

# Common Symptoms of Disease in Children

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R.S. Illingworth

Fifth edition

Comm

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R. S. ILLINGWORTH

M.D., F.R.C.P., D.P.H., D.C.H.

*Professor of Child Health  
The University of Sheffield*

FIFTH EDITION

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## Preface to the fifth edition

在編輯 修正  
In preparing this fifth edition I have completely revised the book, making 500 additions, with well over 100 new references. The revision has been a major one.

I have added new sections on swelling of the face, swelling of the scrotum, recurrent infection, oedema of the conjunctiva, oliguria, retention of urine, cataract, indistinct speech, bow legs, ear discharge, hoarseness, trismus, nasal obstruction, diplopia, pain in the face, inequality of limb length, and various types of skin reactions, such as bullous, eczematous, acneform, ichthyotic, telangiectatic, naevoid, photosensitive and pigmentary conditions. As before, it was often difficult to distinguish symptoms from signs, and my decisions as to what to include are open to criticism.

I have added a brief mention of certain important tropical diseases, such as malaria and bilharzia, but obviously could not include all of them. I have made a particular effort to include known side effects of drugs, as a source of reference, including them in the script and in a table at the end of the book: I regarded this as important, for most of the symptoms described in this book, constituting almost all the important symptoms which children can experience, could be side effects of drugs. No one could remember all these, but their frequency indicates how essential it is that proper enquiry should be made about drugs taken (and possible exposure to poisons) when establishing a diagnosis. I have used the official names throughout, but have included principle trade names in the reference list at the end of the book.

There is an unlimited number of rare diseases, and it would not be sensible to try to make a comprehensive list of them: but the aim of this book remains as before, to guide the reader's thoughts when he is faced with symptoms in a child and is trying to make a diagnosis. Once one has thought of the possibility of a condition, it is easy to look it up in any of the textbooks: but most textbooks do not list symptoms in their index, so that they do not provide the necessary help unless one can think of the particular disease

which may explain the child's symptoms. I have therefore given brief summaries of most conditions, merely named other conditions, but always tried to provide references to further reading and sources of information. I may well be criticized for including some of the rare diseases or for excluding others: I have tried to make this book as useful as possible for doctors using it—who I hope will include not only family doctors but anyone else responsible for the clinical management of children.

As before I have tried to give non-disease before disease, as a cause of symptoms, because it is so much more common than disease: and I have again tried to name and distinguish the common and important from the rare and unimportant. One is much more likely to be right if one thinks of the common condition first: but a puzzling child may have a rare condition, and I wanted to help the doctor to think of such conditions when he has excluded the common ones.

I have been greatly helped in the past by helpful comments by reviewers and correspondents: I should be most grateful for further suggestions for the improvement of this book so that it can be made more useful.

R. S. Illingworth

## Preface to the first edition

When I was talking to my thirteen-year-old child about my attempt to write a book concerning the common symptoms of disease in children, mentioning the difficulties which I was encountering, and the fact that no one, to my knowledge, has attempted it, she said, 'Isn't that all the more reason why you should do it?' I replied that it may well be that the reason why others have not done it is the fact that they had more sense than to try.

I have attempted to write a précis of the common symptoms of disease in children because I felt that the family doctor, when faced with a symptom in a child whom he is examining, would find it useful when in difficulty to refer quickly to conditions which have to be considered. The textbooks, general or specialist, for the most part do not deal with symptoms. For instance, I referred to a large textbook of otorhinolaryngology for information about stridor, but the word was not in the index. It is likely to take a family doctor a long time to find a textbook which discusses the very common cyanotic or apnoeic attacks of the newborn. The great majority of the symptoms which I have discussed in this book are not, in fact, mentioned in the index of the majority of textbooks, and many of the symptoms are not mentioned in the index of any of them. This is not intended to be a criticism of textbooks. Discussion of symptoms would have greatly lengthened them, and inevitably have caused repetition.

In consequence I have discussed about a hundred common symptoms of disease in childhood. I have made no attempt to provide a complete list of all the possible causes of a symptom, but I have tried to pick out the important causes, making it clear which I think are the most common ones, and which I consider to be rare.

Though classifications are useful for memorizing, and though they look neat and tidy, I have avoided them almost completely, because of their inherent weakness in not giving the common conditions first.

Where a symptom may be psychological or organic I have included it, but where a symptom is entirely psychological I have omitted it, because I have discussed psychological problems in my books *The Normal Child in His First Five Years*\* and *The Normal School Child*.† I have, however, included a section concerning psychological manifestations of organic disease, and the somatic manifestations of psychological symptoms.

The book is confined to the subject of diagnosis. I have named common investigations which need to be carried out in order to elucidate the problem—but again have made no effort to name them all. (In a recent article on jaundice in the newborn, the author listed 75 special investigations which should be carried out.) I have not described the normal values of the investigations, nor the methods of performing them: but I have named the investigations in order that the family doctor would know some of the tests which are necessary to establish the diagnosis, and would then know when to refer the child to a special centre for study. I thought, furthermore, that knowledge of the necessary tests would help him in his talks with the parents. I have made a special point of emphasizing the conditions which do require such special investigation.

There is inevitably a certain overlap between signs and symptoms and I have allowed myself a little licence in interpreting the word 'symptoms'. For instance, I have included a short section on enlargement of the spleen. Admittedly an adult experiences discomfort when his spleen is felt. My reason for including it, however, was the frequency of splenic enlargement in children and therefore its importance in the diagnosis of so many different diseases.

I have assumed that the family doctor has basic medical knowledge. I have also had to assume that the family doctor does not want or need profound knowledge on any subject. My notes may well, therefore, be criticized for being superficial. They are deliberately made so, because I did not feel that the family doctor would want more. But I have throughout assumed that having looked through a section of this book to read about a particular symptom, he would then refer to one of the recognized textbooks for more

\* *The Normal Child*, Sixth Edition, 1975, London, Churchill.

† *The Normal School Child: his problems, physical and emotional*, 1964, London, Heinemann.

information. To this end I have listed principal sources of further knowledge. For instance, as a general source of information on a paediatric problem I have recommended Nelson's *Textbook of Pediatrics*.

In my opinion no one should attempt to make a diagnosis in a sick child without knowing what drugs he has already received. The side effects of drugs are so frequent and far reaching, and the number of drugs taken, whether prescribed by a doctor or otherwise, is so great, that it is essential to know what medicines have been given. I have mentioned the side effects of drugs in the relevant sections, and summarized them in a special section.

At the risk of repetition, I have inserted a brief section about commonly held misbeliefs in paediatric diagnosis—including such a misbelief as the idea that convulsions are caused by teething. I am aware of the fact that there is a small amount of repetition in different sections. I decided to retain this for the convenience of the reader.

I hope that family doctors will find this book useful in General Practice. I believe that students will find this book useful for the purposes of revision. It would not serve as a basic textbook for them, but I believe that it would be useful in conjunction with one of the standard textbooks.

It is certain that many will think of causes of which I have not thought, or of symptoms which should have been included. I should greatly welcome comments and suggestions so that the book can be improved if another edition is required.

I wish to thank my friends Dr Peter Wyon, Family Doctor, of Thirsk, Yorks, Dr Frank Harris, Lecturer in Child Health, the University of Sheffield, and my wife, Dr Cynthia Illingworth, for reading every word of the script and for their most useful criticisms: and to my secretaries, Miss D.Bain, Miss J.Grundy and Mrs D.Ackroyd, for typing the drafts of this book.



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## Failure to thrive

All those who are concerned with the care of children are repeatedly faced with the problem of the child who refuses to gain weight in the approved manner. It is surprisingly difficult to obtain a composite picture of this problem in the standard texts. In this chapter I have attempted to put together the main conditions which have to be considered when a child's weight gain is below the average. As the problem in the young baby is different from that in the older child, it will be convenient to discuss it in relation to age groupings. In the first place, however, one must decide whether or not there is anything wrong with the child.

### Variations in normal physical growth

All children are different. Some are small and some are big, some are thin and some are fat. Though nutrition has much to do with this, it is not true to say that nutrition is the only factor. Many factors are unknown. It is difficult and usually impossible to draw the line between normal and abnormal. A child may be pounds below the average in weight, and inches below the average in height, and yet be normal. It is far more important that the child should be full of energy, free from lassitude and abounding in *joie de vivre*, than that he should be average in weight and height. It is much more healthy to be below the average weight than above it. All that one can say is that the further away from the average is the child's weight and height, the less likely it is to be 'normal'.

A child may be unusually small because he takes after his mother or father in that respect. A small child, taking after one of his parents in physical build, is not only small in height (or in the case of a baby, in length), but he is less than the average in weight. As a result his appetite is commonly less. The result is that parents become worried because he has a smaller intake than usual, and so they try to force him to take more. The inevitable result after the age of six to nine months or so is that he refuses. He vomits

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the food which he is forced to take against his will. He begins to associate mealtimes with tears and unpleasantness, and becomes conditioned against food, so that a troublesome vicious circle and difficult behaviour problem results.

After the first year it is useful to be able to consult a table in order to estimate the child's eventual height. Such a table cannot always be relied upon for accuracy, because so many individual variables affect a child's growth; but it may be a good guide which will

Table 1. Height in childhood in relation to expected adult height

Expected adult height	5 ft	150 cm	5 ft 6 in	165 cm	6 ft	180 cm
	in	cm	in	cm	in	cm
Height of boys						
Age in years						
1	25.8	65.5	28.3	72.0	30.9	78.6
2	29.4	74.7	32.1	81.7	35.3	89.6
3	31.8	80.8	35.1	89.2	38.1	97.0
4	34.4	87.3	37.8	96.1	41.2	104.7
5	36.6	93.0	40.3	102.3	43.9	111.6
6	38.7	98.4	42.7	108.4	46.6	118.4
7	40.7	103.5	44.8	113.9	48.9	124.2
8	42.6	108.2	46.9	119.0	51.1	129.9
9	44.6	113.2	49.0	124.4	53.4	135.7
10	46.2	117.4	50.8	129.1	55.5	140.9
Height of girls						
Age in years						
1	27.0	68.5	28.3	72.0	32.4	82.2
2	31.1	79.2	34.3	87.1	37.4	95.0
3	33.9	86.0	37.2	94.5	40.6	103.1
4	36.5	92.8	40.2	102.1	43.9	111.4
5	39.0	99.1	43.0	109.1	46.9	119.0
6	41.3	104.8	45.4	115.3	49.6	125.9
7	43.5	110.5	47.8	121.5	52.2	132.6
8	45.6	115.7	50.1	127.3	54.6	138.8
9	47.6	120.9	52.4	133.0	57.1	145.1
10	49.5	125.7	54.4	138.3	59.4	150.9

As a rough guide, the height on the second birthday is half the expected adult height. Calculated from Tanner *et al.* (1966). Example—7-year-old girl, height 43.5 inches. Probable eventual height is 5 feet.

help the parent to understand the problem. Tables 2 and 3 show the average weight and height of British children, while Table 1, based on the work of Tanner, shows the percentage of eventual height reached at various ages.

An example of the value of such a table is as follows. A child of three years was referred because of her small size, being 34 inches high. Her mother was five feet tall and was relieved to hear that the girl could be expected to reach the same height as she had.

Table 2. Average height of boys and girls

Age in years	<i>Boys</i>					
	CENTILES					
	10		50		90	
	in	cm	in	cm	in	cm
0	20.2	51.4	21.3	54.0	22.3	56.6
1	28.7	72.8	30.0	76.3	31.4	79.7
2	32.6	82.7	34.2	86.9	35.9	91.1
3	35.1	89.3	37.1	94.2	39.0	99.1
4	37.8	96.1	40.0	101.6	42.1	107.1
5	40.2	102.2	42.6	108.3	45.0	114.4
6	42.5	108.0	45.1	114.6	47.7	121.2
7	44.7	113.5	47.4	120.5	50.2	127.5
8	46.8	118.8	49.7	126.2	52.6	133.5
9	48.8	124.0	51.8	131.6	54.8	139.3
10	50.7	128.8	53.9	136.8	57.0	144.8

  

Age in years	<i>Girls</i>					
	CENTILES					
	10		50		90	
	in	cm	in	cm	in	cm
0	19.8	50.4	20.9	53.0	21.9	55.6
1	27.9	70.8	29.2	74.2	30.6	77.7
2	32.0	81.3	33.7	85.6	35.4	89.8
3	34.7	88.1	36.6	93.0	38.5	97.9
4	37.4	94.9	39.5	100.4	41.7	105.9
5	39.8	101.1	42.4	107.2	44.6	113.2
6	42.0	106.8	44.5	113.4	47.2	120.0
7	44.2	112.4	47.0	119.3	49.7	126.3
8	46.3	117.6	49.2	125.0	52.1	132.4
9	48.4	122.9	51.4	130.6	54.4	138.3
10	50.5	128.3	53.7	136.4	56.9	144.5

Table 3. Average weight of boys and girls

Age in years	CENTILES					
	10		50		90	
	lb	kg	lb	kg	lb	kg
0	6.17	2.8	7.72	3.5	9.04	4.1
0.25	11.05	5.01	13.07	5.93	15.41	6.99
0.5	14.99	6.8	17.42	7.9	20.28	9.2
0.75	17.59	7.98	20.28	9.2	23.43	10.63
1.0	19.40	8.8	22.49	10.2	25.79	11.7
2	24.25	11.0	28.0	12.7	32.19	14.6
3	28.00	12.7	32.41	14.7	37.26	16.9
4	31.52	14.3	36.60	16.6	42.11	19.1
5	34.61	15.7	40.72	18.5	47.4	21.5
6	38.14	17.3	45.20	20.5	52.91	24.0
7	41.89	19.0	49.82	22.6	59.29	26.9
8	46.03	20.9	55.11	25.0	66.13	30.0
9	50.48	22.9	60.62	27.5	73.63	33.4
10	55.56	25.2	66.80	30.3	82.23	37.3

## Girls

Age in years	CENTILES					
	10		50		90	
	lb	kg	lb	kg	lb	kg
0	6.28	2.85	7.50	3.4	8.71	3.95
0.25	10.6	4.81	12.26	5.56	14.13	6.41
0.5	14.2	6.44	15.21	6.9	18.72	8.49
0.75	16.71	7.58	19.22	8.72	22.09	10.02
1.0	18.52	8.4	21.38	9.7	24.69	11.2
2	22.93	10.4	26.89	12.2	31.09	14.1
3	27.11	12.3	31.52	14.3	36.15	16.4
4	31.09	14.1	35.93	16.3	41.44	18.8
5	35.05	15.9	40.34	18.3	47.17	21.4
6	38.8	17.6	44.97	20.4	53.79	24.4
7	42.33	19.2	49.82	22.6	61.07	27.7
8	46.29	21.0	55.34	25.1	68.78	31.2
9	50.7	23.0	61.07	27.7	78.04	35.4
10	55.34	25.1	68.56	31.1	90.39	41.0

Tanner, J.M., Whitehouse, R.H., Takaishi, M. (1966). 'Standard from Birth to Maturity for Height, Weight, Height Velocity and Weight Velocity.' *Arch. Dis. Childh.*, 41, 613.

The next most common factor to consider when an apparently well child is unusually small for his age is the birth weight, and in particular the birth weight in relation to the duration of gestation. The smaller the child is at birth, the smaller he is likely to be in later years, and the larger he is at birth, the larger is he likely to be in later childhood. There is evidence that the baby who is small at birth in relation to the duration of pregnancy is likely to be even smaller in later years than the child whose weight at birth corresponded with the usual weight for the duration of gestation. It seems as if the child's growth potential was indicated by his unusually small growth *in utero*, and that his subsequent growth is correspondingly less than that of most other children (Illingworth, 1975).

Many mothers are worried about the normal slowing down of weight gain in the second half of the first year. This is associated with a falling off in appetite. It may cause food forcing and so food refusal. Others are worried by the small appetite of a child who has a small build, because he takes after the mother or father or has congenital heart disease or other condition which affects physical growth. Again, this leads to forcing and so to food refusal. Parents should know that children take all that they need if given a chance, and that it is never necessary to try to make a child eat. A poor appetite in a well child is almost always due to food forcing. A poor appetite is most unlikely to cause defective nutrition.

### **Defective physical growth from previous disease, now cured**

There is evidence from work on animals that if growth is retarded in early life, the growth remains defective later in spite of adequate nutrition.

Many human infants who suffered major surgical procedures in the early weeks, and who were excessively small in weight in that period, are small in later years. (Eid, 1970.) The longer the growth retardation persists before the cause is corrected, the greater is the subsequent growth deficit. Umansky & Hauck (1962) showed that children operated on for ligation of a patent ductus arteriosus, and who were far below the average in size at the time of the operation, did not usually catch up to the average height after the ligation. In



fact only 20 per cent of 444 children showed a marked postoperative acceleration of growth in height. It seems that there is a 'critical period' in physical growth, and that after that a normal diet will not restore the child to an average size.

For true dwarfism, see p. 22.

### Other causes to consider

The following is a useful classification of the causes of failure to thrive:

#### Defective intake

- Breast feeding without weight checks

- Artificial feeding

  - Fear of overfeeding

  - Errors in preparing the feeds

  - Incorrect feeding of premature baby

  - Inadequate fluid in hot climates

- Emotional deprivation; prolonged crying; child abuse

- Chronic infection, e.g., urinary tract

- Vitamin deficiency on synthetic diets

- Bartter's syndrome (p. 300)

- Subdural haematoma (rare)

- Pink disease (rare)

#### Defective Absorption

- Fat. Steatorrhoea, including fibrocystic disease of the pancreas and coeliac disease

- Carbohydrate. Carbohydrate intolerance. Carbohydrate malnutrition

- Protein

- Hirschsprung's disease

#### Increased loss

- Excessive perspiration. Overclothing

- Vomiting

- Diarrhoea

#### Errors of metabolism (all rare)

- Renal acidosis

- Hypercalcaemia

- Nephrogenic diabetes insipidus