunately NBIE can not be diagnosed pre-natally. However in the future research is likely to uncover the underlying genetic causes so pre-natal diagnosis may become a very real possibility, although it will only be available in one or two specialist centres.

What are the complications?
Overheating – Severe scaling of the skin prevents normal sweating so hot weather or vigorous exercise can cause problems.
Eye problems – Ectropion is the term used by doctors to describe when the eyelids are pulled outwards by the tightness of the skin. This makes the eyelids (usually just the lower one) look red and the eyes can be more prone to drying and irritation.
Hand problems – Untreated, the skin of the palms may become thickened, tight and prevent normal bending and straightening of the fingers (“contractures”).
Hair loss – Severe scaling of the skin of the scalp can lead to patchy loss of hair but this is rarely permanent.
Psychological – The appearance of the skin and the eyes can cause severe psychological problems for both parents and the child.

Unfortunately society’s reaction to the appearance of ichthyosis is often hostile and unsympathetic. Whilst this stems from ignorance it is a problem that cannot be underestimated. Two of the most difficult times are when a child starts school and during teenage years. Staring and teasing will occur. Having said that there are a number of individuals with severe ichthyosis who have adjusted well and have managed to lead relatively normal lives, although this requires a strong personality and plenty of family support.

Are there any internal abnormalities we should keep an eye out for?
No, NBIE is confined to the skin.

Is there a cure for NBIE?
No, currently there is no available cure. However there are some treatments that can help.

Treatment:
Moisturisers (also called emollients) and bath oils are a vital part of therapy and will need to be used lifelong. They make the skin feel more comfortable, look less dry and flaky and prevent cracking. These creams vary in their greasiness and some contain urea or lactic acid. It is important that you try a number of these to see which works best for you and your child.
Particular attention should be paid to massaging cream regularly into the palms and under the eyes to prevent tightness of the skin here.
Prevent overheating (especially in children) – Avoid prolonged exposure to the sunshine, exercise in the middle of the day and wear cool loose fitting clothes. If overheating does occur the use of damp sponges will help.
Eye treatment – Use of moisturising eyedrops (artificial tears) can be useful if the eyes become dry. Surgery to the eyelids is not always the right answer for pulled down eyelids as it often will recur.
Specific creams – Synthetic vitamin D creams and synthetic vitamin A-derived creams (retinoids) have been used in a different skin condition called psoriasis. Some patients with severe ichthyosis may find these helpful but they can have side effects especially if large areas of the skin are being treated. Creams containing salicylic acid have also been used but again there may be side effects. Discuss the ins and outs of these therapies with your skin doctor before trying them.
Drugs by mouth – Synthetic vitamin A drugs (called retinoids