

Amniotic Fluid Levels

Drinking extra fluids has been found to help with low AFI.

Source: *American Journal of Obstetric Gynecology*, 1995 Oct, **173:4**, 1186-91

Acute maternal hydration in third-trimester oligohydramnios: effects on amniotic fluid volume, uteroplacental perfusion, and fetal blood flow and urine output [see comments]

Discussion Group

Topic: Scale to determine AFI

Regarding the AFI (amniotic fluid index) less than 5cm would be something they would want to keep an eye on. I just had this question from someone else with the same diagnosis last week. Her doctor said her fluid levels were low.....at 9.5.....

As far as the fluid levels, under 7-8 is considered low and under 5 is considered dangerously low. 11 is just around normal.

Remedies:

(from a midwife) increase her protein intake and stop getting ultrasounds

Drink water! Many people do not drink enough water, but most pregnant women really don't. Low amniotic fluid can signal problems...but very often if the mother just increases her water to 2 liters or more a day, the fluid level resolves. Ten 8 oz. glasses a day is really a minimum, and most people will wrinkle their nose and say "I can't possibly drink that much water!" In hot weather or when the mother has been very active, it should be more!

The amniotic fluid is constantly being made and even when the membranes have been ruptured for an extended amount of time. There is usually a good amount of fluid behind the baby. We know that artificially releasing membranes can lead to complications and put an added stress on the cord etc., as can membranes that have released on their own for extended periods. No birth is ever a completely "dry birth."

Here is a link to the problem you are asking about: low amniotic fluid also known as oligohydramnios <http://www.wikipregnancy.com/page/Oligohydramnios>

Take note of what this link has to say under the heading called TREATMENT. This information is excellent advice that you can pass on the next time this subject comes up.

Topic: Retesting after first low AFI reading

If there is an indication of low amniotic fluid, the mom should request another reading at another time, as sometimes the baby obscures the true level, depending upon the angle of the testing.

I also advise that the mom drink a lot of water prior to the second or any reading.

Fluid level is the most SUBJECTIVE reading in the test-it can change from one sono tech to the next. Baby position is a huge factor; mother's fluid intake is another.

When I have clients that go to 41 weeks and 5 days (hence I'm required to get a biophysical profile Sono-one that checks 8 to 10 items and gets a 'score'); I have the moms drink a gallon of water the

day before and two quarts before the actual ultrasound AND have mom eat a candy bar while in the waiting room for the sonogram. At least 2 of the 8 or 10 tests will be easy to pass with this method--fetal reactivity, the sugar makes sure the bay is moving around well, and the tons of water does increase the amniotic fluid level so it's easily 'measured' by the tech. Some of the other 'tests' are placental grade 9 (is the placental still doing its job?)-and the answer is yes, if the mom is continuing to eat well. Fetal variability (how often and how wide a range of heart rate ups and downs), placental location, and my personal favorite--the size of the baby are notoriously inaccurate at this late stage of pregnancy.

For size and dates, an ultrasound prior to 20 weeks along is fairly accurate as a piece of information. Anything after gets very 'unstable' as a source of information for dates or size and is certainly nothing to base decisions on.

Regarding low amniotic fluid: the placenta makes the amniotic fluid, and the baby contributes by drinking the fluid and peeing. Low AF may be due to a small or poorly formed placenta that is unable to keep up as the baby grows. It may also be due to a problem in the baby--a kidney or bladder malfunction (rare.) The placenta comes from the fertilized egg, just at the baby does, and many problems (including preeclampsia) are due to a placenta that has problems right from the beginning. It may function well for the first several months, and then just can't keep up. So moms need to be healthy BEFORE conceiving to ensure the best chance of a good placenta, healthy baby, etc. Of course excellent nutrition and plenty of water throughout the pregnancy is crucial too, but even that can't cure a placenta that is not great from the beginning. The place of implantation is key, too. A placenta implanting over a uterine scar may have more trouble.

Did they in fact have 'low fluid' ?? And why a cesarean birth. No opportunity for labor? That seems like overkill to me. Usually if it is a serious concern, women are allowed to labor to see what happens.

True low amniotic fluid is called Oligohydramnios

****Johns Hopkins researchers who studied the health of more than 250 babies born at 37 weeks of gestation say they found that babies whose mothers had low levels of amniotic fluid were of normal size. And the babies had no greater risk for health problems than babies whose mothers had normal levels of amniotic fluid.****

Low Level of Amniotic Fluid No Reason to Induce Labor The condition doesn't jeopardize fetal health, study says

<http://www.austin360.com/health/content/shared-auto/healthnews/prer/511660.html>

By Janice Billingsley

HealthScoutNews Reporter

FRIDAY, Feb. 7 (HealthScoutNews) -- A low level of amniotic fluid in the last trimester of a pregnancy, often thought to be sufficient cause to induce delivery, is not reason enough to do so.

Johns Hopkins researchers who studied the health of more than 250 babies born at 37 weeks of gestation say they found that babies whose mothers had low levels of amniotic fluid were of normal size. And the babies had no greater risk for health problems than babies whose mothers had normal levels of amniotic fluid.

"This study indicates that we don't want to intervene because of a Amniotic Fluid Index (AFI) of less than five if everything else is normal," says study author Dr. Ernest M. Graham, an assistant professor of gynecology and obstetrics at Johns Hopkins University.

Graham presented the results of his study on Feb. 7 at the annual meeting of the Society for Maternal-Fetal Medicine in San Francisco.

Amniotic fluid is a clear, slightly yellowish liquid that surrounds the fetus during pregnancy; it is contained in the amniotic sac. Normal levels of fluid indicate proper functioning of the developing fetus, while low levels can be associated with incomplete lung development and poor fetal growth. Measured by depths in centimeters, normal amounts range from five to 25 centimeters; below that is considered low.

The American College of Obstetrics and Gynecology recommends the Amniotic Fluid Index should be only one measure of assessing fetal health. Heart monitors and sonograms are others.

However, doctors often induce delivery -- especially at 37 weeks -- based largely on a low AFI, says Dr. Siobhan Dolan, assistant medical director of the March of Dimes.

Normal gestation lasts approximately 37 to 40 weeks, according to the March of Dimes, which last week launched a \$75 million campaign to address the high incidence of premature babies born before 37 weeks.

"In general, there's a tendency, at 37 weeks, to deliver the baby," Dolan says. "But this is a good study because it gives people reassurance to manage the pregnancy with careful monitoring and observation. You don't have to go immediately to the labor room."

For the study, Graham and his colleagues studied 262 women who gave birth at Johns Hopkins Hospital from 1999 to 2002, comparing the babies' health at birth. One hundred thirty-one women had had a low AFI during their third trimester, a condition called oligohydramnios. The other 131 women had normal amounts of amniotic fluid at the end of their pregnancies.

Women with low AFI levels had their labor induced sooner due to their condition, but were less likely to have Caesarean sections, Graham says. The babies born to these women were normal size, and were at no increased risk for respiratory problems, immature intestines or brain disorders, he says.

"We've always thought that AFI was correlated with blood flow in the fetus, that a low AFI meant there wasn't a good blood flow, but we found that AFI is a very poor indicator of that," Graham says. The finding should give doctors pause before using AFI test results as a reason to induce delivery, he adds.

"If a low AFI is the only thing determining an early intervention in a pregnancy, that is not a reason to do so," he says.

More information

An explanation of the fetal monitoring tests used during pregnancy, including AFI readings, can be found at ["http://www.smartmoms.org/prenatal-tests/test7.html"](http://www.smartmoms.org/prenatal-tests/test7.html).

["http://www.marchofdimes.com/681_4536.asp"](http://www.marchofdimes.com/681_4536.asp) describes what amniotic fluid is and why it is important to the development of the fetus.

SOURCES: Ernest M. Graham, M.D., assistant professor, gynecology and obstetrics, Johns Hopkins University, Baltimore; Siobhan Dolan, M.D., assistant medical director, March of Dimes, White Plains, N.Y., and assistant professor, gynecology and obstetrics, Albert Einstein College of Medicine, Bronx, N.Y.; Feb. 7, 2003, presentation, annual meeting, Society for Maternal-Fetal Medicine, San Francisco
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Discussion Group

Topic: Induction for low AFI

Also during my last pregnancy I was induced for low fluid. This time (20 weeks) I went to see the consultant and he said, after looking at my previous fluid levels, that they have altered the chart and that the old fluid levels would be nothing to worry about and if it was like that again I could go ahead with the homebirth. I guess its progress and a good thing, but it sort of made me mad because I always felt there was nothing wrong last time, last time, with the different chart they made it sound like things were really wrong... I wish they had this chart then.

Topic: Caesarean due to low AFI

"I have a question in regards to the amniotic fluid - 2 mothers end up with C-sections because the Dr's. told them that their amniotic fluid was low. One mother was 3 weeks from her EDD and the other was at her EDD."

Two mothers ended up with c-sections after going through the whole nine yards of interventions, which began with inductions for "low amniotic fluid". This was a very discouraging situation for them because they and their partners all felt compelled to listen to their doctor's cautionary tale about the dangers of such an indicator. To me, the incredulous thing about this type of scenario is how it unfolds: (doctor) "your ultrasound indicates that your amniotic fluid is on the low side and we think it would be advisable to get the baby delivered ASAP before some dangerous complications can set in". They (patient and partner, confused & scared) agree, and then when she gets to the hospital, can you guess what is the first thing that the doctor does? He or she breaks her water. This makes no sense – Doesn't the baby need that fluid?

Here are two links that basically state "babies had no greater risk for health problems than babies whose mothers had normal levels of amniotic fluid." One is an announcement of a study confirming same by Johns Hopkins University.

<http://www.facebook.com/ext/share.php?sid=100616730350&h=jcJeL&u=EVY09>

<http://www.facebook.com/ext/share.php?sid=85728794888&h=SmJik&u=QWsLo>

Topic: How much fluid is normal?

How much fluid should I have?

Terminology:

- 1. polyhydramnios: too much fluid*
- 2. oligohydramnios: too little fluid*

Under normal circumstances, the amount of amniotic fluid you have increases until the beginning of your third trimester and generally peaks at 34 weeks, at which point you may carry about a quart.. After that, it gradually decreases until you give birth. If you're found to have too much fluid at any point in your pregnancy, it's called hydramnios or polyhydramnios. If the condition is not associated with any other findings, the prognosis is usually good.

If preterm labor (which sometimes occurs with this condition) should happen, this is something they can take care of at the hospital.

Watching you closely & perhaps putting you on bed rest if necessary sound like the best course at this time. Please keep a positive frame of mind about the outcome of all of this. I know that you can and will do that.

In addition to that, I think that I would like to recommend that you do some daily affirmations to affect the outcome of this uncertainty:

"I see my baby growing inside of me. Everything is as it should be. He is developing & growing each day and the level of amniotic fluid is perfect for his needs"

"I see my baby surrounded by and bathed in the perfect amount of amniotic fluid"

"I see that everything is as it should be for me to have the perfect birthing for my baby. He is growing as he should and is thriving in the perfect amount of amniotic fluid for his needs"

"My baby knows when the time is right for him to be born; he will decide when to appear, neither too early or too late."

And, remember to keep visualizing him in the perfect birthing position and environment.

Topic: Dry birth

There's no such thing as a true "dry birth." In pregnancy, the mother's body produces amniotic fluid almost continuously. Until the placenta is born, the mother is still pregnant (or so her body thinks) and continues producing it. So even if a woman's membrane fully releases and it's some time until the birth, periodically she will feel a gush of fluid as her body continues doing what it is supposed to do!

*I don't have articles or stats to reference but with my first son I was told fluid levels had dropped at *42* weeks. After a gel induction and a night's worth of surges (and no cervical change) the midwives conceded that the measurement of fluid can be rather subjective (read: Wrong) and by palpation I had plenty of fluid. I left the hospital, went to another facility for a more thorough ultrasound (a biophysical profile), went home, and had a lovely spontaneous birth 3 days later.*

Topic: Other evaluations and considerations

Penny Simpkin has a bit of info on the fact that in the last few weeks of pregnancy it is normal to see the amniotic fluid level decrease a bit, often bringing on release of membranes. I'm fairly certain it's in her book, Pregnancy, Childbirth and the Newborn. Having said that, I'm sure there's more information that just that—as she's not a "medical doctor" and sharing this source with one probably won't be acceptable! But you may be able to find her sources of information.

Is the baby's body outline easily seen thru the abdominal wall while she lays on her back? in other words, is she still rounded and full of fluid? Would some one have to push a bit to feel the body parts on fundal palpation?

Ultrasounds are notoriously inaccurate for evaluating fluid levels. While she is drinking she needs to increase salt and protein intake--I'd suggest she eat every two or three hours--snacking along. Increasing her fluid should make the baby pee more--hence bring up the fluid level in utero.

Questions to raise - does the baby need this level of intervention? Is something truly going on?

Have her eat a candy bar or drink juice right before the scan--we don't want to have 'non-reactive' added to the list of things they might find!

Additional Resources

Website with a great table with AFI index information:

<http://www.transitionsdoula.com/downloads/afi.pdf#search='Amniotic%20fluid%20index>

March of Dimes study about induction due to AFI and neonatal outcomes:

While many studies demonstrate an increase in inductions when the AFI is below 5 these same studies also indicate that at time of birth APGAR scores, cord PH, and NICU admissions were not significantly different between the groups.

http://www.marchofdimes.com/professionals/681_4536.asp

http://www.marchofdimes.com/pnhec/188_1033.asp

About Pregnancy Website information sheets:

<http://pregnancy.about.com/cs/amnioticfluid/a/aaafv.htm>

http://pregnancy.about.com/cs/amnioticfluid/a/aaafv_2.htm

University of Michigan definition:

Oligohydramnios - When a woman is said to have too little amniotic fluid she has oligohydramnios. This is defined as having less than 200 ml of amniotic fluid at term or an AFI of less than 5 cm. This means that during an ultrasound the largest pocket of fluid found did not measure 1 cm or greater at its largest diameter. It is clinically very hard to prove prior to delivery. After the birth, examining the placenta for the presence of amnion nodosum on the placenta is highly correlated with oligohydramnios.

It is usually a combination of factors, not just one that determines induction.

<http://www.med.umich.edu/1libr/tests/testn05.htm>

Induction risky with unripe cervix

Source: *Obstetrics & Gynecology* 2005; 105: 690-7

Posted: 11 April 2005

http://www.obgynworld.com/international/news/2005/Week_15/Day_1/Induction_risky_with.asp

Quantifying risk and risk factors for cesarean delivery after induction of labor.

In nulliparous women, both medical and elective induction raise the risk of cesarean section compared with spontaneous labor, especially in cases with a low Bishop score, (cervical readiness) study findings show.

A team of researchers led by Francis Vrouenraets from Academic Hospital Maastricht in The Netherlands set out to determine the risk and predictors for cesarean delivery after induction of labor in nulliparous women, who are considered to be most at risk.

They analyzed obstetric and neonatal data for a cohort of nulliparous women with a term singleton fetus in the cephalic position who underwent medical (n = 435) or elective induction of labor (n = 189), or entered labor spontaneously (n = 765) at one of two hospitals.

The results revealed a more than two-fold higher incidence of cesarean delivery following medical (23.4 percent) and elective (23.8 percent) induction, compared with the controls (12.0 percent). However, after adjusting for Bishop score for cervical ripeness at admission, the likelihood of cesarean delivery became comparable among all three groups.

The investigators comment: "Whereas induction for medical indications is often inevitable, induction for elective reasons should be discouraged in the case of an unripe Bishop score."

Induction failure redefined

Source: *Obstetrics & Gynecology* 2005; 105: 705-9

Posted: 12 April 2005

http://www.obgynworld.com/international/news/2005/Week_15/Day_2/Induction_failure_re.asp

Researchers determine the length of the latent phase after induction that is associated with a low likelihood of vaginal delivery and high risk of morbidity.

US research indicates that permitting a latent phase of up to 18 hours after induction of labor allows most patients to progress to vaginal delivery without significantly increasing maternal or neonatal risks.

It has been previously suggested that "a failed induction of labor may be diagnosed in women whose continued lack of progression into the active phase makes it unlikely that they would safely proceed to a vaginal delivery," note Charla Simon and William Grobman from Northwestern University Medical School in Chicago, Illinois.

In an effort to identify the most clinically relevant definition of a failed induction, the pair of researchers analyzed medical records for all nulliparous women who were induced at their institution after 36 weeks' gestation over a 6-month period.

Of the 397 women included in the analysis, 26 percent underwent cesarean section. The risk of such delivery rose with increasing length of the latent phase, exceeding the 50 percent mark when the latent phase exceeded 18 hours. These protracted inductions were associated with increased frequencies of chorioamnionitis and postpartum hemorrhage, but this did not translate into higher risks of transfusion, hysterectomy, prolonged hospitalization, or adverse neonatal outcomes.

Simon and Grobman conclude: "The results suggest it is not unreasonable to allow up to 18 hours of latent labor before recommending a cesarean for a failed induction."