## 433 Teams

# OBSTETRICS & GYNECOLOGY

- APGAR score
- Thyroid disease

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# APGAR score

What is the Apgar score?
The Apgar score is a simple assessment of how a baby is doing at birth, which helps determine whether the newborn is ready to meet the world without additional medical assistance.
it's easy to remember what's being tested by thinking of the letters in the name "Apgar": Activity, Pulse, Grimace, Appearance, and Respiration. Here's how each is used to assess a baby's condition at birth:

Activity (muscle tone)
0 Limp; no movement
1 Some flexion of arms and legs
2 Active motion
Pulse (heart rate)
0 No heart rate
1 Fewer than 100 beats per minute
2 At least 100 beats per minute

- Grimace (reflex response)
  0 No response to airways being suctioned
  1 Grimace during suctioning
  2 Grimace and pull away, cough, or sneeze during suctioning
- Appearance (color)
  0 The baby's whole body is completely bluish-gray or pale
  1 Good color in body with bluish hands or feet
  2 Good color all over
- Respiration (breathing)
  0 Not breathing
  1 Weak cry; may sound like whimpering, slow or irregular breathing
  2 Good, strong cry; normal rate and effort of breathing

- What do the Apgar scores mean?
- *The one-minute Apgar score*
  The first Apgar score helps the practitioner decide whether the baby needs immediate medical help. If the baby scores between 7 and 10, it usually means he's in good shape and doesn't need more than routine post-delivery care
- If the baby scores between 4 and 6, he may need some help breathing. This could mean something as simple as suctioning his nostrils or massaging him, or it could mean giving him oxygen. If the baby scores 3 or less, he may need immediate lifesaving measures – a full-fledged resuscitation.
- *The five-minute Apgar score*
  The second score helps the practitioner see how your baby is progressing and whether he has responded to any initial medical intervention. A score of 7 to 10 is still considered normal at this point. If the baby scores 6 or less at the five-minute mark, he may need medical help.

- **THYROID DISEASES**
- **Normal Thyroid Physiology during Pregnancy**
- With the increase in glomerular filtration rate that occurs during pregnancy, the renal excretion of iodine increases, and plasma inorganic iodine levels are nearly halved. Goiters due to iodine deficiency are not likely if plasma inorganic iodine levels are greater than 0.08 µg/dL. Inorganic iodine supplementation up to a total of 250 µg/day is sufficient to prevent goiter forma- tion during pregnancy.
- **placental barrier and could potentially cause fetal hypothyroidism.**
- Thyroid-releasing hormone ( TRH) can cross the placental barrier, but there is no significant placental transfer because of circulating low levels. Thyroid- stimulating antibodies also cross the placenta and can potentially cause fetal thyroid dysfunction.

- Pregnant women on appropriate thyroid replacement therapy can expect a normal pregnancy outcome, but **untreated maternal hypothyroidism has been associated with an increased risk for spontaneous abortion, preeclampsia, abruption, low-birth-weight or stillborn infants, and lower intelligence levels in the offspring.**
- **The most important laboratory finding to confirm the diagnosis of hypothyroidism is an elevated TSH level.** Other findings include low levels of serum free T3 and free T4. Once diagnosed, therapy such as levothyroxine should be started and serum TSH levels performed monthly with appropriate adjustments in levothyroxine dosage.
- **NEONATAL HYPOTHYROIDISM. Thyroid hormone deficiency during the fetal and early neonatal periods leads to generalized developmental retardation.** The severity of symptoms depends on the time of onset and the severity of the deprivation.
- **The incidence of congenital hypothyroidism (cretinism) is about 1 in 4000 births.** The etiologic factors include thyroid dysgenesis, inborn errors of thyroid function, and drug-induced endemic hypothyroidism. **The most common cause of neonatal goiter is maternal ingestion of iodides present in cough syrup.** The goiters associated with maternal iodine ingestion are large and obstructive, unlike those associated with maternal PTU treatment.

- **What causes hypothyroidism in pregnancy?**

1. Hashimoto's disease
2. Hypothyroidism in pregnancy can also result from existing hypothyroidism that is inadequately treated or from prior destruction or removal of the thyroid as a treatment for hyperthyroidism.

- **How does hypothyroidism affect the mother and baby?**

1. preeclampsia
2. anemia—too few red blood cells in the body, which prevents the body from getting enough oxygen
3. miscarriage
4. low birth weight
5. stillbirth
6. congestive heart failure, rarely.

- Symptoms of hypothyroidism in pregnancy include extreme fatigue, cold intolerance, muscle cramps, constipation, and problems with memory or concentration. High levels of TSH and low levels of free $T_4$ generally indicate hypothyroidism.
- Treatment: oral levothyroxine only.

- **Hyperthyroidism:**
- **How does pregnancy normally affect thyroid function?**
- Two pregnancy-related hormones—human chorionic gonadotropin (hCG) and estrogen—cause increased thyroid hormone levels in the blood. Made by the placenta, hCG is similar to TSH and mildly stimulates the thyroid to produce more thyroid hormone. Increased estrogen produces higher levels of thyroid-binding globulin, also known as thyroxine-binding globulin, a protein that transports thyroid hormone in the blood.
- **What causes hyperthyroidism in pregnancy?**
- Graves' disease
- Rarely, hyperthyroidism in pregnancy is caused by hyperemesis gravidarum—severe nausea and vomiting that can lead to weight loss and dehydration. This extreme nausea and vomiting is believed to be triggered by high levels of hCG, which can also lead to temporary hyperthyroidism that goes away during the second half of pregnancy.

❖ **uncontrolled hyperthyroidism during pregnancy can lead to**

1. congestive heart failure
2. preeclampsia—a dangerous rise in blood pressure in late pregnancy
3. thyroid storm—a sudden, severe worsening of symptoms
4. miscarriage
5. premature birth
6. low birth weight

## ❖ Symptoms of hyperthyroidism in pregnancy:

- Irregular heartbeat
- Nervousness
- Severe nausea or vomiting
- Slight tremor
- Trouble sleeping
- Weight loss or low weight gain for a typical pregnancy.

## ❖ Treatment of hyperthyroidism in Pregnancy

An antithyroid medication that interferes with the production of thyroid hormones is used. This medication is usually **propylthiouracil** or PTU for the first trimester, and — if necessary, **methimazole** can be used also, after the first trimester. In rare cases in which women do not respond to these medications or have side effects from the therapies, surgery to remove part of the thyroid may be necessary.

## Done by:

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