

Baby Check App

Professionals' Info Pack

What is Baby Check?

Baby Check is designed to help parents decide how ill their baby is. It consists of 19 simple questions about signs and symptoms of illness which parents check for. Each check has a score, and the scores are added up. The higher the total score the sicker the baby is likely to be.

Baby Check was originally published as a Lullaby Trust booklet, and is now available as a free app. It automatically adds up the scores, tells parents how ill their baby is and what they should do next.

The Lullaby Trust Baby Check app was developed in partnership between Birmingham Community Healthcare NHS Trust and The Lullaby Trust

How to use

1. After viewing the Introduction screen press BEGIN. The user is asked if baby has any of the following symptoms:

- stops breathing or goes blue
- has a fit
- cannot be woken
- is unresponsive and not aware of what is going on
- has glazed eyes and is not focusing on anything
- has been badly or seriously injured
- has a rash that does not fade when pressed with a glass

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2. If YES is pressed, Baby Check displays a message saying the baby may be seriously ill and should be seen by a doctor straight away. A prompt will appear to dial 999.

3. If NO is pressed, the app proceeds to the main page. Here users can learn more about how to use the app, when to use it and how it works. It is advised that all sections are read before beginning the check. Once read, click Start The Check.

4. The first of 19 checks are displayed. Tap the button that best answers the question. After answering the app automatically proceeds to the next check. Pressing the back arrow button will return to the previous check.

5. On completion, Baby Check displays a score and one of the following messages:

- "0-7 the baby is only a little unwell and should not need medical attention"
- "8-12 the baby is unwell and you may wish to consult the doctor"
- "13-19 the baby is ill and you should contact the doctor"
- "20+ the baby is seriously ill and must be seen by a doctor straight away".

The Checks

Below are the 19 checks and the scores that the Baby Check app assigns

1 Unusual cry

Does the baby have an unusual cry?

Yes	2
No	0

2 Fluids taken

Has the baby taken less fluids than usual in the last 24 hours?

Has taken very little fluid	9
About half as much fluid as usual	4
A little less fluid than usual	3
About the same amount of fluid	0

3 Vomiting (being sick)

Has the baby vomited at least half the feed after every one of the last three feeds?

Yes	4
No	0

4 Green vomit

Has the baby had any bile-stained (green) vomiting?

Yes	13
No	0

5 Wet nappies

Has the baby passed less urine than usual?

Yes	3
No	0

6 Blood in a nappy

Has there been a large amount of obvious blood in the baby's nappy (not just on the stool)?

Yes	11
No	0

7 Drowsiness

Score

Has the baby been drowsy and less alert than usual when awake?

Drowsy most of the time	5
Occasionally drowsy	3
Not drowsy	0

8 Floppiness

Does the baby seem more floppy than usual?

Yes	4
No	0

9 Watching

Is the baby watching you less than usual?

Yes	4
No	0

10 Awareness

Is the baby responding less than usual to what is going on around?

Yes	5
No	0

11 Difficulty breathing in

When the baby breathes in does it show:

Obvious or deep indrawing with each breath	15
Indrawing just visible with each breath	4
No sign of indrawing	0

12 Looking pale

Is the baby:

Much paler than usual or had an episode of going very pale at any time during the last 24 hours	3
The same as usual	0

13 Wheezing

Is the baby wheezing when breathing out?

Yes	3
No	0

14 Blue nails

Are the baby's nails blue?

Yes	3
No	0

15 Circulation

After gently squeezing the baby's big toe to make it white, how quickly does the colour return?

Baby's toe was completely white before the squeeze

Baby's toe colour does not return within three seconds

Toe colour returns within three seconds

16 Rash

Does the baby have a rash which is raw and weeping and is bigger than the size of the baby's palm?

Yes

No

17 Hernia

Is there a bulge in the groin or scrotum which gets bigger with crying?

Yes

No

Score 18 Temperature

Is the baby's temperature 38.3°C or more?

Yes

No

Score

4

0

3

19 Crying during checks

3

Has the baby cried during the checks (more than a little grizzle)?

0

Yes

No

3

0

4

0

13

0

Interpretation of the scores

The table below shows the chance of a baby being well or mildly ill, moderately ill or seriously ill at different scores. (The positive predictive value of the scores).

Example: A baby scoring 24 has a 3% chance of being well or mildly ill, a 41% change of being moderately ill and a 56% change of being seriously ill.

Score	Well or mildly ill	Moderately ill	Seriously ill
0	99%	1%	0%
2	90%	9%	1%
4	85%	14%	2%
6	77%	21%	2%
8	66%	30%	4%
10	54%	41%	5%
12	41%	51%	8%
14	30%	58%	12%
16	20%	62%	18%
18	13%	62%	25%
20	8%	58%	34%
22	5%	50%	45%
24	3%	41%	56%
26	2%	32%	66%
28	1%	24%	75%
30	0%	17%	83%
32	0%	12%	88%
34	0%	8%	91%
36	0%	5%	95%
38	0%	3%	97%
40	0%	2%	98%
42	0%	1%	99%
48	0%	0%	100%

Caveats

Mild conditions needing medical attention

Conditions such as thrush, sticky eyes, lumps or swellings, loose stools, vomiting, etc. are rarely serious and score low, but they may still need medical attention.

Sudden infant death

Very rarely babies die suddenly with no apparent signs of illness. Baby Check is not designed to detect such babies, although it will help carers recognise serious illness.

The Research

Baby Check was developed from a four-year project which analysed the signs and symptoms of illness in over 1,000 babies under six months of age.

The study in Cambridge, UK and Melbourne, Australia (1991) recorded signs and symptoms of illness in 298 infants at home and 719 infants in hospital. A paediatrician graded each infant as being either well, or mildly, moderately or seriously ill. Ordinal regression analysis identified a combination of twelve signs and seven symptoms, each with a score, that best predicted illness severity.

Performance of Baby Check

Babies seriously ill with bacterial meningitis, pneumonia, bad bronchiolitis, septicaemia or intussusception consistently scored 20 or more, while 97% of babies at home scored less than 8. The accuracy and acceptability of Baby Check was also tested in field trials.

Trials in hospital

Baby Check was studied with infants in hospital. Junior doctors examined and scored the infants, while registrars and consultants independently assessed their illness severity. Baby Check correlated well with the doctors' opinion about whether to admit the babies, and it was better than the registrars at identifying babies that were well or mildly ill.

Trials at home

Parents scored normal babies at home. Most found Baby Check easy to use, helpful and reassuring. The scores were predominantly low (97% less than 7) and correlated well with those made by a trained research nurse. Baby Check discouraged parents from taking their baby to a doctor unnecessarily and empowered them to get help when the baby was ill. Most parents (80%) said they would like a copy and nearly all (96%) would recommend it to others. Only a few (4%) said it caused some anxiety.

Trials with general practitioners

Family doctors scored babies they were concerned about. Baby Check showed them that some were sicker than they first thought, and that it was useful to reassure parents their baby was not seriously ill. Many suggested that parents and health visitors should have a copy.

Testimonials

"Having something in your pocket that you can pick up and turn to when you're unsure about your baby's health is really great." **Ellie, young mum**

"It's a great app which I usually recommend to prospective and new parents during antenatal and new birth visits." **Sally, Health Visitor**

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