

Assessments for Newborn Babies



Each newborn baby is carefully checked at birth for signs of problems or complications. The healthcare provider will do a complete physical exam that includes every body system. Throughout the hospital stay, doctors, nurses, and other healthcare providers continually look at the health of the baby. They are watching for signs of problems or illness. Assessments may include the below.

Apgar scoring

The Apgar score helps find breathing problems and other health issues. It is part of the special attention given to a baby in the first few minutes after birth. The baby is checked at 1 minute and 5 minutes after birth, and at 5-minute intervals until 20 minutes with an Apgar score less than 7. The Apgar score includes heart rate, breathing effort, muscle tone, reflexes, and color.

Each area can have a score of 0, 1, or 2, with 10 points as the maximum total. Most babies score 8 or 9, with 1 or 2 points taken off for blue hands and feet because of immature circulation. If a baby has a difficult time during delivery and needs extra help after birth, this will be shown in a lower Apgar score. Apgar scores of 6 or less usually mean a baby needed immediate attention and care.

Sign	Score = 0	Score = 1	Score = 2
Heart rate	Absent	Below 100 per minute	Above 100 per minute
Breathing effort	Absent	Weak, irregular, or gasping	Good, crying
Muscle tone	Flaccid	Some flexing of arms and legs	Well-flexed, or active movements of arms and legs
Reflex or irritability	No response	Grimace or weak cry	Good cry
Color	Blue all over, or pale	Body pink, hands and feet blue	Pink all over

Birth weight

A baby's birth weight is an important marker of health. Full-term babies are born between 37 and 41 weeks of pregnancy. The average weight for full-term babies is about 7 pounds (3.2 kg). In general, very small babies and very large babies are at greater risk for problems. Babies are weighed every day in the nursery to look at growth, and the baby's need for fluids and nutrition. Newborn babies may often lose up to 8% to 10% of their birth weight. This means that a baby weighing 7 pounds, 3 ounces at birth might lose as much as 11.5 ounces in the first few days. Babies will usually gain this weight back within the first 2 weeks after birth. Premature and sick babies may need more calories to reach a healthy weight gain.

Most hospitals use the metric system for weighing babies. This chart will help you convert grams to pounds.

Converting grams to pounds and ounces:

1 lb. = 453.59237 grams; 1 oz. = 28.349523 grams; 1,000 grams = 1 kg.

Pounds

Ounces	2	3	4	5	6	7	8	9
0	907	1361	1814	2268	2722	3175	3629	4082
1	936	1389	1843	2296	2750	3203	3657	4111
2	964	1417	1871	2325	2778	3232	3685	4139
3	992	1446	1899	2353	2807	3260	3714	4167
4	1021	1474	1928	2381	2835	3289	3742	4196
5	1049	1503	1956	2410	2863	3317	3770	4224
6	1077	1531	1984	2438	2892	3345	3799	4252
7	1106	1559	2013	2466	2920	3374	3827	4281

8	1134 1588 2041 2495 2948 3402 3856 4309
9	1162 1616 2070 2523 2977 3430 3884 4337
10	1191 1644 2098 2551 3005 3459 3912 4366
11	1219 1673 2126 2580 3033 3487 3941 4394
12	1247 1701 2155 2608 3062 3515 3969 4423
13	1276 1729 2183 2637 3090 3544 3997 4451
14	1304 1758 2211 2665 3118 3572 4026 4479
15	1332 1786 2240 2693 3147 3600 4054 4508

Measurements

The hospital staff takes other measurements of each baby. These include:

- **Head circumference.** This is the distance around the baby's head.
- **Abdominal circumference.** This is the distance around the belly (abdomen).
- **Length.** This is the measurement from top of head to the heel.

The staff also checks these vital signs:

- **Temperature.** This checks that the baby is able to have a stable body temperature in a normal room environment.
- **Pulse.** A newborn's pulse is normally 120 to 160 beats per minute.
- **Breathing rate.** A newborn's breathing rate is normally 40 to 60 breaths per minute.

Physical exam

A complete physical exam is an important part of newborn care. The healthcare provider carefully checks each body system for health and normal function. The provider also looks for any signs of illness or birth defects. Physical exam of a newborn often includes:

- **General appearance.** This looks at physical activity, muscle tone, posture, and level of consciousness.
- **Skin.** This looks at skin color, texture, nails, and any rashes.
- **Head and neck.** This looks at the shape of head, the soft spots (fontanelles) on the baby's skull, and the bones across the upper chest (clavicles).
- **Face.** This looks at the eyes, ears, nose, and cheeks.
- **Mouth.** This looks at the roof of the mouth (palate), tongue, and throat.
- **Lungs.** This looks at the sounds the baby makes when they breathe. This also looks at the breathing pattern.
- **Heart sounds and pulses in the groin (femoral)**
- **Abdomen.** This looks for any masses or hernias.
- **Genitals and anus.** This checks that the baby has open passages for urine and stool.
- **Arms and legs.** This checks the baby's movement and development.

Gestational assessment

The healthcare provider will check how mature the baby is. This is an important part of care. This check helps figure out the best care for the baby if the dates of a pregnancy are uncertain. For example, a very small baby may actually be more mature than they appear by size and may need different care than a premature baby needs.

Healthcare providers often use an exam called the Dubowitz/Ballard Examination for Gestational Age. This exam can closely estimate a baby's gestational age. The exam looks at a baby's skin and other physical features, plus the baby's movement and reflexes. The physical maturity part of the exam is done in the first 2 hours of birth. The movement and reflexes part of the exam is done within 24 hours after birth. The provider often uses the information from this exam to help with other maturity estimates.

Physical maturity

The physical maturity part of the Dubowitz/Ballard exam looks at physical features that look different at different stages of a baby's gestational age. Babies who are physically mature usually have higher scores than premature babies.

Points are given for each area of assessment. A low of 1 or 2 means that the baby is very immature. A score of 4 or 5 means that the baby is very mature (postmature). These are the areas looked at:

- **Skin textures.** Is the skin sticky, smooth, or peeling?
- **Soft, downy hair on the baby's body (lanugo).** This hair is found on premature babies. It is sometimes seen on a full-term infant but not on a post-term infant.
- **Plantar creases.** These are creases on the soles of the feet. They can range from absent to covering the entire foot.
- **Breast.** The provider looks at the thickness and size of breast tissue and the darker ring around each nipple (areola).
- **Eyes and ears.** The provider checks to see if the eyes are fused or open. They also check the amount of cartilage and stiffness of the ears.
- **Genitals, male.** The provider checks for the testes and how the scrotum looks. It may be smooth or wrinkled.
- **Genitals, female.** The provider checks the size of the clitoris and the labia and how they look.

Maturity of nerves and muscles

The healthcare provider does 6 checks of the baby's nerves and muscles.

A score is given for each area. Typically, the more mature the baby is, the higher the score. These are the areas checked:

- **Posture.** This looks at how the baby holds their arms and legs.
- **"Square window."** This looks at how far the baby's hands can be flexed toward the wrist.
- **Arm recoil.** This looks at how much the baby's arms "spring back" to a flexed position.
- **Popliteal angle.** This looks at how far the baby's knees extend.
- **"Scarf sign."** This looks at how far the baby's elbows can be moved across the baby's chest.
- **Heel to ear.** This looks at how near the baby's feet can be moved to the ears.

When the physical assessment score and the nerves and muscles score are added together, the healthcare provider can estimate the baby's gestational age. Scores range from very low for immature babies to very high scores for mature and postmature babies.

All of these exams are important ways to learn about your baby's well-being at birth. By finding any problems, your baby's healthcare provider can plan the best possible care.

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