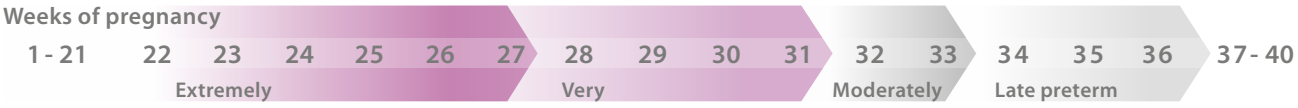
Preterm birth

Born too soon

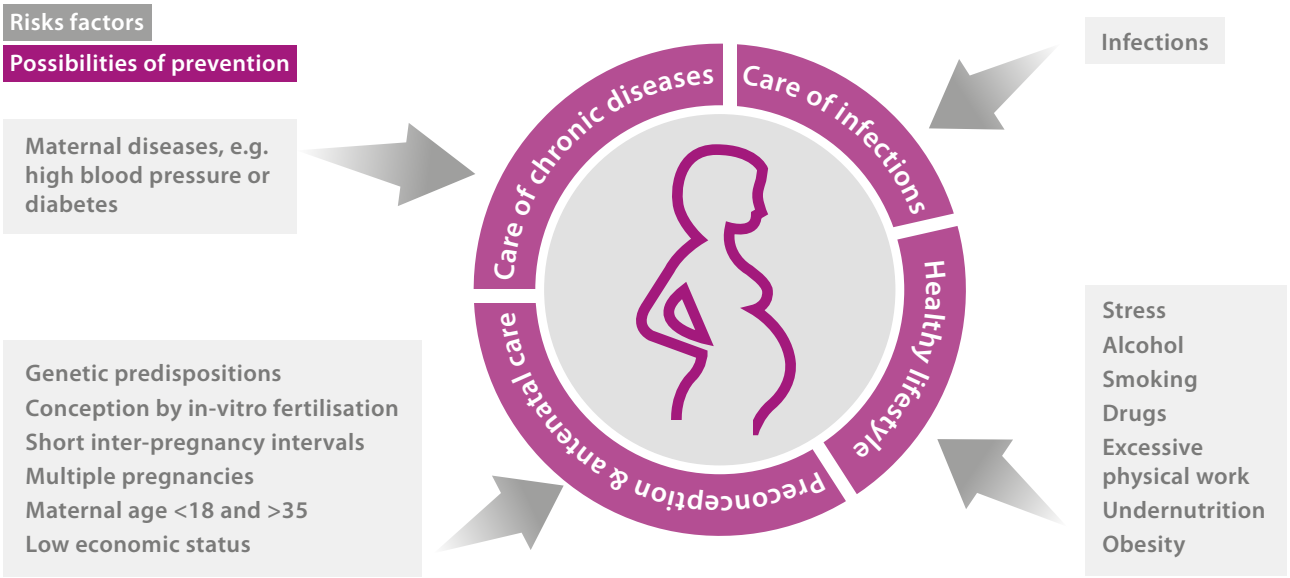
Usually, a baby is born after 37 to 42 weeks of pregnancy. Due to various reasons, however, over 10% of the 130 million babies worldwide and 5 to 12% of the 5 million European babies are born "preterm" each year, thus, by definition before the completion of 37 weeks of pregnancy[1,2].

The later a baby is born, the higher is its chance to survive. Nowadays, almost 95% of children born at week 28 to 32 survive in high-income countries. Therefore, clinics and research shifted from merely trying to save lives towards preventing impairments. Nevertheless, preterm born babies are at a higher risk for short- and long-term health impairments compared to term born babies[2,3].



Risks and prevention of preterm birth

Several demographic, lifestyle and medical factors have been identified that may increase the risk of preterm birth. A healthy lifestyle, prevention and treatment of diseases as well as antenatal care may contribute to a term birth[3,4]. However, in about 50% of preterm births, the actual cause of early delivery as well as possibilities of prevention remain unknown.



Signs of preterm labour

Often, the signs for preterm labour are unspecific. The National Health Service, United Kingdom[5], defines them as

- "regular contractions or tightenings
- period-type pains
- a "show" – when the plug of mucus that has sealed the cervix during pregnancy comes away and out of the vagina
- a gush or trickle of fluid from your vagina – this could be the waters breaking
- backache that's not usual"

When a pregnant woman shows any of the above-mentioned signs, it does not necessarily mean that she will give birth immediately. The healthcare professional will perform a diagnostic assessment to find the reason behind the signs of preterm labour. The tests can include measuring the fetal heartbeat and the uterine contractions (cardiotocography), ultrasonography and vaginal examination.

As the best "incubator" for a baby is the mother's womb, healthcare professionals will try to prevent preterm birth. However, the decision of either inhibit birth or deliver the baby depends on the risks and benefits of both mother and baby.[6]

Treatment of preterm labour

In any case, healthcare professionals will try to prolong the pregnancy for at least 48 h to prepare the pregnant woman and her child as best as possible for the upcoming birth. Within these 48 h, the pregnant woman should be transferred to a specialised perinatal centre.

Two major types of medications can be considered during this time:

- Tocolytics: drugs that reduce uterine contractions
- Glucocorticoids: drugs that prepare the immature lung of the baby for breathing and additionally reduce the risk for internal bleedings in the skull and severe problems of the gut (Necrotizing enterocolitis)

When preterm labour is treated with medication, doctors always look for the individual indication and need as well as the risks and benefits of mother and child.[6]

For the baby

The earlier a baby is born, the less developed and more vulnerable its organs and bodily functions will be. To ensure appropriate care for preterm babies, hospitals provide specialised care in Neonatal Intensive Care Units (NICU).

Original hand size of an extremely preterm, compared to a term newborn[8]

Due to medical advances, the rates of preterm born babies with sensory or neuromotor impairments have significantly decreased during the past two decades[7]. Nevertheless, they remain at greater risk of developing short- and long-term health complications e.g. affecting the cardio-vascular system, lung, digestive tract, brain, hearing, or vision, compared to term born infants[2]. Thus, preterm born babies need assessments of their development and follow-up check-ups at close intervals.

For the parents

For most parents, a preterm birth comes as a shock. As it is often unexpected, parents are poorly prepared for it. They might be overwhelmed by decisions to take and need time to cope with the situation, to explain the situation to the newborns' siblings and other family members, and to find their role as parents[3]. Of course, the hospital staff will do their best to support the babies and their parents. The parents themselves can contribute to their baby's development, too, e.g. by skin-to-skin care[8], involvement in the care of their baby and by providing breastmilk for the baby. For the mother, it is important to talk to healthcare professionals to evaluate the potential reasons why her baby was born preterm, and to discuss her options to prevent another preterm birth in future pregnancies.

For further questions and your possibilities on how to prevent preterm birth, please ask your healthcare professional.

A list of local parent organisations engaged in preterm birth can be found on ***www.gfcni.org/network/parent-and-patient-organizations***.

About GFCNI

The Global Foundation for the Care of Newborn Infants (GFCNI) is the first global organization and network to unite patients, families, healthcare professionals, medical staff, and scientists from different disciplines, fields, and countries – all with the joint goal of advancing the health and quality of care for newborns and their families across the globe. We envision a future where every baby born receives the right care, at the right time, in the right place!

For more information: ***www.gfcni.org***

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Have a look at our other information materials on ***gfcni.org/downloads*** e.g.

- A healthy pregnancy
- Pre-eclampsia
- Welcoming the family in the NICU
- Breastfeeding a preterm baby
- Parenteral nutrition
- Respiratory Syncytial Virus (RSV)

Photo credit: Christian Klant Photography, Istockphoto.

References
1. Euro-Peristat Project. 2015.
2. Born Too Soon: The Global action report on preterm Birth. World Health Organization; 2012
3. Delnord M et. al. Current Opinion in Obstetrics & Gynecology. 2015;27(2):133–142.
4. Zeitlin J, et. al. International Journal of Obstetrics & Gynaecology. 2013;120(11):1356–1365.
5. *www.nhs.uk/conditions/pregnancy-and-baby/premature-early-labour*
6. Schleussner E, Dtsch Arztebl Int 2013; 110(13)
7. Pierrat V, et al. BMJ 2017;358:j3448.
8. Honoré E et. al. Data in Brief. 2016;7:1451–1454.

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