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The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. The pregnancy test calculator can help you calculate the best time to take a regular pregnancy test or a specially marked early pregnancy test. How Pregnancy Tests Work Pregnancy tests work by measuring or detecting the level of human chorionic gonadotropin (hCG) in a woman's urine or blood. Home pregnancy tests are generally urine sticks which detect if hCG is present in urine. A pregnancy blood test detects if hCG is present in the blood. A doctor will generally not order a blood test until you have missed a period. hCG HCG is short for Human chorionic gonadotropin, a hormone produced by the placenta during pregnancy. Two Types of Home Pregnancy Tests Tests offer different accuracies and sensitivities but can basically be divided into two categories: early and regular.Early home pregnancy tests: Early home pregnancy tests are more sensitive than regular tests so can be used even before a period is missed. However, some accuracy is sacrificed by testing early. Early tests will normally be clearly labeled and marketed as early pregnancy tests. Regular home pregnancy tests: Regular home pregnancy tests are only effective from the day a period is missed. Purchasing Pregnancy Tests Home pregnancy tests are not all equal. Here's what to look out for when purchasing a pregnancy test: Accuracy: Accuracy measurements are expressed as percentages and most home tests claim 99% accuracy. Importantly, manufacturers normally state that their accuracy measurements are only valid if the test is performed from the day of your first missed period and only if hCG is present.Sensitivity: Sensitivity is the range of hCG the pregnancy test can detect. As with accuracy, you can usually find the sensitivity of a pregnancy test on its packaging. Sensitivity is measured in milli-international units per milliliter, usually abbreviated to mIU/ml. The lower the mIU per ml, the greater the ability of the test to detect hCG. Tests with low mIU are commonly labeled early pregnancy tests since they can detect smaller amounts of hCG. Most pregnancy tests available at a drug or grocery store are perfectly fine for testing after a missed period, otherwise see here on early tests. How Soon Can You Take A Pregnancy Test? An early home pregnancy test can be taken up to 5 days before a woman's expected menstrual period is due. A positive early pregnancy test result will be reasonably accurate and reliable. However a negative early pregnancy test result can be very unreliable as the hCG concentrations are still low and need time to increase. Early pregnancy tests are more sensitive (lower mIU/ML) than regular tests, so they are better able to detect hCG, but since every woman is different, it is possible that the level of hCG present in an individual woman's urine may not be high enough for a particular test to detect. Medications are also known to affect pregnancy test results and can produce false negatives and false positives. When is the Earliest Time to Take an Early Home Pregnancy Test? As women all have different ovulation and menstrual cycles, if you know the date you ovulated and the average length of your menstrual cycle it can help you choose the day to take an early pregnancy test. The earliest times for testing (using an early test) are: 9 to 11 days after ovulation (9dpo - 11dpo)5 to 4 days before your expected periodDPO = Days Past OvulationPlease note: You may have seen early pregnancy tests claiming 6 days "sooner." This is in fact 6 days after your expected period, or 5 days before your expected period. The best times to test (using an early test) while not sacrificing too much accuracy:12 to 13 days after ovulation (12dpo - 13dpo) or1 to 2 days before your expected periodDPO = Days Past Ovulation When is the Best Time to Take A Home Pregnancy Test for Greatest Accuracy? The best time to take a home pregnancy test (early test or regular test) for greatest accuracy:From 14 to 15 days after ovulation (14dpo - 15dpo) or From the day of your expected period or soon afterDPO = Days Past Ovulation Early Pregnancy Test Accuracy Pregnancy test manufacturers give accuracies based on a woman ovulating/conceiving 14 days before her expected period. Also assumed is that each woman taking a pregnancy test knows the date her expected menstrual period is due or the length of her menstrual cycle. Both these variables can he highly irregular and affect how soon hCG is detectable. HCG starts being detectable in urine with its lowest accuracy at approximately 8 days after ovulation/conception. Accuracy is highest from 14 days after ovulation/conception which is commonly the day of the expected period for women with regular cycles. Best Overall Time to Test Since most pregnancy test manufacturers claim highest accuracy from the day of your first missed period, we suggest taking a pregnancy test from the day you miss your first period. Understanding Pregnancy Test Lines Most pregnancy tests will indicate a positive result by showing two lines, a cross, a marker, or the word pregnant. If your test displays a positive result, then you have hCG present in your urine and you are pregnant. A faint line or faint positive is still a positive. A pregnancy test only detects if hCG is present in your urine and reacts accordingly, displaying a positive result - regardless of how clear the result is. DPO DPO means Days Past Ovulation or Days Passed Ovulation. DPO is generally used by women who are trying to conceive and are watching the days that have passed since ovulating. Knowing the days past ovulation, DPO, can set a timeline for when to test for pregnancy and when to watch for symptoms of pregnancy. Comparison TableDPO and Days before Period (28 day cycle) 0dpo14 days before expected period 1dpo13 days before expected period 2dpo12 days before expected period 3dpo11 days before expected period 4dpo10 days before expected period 5dpo9 days before expected period 6dpo8 days before expected period 7dpo7 days before expected period 8dpo6 days before expected period 9dpo5 days before expected period 10dpo 4 days before expected period 11dpo 3 days before expected period 12dpo 2 days before expected period 13dpo 1 day before expected period 14dpo Expected period day Earliest Tests to Buy 6 days before expected period or 8dpo Early Detection Pregnancy Test 5 days before expected period or 9dpo 4 days before expected period or 10dpo Majority of all early tests are available at local grocery or drug stores. References You can start with the pregnancy test calculator quiz below to find out if you are likely to have an accurate pregnancy test result using a common at home early detection pregnancy kit.Quiz: Pregnancy Test CalculatorBy using this tool you consent to our terms of service and privacy policy and that you are over 16 years of age. This is a general tool and does not serve as a due date calculator, brand-specific pregnancy test calculator, diagnostic, medical advice, or method for confirming pregnancy. Always consult your specific pregnancy test kit for information on accuracy. What we'll cover in this postNow that you have your pregnancy test calculator quiz results, let's dive into the details. Are you planning or questioning if you might be pregnant? Below, we take a look at some of the early symptoms of pregnancy, the best time to take a pregnancy test, how to use and evaluate a testing kit and a few ways to calculate your estimated due date. Here's what we'll cover in this post:Signs you might be pregnantWhat are the most common symptoms of early pregnancy?What if I don't have these symptoms?Using pregnancy test calculatorsWhen will a pregnancy test be accurate?Quiz: Am I in the window for an accurate test result?How to take and evaluate an at home pregnancy testHow do I use a pregnancy testing kit?What if my pregnancy test result is unclear?Calculating your estimated due dateWhy are due dates an estimate?How is my possible due date calculated?What else do I need to know about due dates?Am I pregnant? Common pregnancy symptoms to considerSince pregnancy symptoms show up differently for everyone, you may not be able to rely on them to confirm your pregnancy. Factors like the length of your menstrual cycle, variation in hormone levels, existing health conditions, recent use of birth control, and daily lifestyle can influence the accuracy of pregnancy tests or the degree to which you notice symptoms. For those actively trying to conceive (TTC), early pregnancy symptoms might be eagerly awaited. For others, they may be surprising, uncomfortable, or mistaken for something else. You might experience some, all, or none of the symptoms below, so read on for more ways to confirm if you are pregnant.What are the most common symptoms of early pregnancy?Your period doesn't come when you expect it to. A missed period, or "amenorrhea", is a very common signal that someone might be pregnant, but it can be caused by other factors, like a change in medication, lack of sleep, or emotional stress, so do not consider this a definitive sign. You have to pee all the time. Frequent urination is caused by an increase in blood flow to the pelvic area with hormonal changes. This triggers the bladder to become more active, even expelling very small amounts of urine more frequently, and this can happen as early as a week after conceiving. However, infection can cause frequent urination too, so if you experience painful urination or have a history of urinary tract infections, it may be worth seeing your health care provider in case treatment is needed, regardless of your pregnancy status.You are tired or fatigued all the time. High levels of hormones like progesterone can make someone feel sedated, and a pregnant person's metabolism speeds up to support a developing embryo, requiring more energy in all of the body's systems. This is a helpful adaptation to supporting a healthy pregnancy but it can be difficult for someone accustomed to having more energy.Food tastes funny and smells seem stronger. Hormonal changes in the bloodstream impact the content, and thereby taste, of your own saliva - which can, in turn, affect the taste of food. A heightened sense of smell can make you more sensitive to foods, fragrances, and body odors that didn't bother you before - which is helpful if you come across food that has turned or a noxious chemical - think of it as a protective alert system!Nausea in the morning, nausea in the evening. "Morning sickness" is a bit of a misnomer - this uncomfortable feeling can hit any time of day but tends to be strongest on an empty stomach. Causes of morning sickness are not precisely known, but it seems to be a good reminder to keep pregnant people nourished and restful as needed. It's okay to use a sick day in early pregnancy!Your boobs are….changing. Tenderness, lumpy swelling, sensitivity, and even changes to the color of your nipples and blood vessels are a common indication that pregnancy has started.What if I don't have these early pregnancy symptoms?Every person's body, health history, and physical awareness are a little different, and some people may not notice or experience early signs of pregnancy at all. If you suspect you may be pregnant for other reasons, you have a few options, including:Waiting another week or so to see if anything changes in your physical symptomsTake an at-home test anyway, using the calculator info in the quiz to make sure you are in the window for the most accurate resultsScheduling an appointment to get a blood test through your primary health care providerIf you experience any symptoms to a severe level, such as constant vomiting, pain with urination, or other concerning signs like fever or non-menstrual bleeding, seek medical care.Using a pregnancy test calculator to identify when to take a testGet your personalized results with our pregnancy test calculator quiz at the top of this postAt-home pregnancy kits can be costly, and personal preferences around confirming and sharing a positive pregnancy test might influence your decision about when or if to take a test. Confirming a pregnancy early on may help you to navigate first trimester symptoms, get appropriate prenatal care, and start addressing any decisions or major lifestyle shifts that may come with a positive test result. Whether you have been actively planning for pregnancy or unexpectedly find yourself experiencing some of the symptoms above, a pregnancy test is only useful if it's used effectively. A pregnancy test calculator uses information about your menstrual cycle to predict if enough time has passed for the chemical changes of pregnancy to be picked up by an at-home urine test.When will a pregnancy test result be accurate?Kits vary in accuracy and testing timeline recommendations, so it's important to follow the guidance on the brand of pregnancy kit you purchase. Our online calculator uses your cycle length and the amount of days since your last cycle to estimate the earliest range in which you might consider taking a common early detection at home pregnancy test. In general, these tests suggest waiting until at least 5 days before your missed period to test and will become much more accurate if you wait until the day of your missed period to test. Why do I have to wait so long to take a pregnancy test?It takes about a week from conception - or when a sperm meets and penetrates an ovum (egg) - for the fertilized egg to travel the length of the Fallopian tube and implant itself in the protective and nourishing lining of the uterus. It is after this implantation that your body starts to release the hormone that most at-home pregnancy kits test for, called hCG (human chorionic gonadotropin). This delay between fertilization and chemically-detectable pregnancy means that an at-home urine testing kit won't be accurate if it's used too early. These tests are generally considered most reliable (up to 90% or more, depending on the brand) two or more weeks after conception, but for many that can be hard to calculate because sex or exposure to semen isn't the only factor. When an egg is released from the ovary into the Fallopian tube (ovulation), there is only a 12-24 hour window in which it can be fertilized….yet sperm can "hang out" for a few days, seeking a viable egg. This means that factors influencing both conception and implantation dates include:The average length of your menstrual cycle. Day 1 is the first day of your period, the number of days that pass before your next period starts is your cycle length, typically 25-35 days.The day ovulation occurs in your cycle. Many people ovulate around Day 14 but this is not universal; if you've been tracking your temperature and other cycle symptoms you may have an idea of when you ovulate.Your last period date. This is used in combination with the factors above, to estimate your current ovulation window.When fertilization may have occurred. This could be dependent on the frequency of sex and fertility-supported processes such as IVF and at-home insemination.How to take and evaluate an at-home pregnancy testOnce you've decided to test for pregnancy with an at-home urine test, you might find yourself faced with some options. If you've never used one before, or if emotions are high, the short period of time between purchasing and using your pregnancy test can feel intense, so it's important to give your careful focus to make the most effective use of your test.How do I use a pregnancy testing kit?Many brands offer multiple kits in one package, but all rely on accurate use of the test. The best time to use an at-home test is in the morning when pregnancy hormones are most concentrated in urine. Read the instructions carefully, with the expectation that you will need to:Position the test strip as directed.Urinate directly onto the strip or urinate into a cup and submerge the strip.Wait for the allotted time before expecting a clear result.What if my pregnancy test result is unclear?Sometimes people report unclear results, often represented in a color or shape that shows up after the allotted number of minutes. Others may find that one test shows one result, and a second shows another. If there is any indication that the test is positive, or if you have persistent symptoms despite a negative test result, it is recommended to follow-up on at-home pregnancy testing with a blood test through your healthcare provider. These are more precise tests that also detect hCG, and can usually be used reliably within two weeks of conception.Calculating your estimated due dateAs you can probably imagine if you read the section above, due dates are an estimate for good reason. Menstrual cycles, ovulation windows, and conception activity vary - as does gestational development! There are a few ways to estimate your due date, and they all include room for error. Even though there is no way to predict with 100% accuracy when a baby will be fully developed and ready to be born, estimating when that will be can help you, your family and your health care providers plan for baby, help you both get appropriate medical care, and make work and lifestyle changes with less stress.Why are due dates an estimate?The most commonly used standard length of average human gestation is 280 days, or 40 weeks. However, the actual length of a healthy pregnancy can vary by as much as 5 weeks! Typical full-term pregnancies include babies born between 38-42 weeks, and most babies are not born on their due date.This 40-week mark will be estimated by your care provider using the information you provide on the same factors that are used to calculate the best time to use a test kit.The average length of your menstrual cycle. The day ovulation occurs in your cycle. Your last period date. When fertilization may have occurred.How is my possible due date calculated?A common method is to assume a Day 14 ovulation (if it is not known otherwise) and count out 40 weeks from the first day of your last period. There are variations on the exact formula used.Another very casual estimate is using the estimated date of conception and counting back three months. In the past, providers and their clients did not discuss exact due dates so much as general periods of expectation, such as 'late October or early November'.What else do I need to know about due dates?Your family's history may be an indication of obvious trends in gestational length - for example, if your mother, grandmother, aunts, and sister all had their babies at 41 weeks, you and your health care provider might discuss a higher likelihood that you too will have a pregnancy of about that length.Occasionally, an early ultrasound may be used to help confirm pregnancy, as early fetal development shows some clear marks of gestational age. Such an ultrasound could also confirm a multiple pregnancy or other unique features.Only ultrasounds before 22 weeks are considered accurate enough in assessing developmental milestones that can help to calculate gestational age; after that they are rarely used for estimating dates because they become less accurate. Depending on the methods used, you and your health care providers may have different estimates of when your baby will be due. If healthcare decisions are made based on these dates you have the right to discuss your options, get more information, and be the final decider in what happens with your body and your baby.This content includes general information and tools, and does not serve as medical advice, diagnosis, or method for confirming or treating pregnancy and related conditions. Consult your medical health care provider for advice relevant to you. In an emergency always call 911 or seek appropriate medical attention. Test based on scientific data to determine if a person is pregnant A modern hormone pregnancy test, showing a positive result A series of pregnancy test strips, taken one per day at the beginning of a pregnancy A pregnancy test is used to determine whether a person is pregnant or not. The two primary methods are testing for the pregnancy hormone (human chorionic gonadotropin (hCG)) in blood or urine using a pregnancy test kit, and scanning with ultrasonography.[1] Testing blood for hCG results in the earliest detection of pregnancy.[2] Almost all pregnant people will have a positive urine pregnancy test one week after the first day of a missed menstrual period.[3] This image depicts how the hormone hCG, produced by pregnant people's placentas, is detected in urine pregnancy tests to indicate a positive result. Identified in the early 20th century, human chorionic gonadotropin (hCG) is a glycoprotein hormone that rises quickly in the first few weeks of pregnancy, typically reaching a peak at 8- to 10-weeks gestational age.[4][5] hCG is produced by what will become the placenta.[6] hCG testing can be performed with a blood (serum) sample (typically done in a medical facility) or with urine (which can be performed in a medical facility or at home). The assays used to detect the presence of hCG in blood or urine are generally reliable and inexpensive. Secretion of hCG can occur as soon as 6 days following ovulation and on average 8–10 days following ovulation; this is the earliest hCG can be detected in a blood sample.[7][5][8] The hCG concentration in blood is higher than in urine. Therefore, a blood test can be positive while the urine test is still negative.[9][10] Qualitative tests (yes/no or positive/negative results) look for the presence of the beta subunit of human chorionic gonadotropin in blood or urine. For a qualitative test the thresholds for a positive test are generally determined by an hCG cut-off where at least 95% of pregnant people would get a positive result on the day of their first missed period.[11] Qualitative urine pregnancy tests vary in sensitivity. High-sensitivity tests are more common and typically detect hCG levels between 20 and 50 milli-international units/mL (mIU/mL). Low-sensitivity tests detect hCG levels between 1500 and 2000 mIU/mL and have unique clinical applications, including confirmation of medication abortion success.[12] Qualitative urine tests available for home use are typically designed as lateral flow tests. Quantitative tests measure the exact amount of hCG in the sample. Blood tests can detect hCG levels as low as 1 mIU/mL, and typically clinicians will diagnose a positive pregnancy test at 5mIU/mL.[11] Table 1. Human chorionic gonadotropin (hCG) detection thresholds by test type and sample type Urine pregnancy test Blood pregnancy test Detection thresholds High-sensitivity: Qualitative test: 20 to 50 mIU/mL, depending on test Low-sensitivity: Qualitative test: 1500-2000 mIU/mL, depending on test Qualitative test: 5 to 10 mIU/mL, depending on test Quantitative test: 1 to 2 mIU/mL for an ultrasensitive test There is a multilevel urine pregnancy test (MLPT) that measures hCG levels semiquantitatively. The hCG levels are measured at 10,000 mIU/mL. This test has utility for determining the success of medication abortion.[13][14] Single intrauterine pregnancy, first trimester. The gestational sac is pictured (black-appearing on ultrasound) containing a fetal pole and yolk sac (circular structure beneath fetal pole.) Obstetric ultrasonography may also be used to detect and diagnose pregnancy. It is very common to have a positive at-home urine pregnancy test before an ultrasound. Both abdominal and vaginal ultrasound may be used, but vaginal ultrasound allows for earlier visualization of the pregnancy. With obstetric ultrasonography the gestational sac (intrauterine fluid collection) can be visualized at 4.5 to 5 weeks gestation, the yolk sac at 5 to 6 weeks gestation, and fetal pole at 5.5 to 6 weeks gestation. Ultrasound is used to diagnose multiple gestation, which cannot be diagnosed based on the presence of hCG in urine or blood.[15] Determination of the gestational age of the embryo/fetus is an additional benefit of ultrasound compared to hCG tests.[16] The control line of this pregnancy test is blank, making the test invalid. The control line on the left of this pregnancy test is visible, suggesting that the test result is valid. A pale purple line has also appeared on the right hand side (the test line) which clearly signifies that the subject is pregnant. A systematic review published in 1998 showed that home pregnancy test kits, when used by experienced technicians, are almost as accurate as professional laboratory testing (97.4%). When used by consumers, however, the accuracy fell to 75%: the review authors noted that many users misunderstood or failed to follow the instructions included in the kits.[17] False positive pregnancy test results are rare and may occur for several reasons, including: user error in performing and interpreting the test, biochemical pregnancy (loss of pregnancy before signs of pregnancy are apparent on ultrasound, likely very soon after implantation), and non-pregnant production of the hCG molecule (i.e. secretion due to a tumor or the pituitary gland, some diseases of the liver, cancers, including choriocarcinoma and other germ cell tumors, IgA deficiencies, heterophile antibodies, enterocystoplasties, gestational trophoblastic diseases (GTD), and gestational trophoblastic neoplasms).[18][3] bacterial contamination and blood in urine[19] Spurious evaporation lines may appear on many home pregnancy tests if read after the suggested 3–5 minute window or reaction time, independent of an actual pregnancy. False positives may also appear on tests used past their expiration date.[20] Urine tests can be falsely positive in those that are taking the medications: chlorpromazine, promethazine, phenothiazines, methadone,[19] aspirin, carbamazepine and drugs that cause high urinary pH.[21] False negative readings can occur when testing is done too early. hCG levels rise rapidly in early pregnancy and the chances of false negative test results diminish with time (increasing gestational age).[22] Less sensitive urine tests and qualitative blood tests may not detect pregnancy until three or four days after implantation.[23] Menstruation occurs on average 14 days after ovulation, so the likelihood of a false negative is low once a menstrual period is late. Ovulation may not occur at a predictable time in the menstrual cycle. A number of factors may cause an unexpectedly early or late ovulation, even for people with a history of regular menstrual cycles.[24] Medical providers often struggle to 'rule out' pregnancy for medical testing or treatment that cannot be conducted during pregnancy before they can do an accurate urine pregnancy test.[25] More rare, false negative results can also occur due to a "hook effect", where a sample with a very high level of hCG is tested without dilution, causing an invalid result.[26] Pregnancy tests may be used to predict if a pregnancy is likely to continue or is abnormal. Miscarriage, or spontaneous abortion or pregnancy loss, is common in early pregnancy.[27] Serial quantitative blood tests may be done, usually 48 hours apart, and interpreted based on the knowledge that hCG in a viable normal pregnancy rises rapidly in early pregnancy. For example, for a starting hCG level of 1,500 mIU/ml or less, the hCG of continuing, normal pregnancy will increase at least 49% in 48 hours. However, for pregnancies with a higher starting hCG, between 1,500 and 3,000 mIU/ml, the hCG should rise at least 40%; for a starting hCG greater than 3,000 mIU/ml, the hCG should increase at least 33%.[28] Failure to rise by these minimums may indicate that the pregnancy is not normal, either as a failed intrauterine pregnancy or a possible ectopic pregnancy.[28] Ultrasound is also a common tool for determining viability and location of a pregnancy. Serial ultrasound may be used to identify non-viable pregnancies, as pregnancies that do not grow in size or develop expected structural findings on repeated ultrasounds over a 1–2 week interval may be identified as abnormal.[29] Occasionally, a single ultrasound may be used to identify a pregnancy as non-viable; for example, an embryo that is greater than a certain size but that lacks a visible heart beat may be confidently determined to be not viable without the need for follow up ultrasound for confirmation.[29] Research has identified at least one other possible marker that may appear earlier and exclusively during pregnancy. For example, early pregnancy factor (EPF) can be detected in blood within 48 hours of fertilization, rather than after implantation.[30] However, its reliable use as a pregnancy test remains unclear as studies have shown its presence in physiological situations besides pregnancy, and its application to humans remains limited.[31] Jan Steen's The Doctor's Visit. Included in this 17th-century painting is a depiction of a dubious pregnancy test: a ribbon dipped in the patient's urine and then burned.[32] Records of attempts at pregnancy testing have been found as far back as the ancient Greek and ancient Egyptian cultures. The ancient Egyptians watered bags of wheat and barley with the urine of a possibly pregnant person. Germination indicated pregnancy. The type of grain that sprouted was taken as an indicator of the fetus's sex.[33] Hippocrates suggested that a person who had missed their period should drink a solution of honey in water at bedtime: resulting abdominal distention and cramps would indicate the presence of a pregnancy. Avicenna and many physicians after him in the Middle Ages performed uroscopy, a nonscientific method to evaluate urine. Selmar Aschheim and Bernhard Zondek introduced testing based on the presence of human chorionic gonadotropin (hCG) in 1928.[34] Early studies of hCG had concluded that it was produced by the pituitary gland. In the 1930s, Doctor Georgeanna Jones discovered that hCG was produced not by the pituitary gland, but by the placenta. This discovery was important in relying on hCG as an early marker of pregnancy.[35] In the Aschheim and Zondek test, an infantile female mouse was injected subcutaneously with urine of the person to be tested, and the mouse later was killed and dissected. Presence of ovulation indicated that the urine contained hCG and meant that the subject was pregnant. A similar test was developed using immature rabbits. At the beginning of the 1930s, Hillel Shapiro and Harry Zwarenstein, who were researchers at the University of Cape Town, discovered that if urine from a pregnant person was injected into the South African Xenopus frog and the frog ovulated, this indicated that the subject was pregnant. This test, known as the frog test, was used throughout the world from the 1930s to 1960s, with Xenopus frogs being exported in great numbers.[36][37] Shapiro's advisor, Lancelot Hogben, claimed to have developed the pregnancy test himself, but this was refuted by both Shapiro and Zwarenstein in a letter to the British Medical Journal. A later article, independently authored, granted Hogben credit for the principle of using Xenopus to determine gonadotropin levels in a pregnant person's urine, but not for its usage as a functional pregnancy test.[38] Hormonal pregnancy tests such as Primodos and Duogynon were used in the 1960s and 1970s in the UK and Germany. These tests involved taking a dosed amount of hormones, and observing the response a few days later. A pregnant person does not react, as they are producing the hormones in pregnancy; a subject who is not pregnant responds to the absence of the hormone by beginning a new menstrual cycle. While the test was (is) generally considered accurate, research advancements have replaced it with simpler techniques.[39] Immunologic pregnancy tests were introduced in 1960 when Wide and Gemzell presented a test based on in-vitro hemagglutination inhibition. This was a first step away from in-vivo pregnancy testing[40][41] and initiated a series of improvements in pregnancy testing leading to the contemporary at-home testing.[41] Direct measurement of antigens, such as hCG, was made possible after the invention of the radioimmunoassay in 1959.[42] Radioimmunoassays require sophisticated apparatus and special radiation precautions and are expensive. Organon International obtained the first patent on a home pregnancy test in 1969, two years after product designer Margaret Crane noticed that the laboratory testing procedure was relatively simple and made a prototype. The product became available in Canada in 1971, and the United States in 1977, after delays caused by concerns over sexual morality and the ability of potentially pregnant people to perform the test and cope with the results without a doctor.[43] Another home pregnancy testing kit was based on the work of Judith Vaitukaitis and Glenn Braunstein, who developed a sensitive hCG assay at the National Institutes of Health.[44][45] That test went onto the market in 1978.[46] In the 1970s, the discovery of monoclonal antibodies led to the development of the relatively simple and cheap immunoassays, such as agglutination-inhibition-based assays and sandwich ELISA, used in modern home pregnancy tests. Tests are now so cheap that they can be mass-produced in a general publication and used for advertising.[47] Blastocyst Gravindex ^ Chard T (1992). "REVIEW: Pregnancy tests: a review". Human Reproduction. 7 (5): 701–710. doi:10.1093/oxfordjournals.humrep.a137722. ISSN 1460-2350. 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Please note that Flo Health does not collect, process, or store any of the data that you enter while using these tools. All calculations are done exclusively in your browser. Flo Health does not have access to the results. All data will be permanently erased after leaving or closing the page. First day you can test is Tell me more Whether you're trying for a baby or not, the time between thinking you might be pregnant and knowing for sure can be stressful. No one likes living in uncertainty. So, how soon can you take a pregnancy test? Timing is key when you're aiming for an accurate result. You can use Flo's calculator as a guide for when to take a pregnancy test based on just one piece of information: the first day of your last period or the date you last ovulated. You can also enter your details in the Flo app, which can quickly tell you whether you're ready to take a pregnancy test or not. Key takeaways about using a pregnancy test calculator When should I take a pregnancy test after a missed period?The best time to check if you're pregnant or not is the first day of a late or missed period or later (if you can wait). This is because pregnancy tests get more accurate the longer you wait. Standard at-home pregnancy tests are urine tests that can detect hCG. This is the first indication that you might be pregnant. But it can take a little while for there to be enough hCG in your urine for a pregnancy test to detect. After a late or missed period, your hCG levels should be enough for a standard test to pick up on it and tell you with clarity whether you're pregnant or not. Studies have reported that tests taken on the first day that you miss your period can be considered to have 90% sensitivity at detecting hCG. This rises to 97% if you wait one week after you've missed your period. [3] It can feel like a waiting game. Keeping track of when to expect your period can be tough, but using the Flo app can help. Once you've inputted your cycle data, it will automatically alert you when your period is late so you'll know it's time to test. When should I take an early pregnancy test?Although a standard pregnancy test will typically only give you an accurate result once your period is late or you've missed it altogether, some brands claim to detect pregnancy earlier than this. Generally speaking, early pregnancy tests are more sensitive to hCG. Early pregnancy tests can be useful if you've been trying to conceive and struggling to wait to take a test. However, it's important to note that they are considered to be less accurate. This is because your hCG levels are low at the very beginning of pregnancy, and the test may not be able to pick them up. This could lead to a false result. It's rare for a test to give you a positive result when you're not pregnant, but you may receive a negative result when you are pregnant if the amount of hCG in your urine is too small for the test to detect. You should wait at least two weeks after you've ovulated (when one of your ovaries releases an egg) before taking a pregnancy test. This is because it can take between six and 10 days for your egg to travel down your fallopian tube and implant into your uterine wall. Once implantation happens, your fertilized egg starts to release hCG. Knowing when you're ovulating and when your fertile window is (the time in your cycle when you're most likely to become pregnant) can help you understand any changes throughout your menstrual cycle. An app like Flo can help you track your fertile window every cycle so you always know where you are. When should I take a pregnancy test after sex?If your cycle is irregular, or you're not sure when your period is due, then it's recommended that you wait at least three weeks to take a pregnancy test after sex. Otherwise, if you track your period and have a regular cycle, then you can take a standard pregnancy test on the first day of your late or missed period. If you wait a week after your missed period, it's worth knowing that you may get an even more accurate result. If you don't want to have a baby and have had unprotected sex, emergency contraception can help prevent pregnancy. You can use emergency contraception within three to five days after having sex. It is most effective when taken as soon as possible. If you don't have a withdrawal bleed or period within three weeks of using emergency contraception, you should then take a pregnancy test. When should I take a pregnancy test while breastfeeding?If you're breastfeeding, having unprotected sex, and think you might be pregnant, the same rule applies — you can take a pregnancy test on the first day of a late or missed period or three weeks after you last had sex. Remember that identifying a new pregnancy soon after a previous one can be difficult. It can take up to 60 days for your hCG levels to return to zero after giving birth. So, if you take an early test during this period, it may detect leftover hCG from your previous pregnancy.Exclusively breastfeeding your baby can delay the return of your period for around six months and suppress ovulation. This reduces but doesn't eliminate your chance of becoming pregnant. Everybody is different, after all. It's important to keep in mind that ovulation happens before your first period. So if you think you might be pregnant even though your period hasn't returned yet, you should still take a pregnancy test.When should I take a pregnancy test after a miscarriage? Miscarriage can be an intensely emotional and painful time. It can take time for your hCG levels to drop following a miscarriage, and this can vary depending on how far along you were.Many health care professionals recommend not having sex for around two weeks after you've had a miscarriage. This is to protect you from infection. Then, if or when you feel ready to try again, speak to your doctor about the best next step. It's possible to ovulate and become pregnant as soon as two weeks after having a miscarriage. If you've had unprotected sex after a miscarriage, you can take a pregnancy test about three weeks later, and if it is positive, the hCG detected in the test could indicate a new pregnancy. What makes a pregnancy test positive?A pregnancy test will show as positive when it detects a sufficient amount of hCG in your urine. If there's not enough hCG for the pregnancy test to detect, it will show a negative result. Once your fertilized egg has attached to your uterine lining (implantation), your body starts to release hCG instantly. It initially does this through your fertilized egg (known as an embryo). Your body produces a whole new organ in early pregnancy called the placenta. It plays a fundamental role in supporting your growing baby. It starts to grow and develop around the 4th week, and even before it's fully formed, it takes over by releasing hCG. Are there variations in hCG levels?Like so much with your cycle, how quickly your hCG levels rise can be pretty personal to you. While hCG generally rises in early pregnancy, peaking at around 10 weeks, levels can slightly differ for everyone. You don't need to check your blood hCG levels unless your doctor recommends it. How to take an at-home pregnancy testIf you've used Flo's pregnancy test calculator, your period is late, and it's time to take a test, here are some things to keep in mind to give yourself the best chance of an accurate result. Always read and follow the instructions that came with your test. Some tests work differently than others, so follow the instructions in your pack.Make sure the test is within its expiration date. Pregnancy tests can expire, so if the date on the box has passed, go out and get a new test. Don't drink too much water beforehand. The temptation might be to drink lots to produce more urine, but you might dilute it. Wash your hands and make sure you're taking your test in a clean environment. Remove the pregnancy test from its wrapper. You will either need to pee directly onto the test or into a clean container or cup and then place the absorbent end of the test stick in the cup. Your test box will explain what you need to do. Once you've soaked the absorbent end of the stick in urine, place it on a flat surface, facing upward (make sure you can see the little results box).You will then need to wait for your results to show. Different brands of pregnancy tests have different reaction times. This is the amount of time it will take to see a result. Make sure you read the instructions carefully. Different brands present positive and negative tests differently, so it's really important to read the box to understand your results. Once you've waited the stated amount of time and have your result, you can throw your test in the garbage. If you wait too long to read your test result, you may see an evaporation line. This is a faint, colorless line that might appear when moisture evaporates from your test. It's possible to mix it up with a positive result, so once you've taken your test and got your result, you can discard it. Whether you were trying to conceive or not, a positive pregnancy test result can come with a lot of big feelings — all of which are completely valid. Whether it's news you wanted, news you didn't, or somewhere in between, the next thing to do is make an appointment with your doctor, who can discuss your care and options going forward. You can also use the Flo for Pregnancy app to guide you through every pregnancy stage, from positive test to birth. The only way to know for certain that you're pregnant is to take a pregnancy test. The best time to do this is after a missed or late period. Once you've received a positive result, you can discuss next steps with a health care professional. For the most accurate results, experts recommend taking a pregnancy test first thing in the morning. Your urine will be most concentrated in the morning before you've had anything to drink. That means that your hCG levels will be at their highest. But if you're testing after the day of your missed period, most at-home pregnancy tests will be able to give you an accurate result, day or night. Technically, hCG can be detected in your blood about 11 days after conception, but it can take a little longer to detect it in your urine. [9] Taking a pregnancy test after a late or missed period reduces the chance of getting a false-negative result. Your missed period will typically be about two weeks after conception, hence the term "two-week wait." Betz, Danielle, and Kathleen Fane. "Human Chorionic Gonadotropin." StatPearls, StatPearls Publishing, 2025, www.ncbi.nlm.nih.gov/books/NBK532950/.Blake, Rachel A. "Can Breastfeeding Really Prevent Pregnancy?" Harvard Health Publishing, 2 Mar. 2022, www.health.harvard.edu/blog/can-breastfeeding-really-prevent-pregnancy-202203022697. Campbell, Oona M. R., and Ronald H. Gray. "Characteristics and Determinants of Postpartum Ovarian Function in Women in the United States." 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