Reporting Title: Preeclampsia | T1

Test Definition: PE
Testing Location: Melville, NY
Reporting Location: Melville, NY

Description:
Preeclampsia | T1 includes measuring first trimester maternal serun Placental Growth factor (PlGF), Pregnancy associated plasma protein A (PAPP-A) and alpha-fetoprotein (AFP) and optionally mean arterial pressure (MAP) and uterine artery Doppler pulsitivity index (UtAD-PI). These measurements are compared to median values for a given gestational age and an MoM is calculated for each. The results are entered into a multivariate algorithm that includes nulliparity, previous or family history of PE and chronic hypertension to derive a risk factor for early onset preeclampsia.

Analytical Method(s):

All assays are performed on a PerkinElmer AutoDELFIA instrument.

1. PlGF is measured using a lab-developed solid phase 2-site sandwich fluorometric assay.
2. PAPP-A is measured using a lab-developed solid phase 2-site sandwich fluorometric assay.
3. AFP is measured using a lab-developed solid phase 2-site sandwich fluorometric assay.

Patient preparations:
Counsel patient on prenatal screening for early onset preeclampsia.

Specimen Requirements:
Container/Tube: Red-top Vacutainer® tube or Serum Separator Tube (Red/Grey or Gold Top SST) .

Specimen Volume: 0.5 ml of spun serum or 5 ml of unspun whole blood

Specimen Stability: Serum samples are stable at ambient temperature for 6 days.

Specimen Collection Instructions
See Collection of Serum Specimens from Venipuncture Instruction Manual

Additional Information:

1. Indications for Testing: General population screening of pregnant women
2. Gestational age is determined based on CRL at time of Uterine artery Doppler exam. If uterine artery Doppler exam is not performed, provide a CRL from another ultrasound exam.
3. Special Timing: Draw specimen between 10 weeks 0 days and 13 weeks 6 days.
4. To include Uterine Artery Doppler-PI in the result, the UtAD-PI must be performed when CRL is between 45 and 84 mm.
5. Mean arterial pressure (MAP) must be assessed between 11 weeks 1 day and 13 weeks 6 days. MAP should be obtained in accordance with guidelines of the Fetal Medicine Foundation.
6. The ordering physician should ensure that the ultrasound information has been obtained from a sonographer who is credentialed by and participating in an Uterine artery Doppler quality review program.

7. If patient is returning at a later date for her ultrasound exam, ultrasound related fields may be left blank. When the patient does return for her ultrasound exam the information may be entered on our portal (https://ntd.ereports.eurofinsus.com).
8. Serum specimens are stable at ambient temperature for 6 days
9. Rejection Criteria: hemolysis, lipemia, incorrect tube type

CPT Codes: 1 x 83520,1 x 84163,1 x 82105

Reference Values:
After Screening Risk < 1 in 50 are Within Range
After Screening Risk ≥ 1 in 50 are Increased Risk

An Interpretive Report will be provided.

Supplemental Report:
No

Testing Algorithm:
Follow up:

1. Increased Risk Results: Recommend immediate follow-up with increased monitoring

Consents/Authorizations:

Patient signature on patient authorization/assignment on requisition form is required.

Disclaimer:

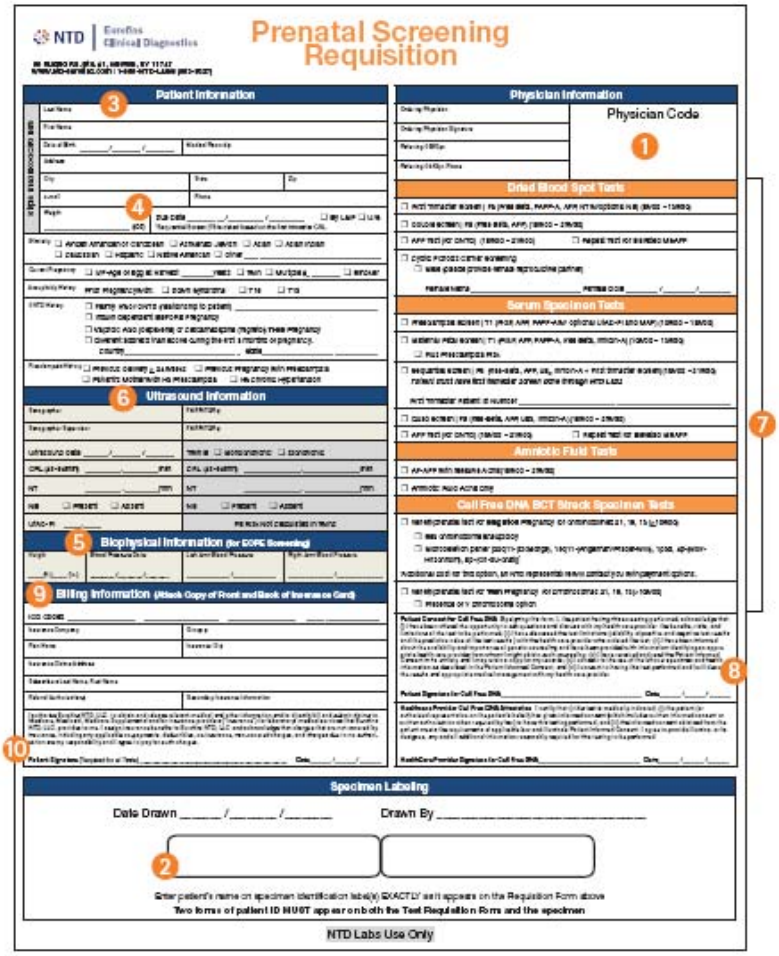
The test was developed and its performance characteristics determined by Eurofins NTD, LLC. It has not been cleared or approved by the U.S. Food and Drug Administration. The methods and performance characteristics have been reviewed and approved by the New York State Department of Health.

Test Requisition Instructions

NTD | Eurofins Clinical Diagnostics

Prenatal Screening Test Requisition Form Instructions

1. **Account Information** – Please enter Ordering Physician name and Referring Ob/Gyn name and phone number, if applicable. A provider signature is required for patients with Medicaid.
2. **Specimen Labels** – Preprinted with the requisition number. Please enter the patient's last and first name EXACTLY as they appear on the requisition form. Affix label(s) to patient specimen(s). Please complete date drawn and drawn-by fields.
3. **Patient Information** – For all tests, please complete patient weight, ethnicity and current pregnancy information. Complete additional patient history as appropriate for test(s) ordered. *Please note, all patient information requested is used to ensure the most accurate risk assessment possible for your patient.*
4. **Gestational Age** – Complete for tests other than First Trimester Screen I Fβ, Sequential Screen I Fβ, PreeclampsiaScreen℠ | T1 or Maternal Fetal Screen℠ | T1 which require CRL (see section 6).
5. **Biophysical Information** – Complete this section for preeclampsia screening only.
6. **Ultrasound Information** - Please provide sonographer and supervisor names and credentialing numbers. Enter all ultrasound information as appropriate for test(s) ordered.
7. **Test Requests** - Tests are ordered by specimen type. Check all tests that apply and provide appropriate ICD codes.
8. **Cell Free DNA** - BOTH the physician and patient signatures are required.
9. **Billing Information** – Provide photocopy of front and back of insurance card or print the information in the required fields.
10. **Patient Signature** - Required for all tests.



Please call 1-888-NTD-LABS (683-5227) for further assistance.

NTD Prenatal Screening Requisition Form

NTD Eurofins Clinical Diagnostics
80 Rutand Rd. Suite 1 • Melville, NY • 11747
ntdlabs.com • Phone: 888-784-5221

Prenatal Screening Requisition

Physician information

Ordering Physician | Ordering Physician Signature | Physician Code
Referring Clk/Keys | Referring Clk/Keys Phone

Patient Information

Staple Dried Blood Card Here

Last Name | First Name | Date of Birth ___/___/___ | Medical Record #
Address | City | State | Zip | Phone
Due Date ____/____/____ ☐By LMP ☐By U/S
*Sequential Screen (FβI) is dated based on the first trimester CRL.
Weight _____ (lbs) | email
Ethnicity
☐African American or Caribbean ☐ Ashkenazi Jewish ☐Asian ☐Asian Indian ☐Caucasian ☐Hispanic ☐Native American ☐Other_____
Current Pregnancy (check all that apply)
☐IVF -Age of Egg at Harvest_____yrs. ☐Twin ☐Multiple #___ ☐Smoker
Aneuploidy History (check all that apply)
☐Prior Pregnancy with Down syndrome ☐Prior pregnancy with Trisomy 13 ☐Prior Pregnancy with Trisomy 18
ONTD History (check all that apply)
☐Family Hx of ONTD (relationship to patient) _____
☐Insulin dependent Before Pregnancy
☐Valproic Acid (Depakene) or Carbamazepine (Tegretol) THIS Pregnancy
☐Different address than above during the first 3 months of pregnancy.
Country _____ State _____
Preeclampsia History (check all that apply)
☐Previous Pregnancy with Preeclampsia ☐Previous delivery ≥ 24 weeks ☐Patient's mother with history of Preeclampsia ☐History of Chronic Hypertension

Biophysical Information (for Preeclampsia Screen | T1)

Height (ft) (in.) | Blood Pressure Date ___/___/___ | Left Arm Blood Pressure ___/___ | Right Arm Blood Pressure ___/___

Ultrasound Information

Sonographer | FMF or NTQR #
Sonographer Supervisor | FMF or NTQR #
Ultrasound Date ____/____/____ | CRL (45-84mm)____.____ mm | NT ____.____ mm | NB ☐Present ☐Absent | UtAD-PI (Left) _____ (Right) _____
Twin B ☐Monochorionic ☐Dichorionic | CRL (45-84mm)____.____ mm | NT ____.____ mm | NB ☐Present ☐Absent | PE Risk Not Calculated in Twins

First Trimester Test Requests

☐Maternal Fetal Screen | T1 (PlGF, AFP, PAPP-A, free Beta, Inhibin-A, NT w/optional NB) (10w0d – 13w6d) ☐Include Preeclampsia Risk	Serum - SST (Red/Grey or Gold Top) or Red Top	CD Order(s)	NTD Labs Use Only
☐ Preeclampsia Screen | T1 (PlGF, AFP, PAPP-A w/ optional UtAD and MAP) (10w0d – 13w6d)	Serum - SST (Red/Grey or Gold Top) or Red Top	CD Order(s)	
☐ First Trimester Screen | Fβ (Free Beta, PAPP-A, AFP, NT w/optional NB) (9w0d – 13w6d)	Dried Blood Spot	CD Order(s)	
☐ Cystic Fibrosis Carrier Screening ☐ Male (please provide female reproductive partner) Female Name_____ Female DOB ____/____/____	Dried Blood Spot	CD Order(s)	

Second Trimester Test Requests

☐ Sequential Screen | Fβ(free-Beta, AFP, uE3, Inhibin-A + First trimester Screen)(15w0d – 21w6d) *Patient must have first trimester screen done through NTD Labs* First Trimester Patient ID Number _____	Serum - SST (Red/Grey or Gold Top) or Red Top	CD Order(s)	NTD Labs Use Only
☐ Quad Screen | Fβ (free-Beta, AFP, uE3, Inhibin-A)(15w0d – 21w6d)	Serum - SST (Red/Grey or Gold Top) or Red Top	CD Order(s)	
☐ AFP Test (for ONTD) (15w0d – 21w6d) ☐Repeat test for Elevated MSAFP	Serum - SST (Red/Grey or Gold Top) or Red Top	CD Order(s)	
☐ Second Trimester Screen | Fβ (Free Beta, AFP) (15w0d – 21w6d)	Dried Blood Spot	CD Order(s)	
☐ AFP Test (for ONTD) (15w0d – 21w6d) ☐Repeat test for Elevated MSAFP	Dried Blood Spot	CD Order(s)	

Amniotic Fluid Specimen Test Requests

☐ AF-AFP with reflexive AChE(15w0d – 21w6d)	Amniotic Fluid	CD Order(s)	NTD Labs Use Only
☐ Amniotic Fluid AChE Only	Amniotic Fluid	CD Order(s)	

Billing Information (Please Attach a Copy of The Front and Back of the Patient's Insurance Card or Provide Information Below)

Insurance Company | Plan Name | Group #
Subscriber's Last Name, First Name | Insurance ID# | Referral Authorization #
Insurance Claims Address | Secondary Insurance Information

I authorize Eurofins NTD, LLC. to obtain and release relevant medical and other information and to directly bill and submit claims to Medicare, Medicaid, Medicare Supplemental and/or insurance providers ("Insurance") for laboratory/ medical services that Eurofins NTD, LLC. provides to me. I assign insurance benefits to Eurofins NTD, LLC and acknowledge that charges that are not covered by insurance, including any applicable co-payments, deductibles, co-insurance, non-covered charges, and charges due to no authorization are my responsibility and I agree to pay for such charges.

Patient Signature (Required for all Tests) _____ Date ____/____/____

Specimen Labeling

Date Drawn____/____/____ Drawn By:_____

FPO UR4306001 Last Name, First Name | FPO UR4306001 Last Name, First Name

Enter patient's name on specimen identification label(s) EXACTLY as it appears on the Requisition Form below
Two forms of patient ID MUST appear on both the Test Requisition Form and the specimen

NTD-51101-0118

EMR Ask at Order Entry (AOE) Questions:

Test ID	Question ID	Description	Type	Required
PE	NOF	Number of Fetuses • 1 • 2 • 3 or more (NT Only)	Answer List	YES
PE	SMOKE	Is Patient Smoker • No • Yes	Answer List	YES
PE	MATWT	Maternal Weight	Plain Text	Yes
PE	MWLBSKGS	Units • LBS • KGS	Answer List	YES
PE	ETHNIC	Ethnicity • African American/Caribbean • Asian • Asian Indian • Caucasian • Hispanic • Native American • Other	Answer List	YES
PE	USDATE	Ultrasound Date	Plain Text	Yes
PE	CRL	CRL	Plain Text	Yes*
PE	BPDATE	Blood Pressure Date	Plain Text	No
PE	BPLEFT	Blood Pressure Left Arm	Plain Text	No
PE	BPRIGHT	Blood Pressure Right Arm	Plain Text	No
PE	UTADPI	Uterine Artery Doppler-PI (Mean)	Plain Text	No
PE	SONOID	Sonographer Name or MFM/NTQRID	Plain Text	No
PE	SSUPER	Sonographer Supervisor (MD) Name or FMF/NTQRID	Plain Text	No
PE	HGHT	Maternal Height (Ft.In)	Plain text	Yes
PE	PAROUS	Previous Delivery > 24 Weeks • No • Yes	Answer List	Yes
PE	HXPE	Previous Pregnancy with preeclampsia • No • Yes	Answer List	Yes
PE	HXPEMO	Patient's Mother with History of Preeclampsia • No • Yes	Answer List	Yes

PE	HXCHHY	Chronic Hypertension • No • Yes	Answer List	Yes

EMR Result Codes:

Data Type	Code	LOINC	Name	Contains Result	Comments
CE	RSKTBL		Risk Table	No	Included if disorders are available
ST	EOPE		Early Onset Preeclampsia	Yes	Risk result information contained in NTEs
CE	PRF		Prior Risk Factors	Yes	Included if data is available (contained in NTEs)
CE	SM		Serum Markers	No	Included if any Serum markers are available
CE	PlGF		PlGF	Yes	Measurements contained in NTEs
CE	PAPPA	32046-5	PAPP-A	Yes	Measurements contained in NTEs
CE	AFP	19176-7	AFP	Yes	Measurements contained in NTEs
CE	PM		Physical Markers	No	Included if any physical markers are available
CE	MAP		Mean Arterial Pressure (MAP)	Yes	Measurements contained in NTEs
CE	UTADPI		Uterine Artery Doppler PI (UtAD-PI)	Yes	Measurements contained in NTEs
CE	DGD		Demographic Data	Yes	Included if demographic data is available (contained in NTEs)
CE	REC		Recommendations	Yes	Only displayed if recommendations are available
CE	COM	55107-7	Comments	Yes	Only displayed if comments are available
CE	FTR		Footer	Yes	Only displayed if footer is available
CE	NOT		Notification	Yes	Included for Unsatisfactory Specimens Only

Example Report

NTD | Eurofins Clinical Diagnostics

80 Ruland Rd, Suite 1 • Melville, NY • 11747 • (631) 425-0800 • Fax (631) 425-0864 • reporting@ntd-eurofins.com

Preeclampsia Screen™ | T1 Report

Physician ID #: 24328
Physician Tel #: (000) 000-0000
OB SPECIALISTS
100 ANYWHERE ST
MELVILLE, NY 11747

Patient Name: PESCREEN, INCREASEDRISK
Patient ID #: 17PE0008888
Client ID #: 1234567
Date of Birth: 01/01/88 (age at EDC: 29)
CRL (mm): 53.1
Multi. Preg: No
Smoker: No
Sonographer: SONOPERSON
Sono Supervisor: SONODOCTOR

U/S Date: 03/09/17
GA @ U/S: 11w6d
Draw Date: 03/09/17
GA @ Draw: 11w6d (CRL)
MAP Date: 03/09/17
GA @ MAP: 11w6d
Date Received: 03/10/17
Report Date: 03/21/17

Interpretation: INCREASED RISK FOR EARLY ONSET PREECLAMPSIA

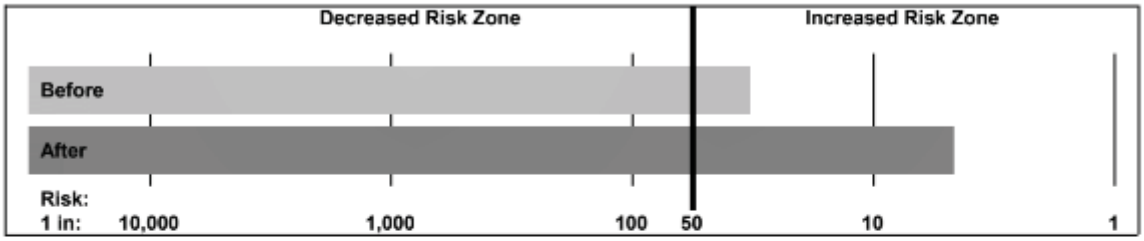
Prior Risk Factors	
Ethnicity	Afr. Amer./Carib.
Previous delivery >24 weeks	Yes
Fam Hx Preeclampsia	No
Previous Preeclampsia	Yes
Chronic Hypertension	No
Weight	152 lbs
Height	5' 2"
BMI	27.8

Serum Markers	Value	MoM	Percentile
PIGF	20.2 pg/ml	0.78	30
PAPP-A	520 mU/l	0.29	2.5
AFP	26.23 U/ml	1.92	90

Physical Markers	Value	MoM	Percentile
Mean Arterial Pressure (MAP)	92 mm Hg	1.08	80
Uterine Artery Doppler PI (UtAD-PI)	2.1	1.23	70

Risk Table	Cut-Off	Risk Before Screening	Risk After Screening	Result
Early Onset Preeclampsia	1 in 50	1 in 26	1 in <5	INCREASED RISK

Early Onset Preeclampsia Risk



Recommendations:
- Immediate follow-up with increased monitoring.

Jonathan B. Carmichael, Ph.D
Laboratory Director,
Eurofins NTD, LLC

Terrence W. Hallahan, Ph.D
Laboratory Director,
Eurofins NTD, LLC

CAUTION: This test was developed and its performance characteristics determined by Eurofins NTD, LLC. It has not been cleared or approved by the U.S. Food and Drug Administration. The methods and performance characteristics have been reviewed and approved by the New York State Department of Health. These results do not eliminate the possibility that this pregnancy may be associated with birth defects or pregnancy complications including preeclampsia, pre-term delivery and low birth weight. This report contains Protected Health Information. The recipient shall not disclose this information unless required to provide appropriate medical care without the permission of the patient. The multiple of the median and risk results provided in this report are dependent on the accuracy of the demographic and ultrasound information provided. The ordering physician should ensure that the ultrasound information has been obtained from a sonographer who is credentialed by and participating in a uterine artery Doppler quality review program such as FMF. Eurofins NTD, LLC assumes no responsibility for ensuring that the ultrasound information has been obtained by a properly credentialed sonographer, including verification or updates to credentialing status.

This report was generated on: 03/21/2017 01:53:20 PM

ISO

Physician Information Brochure

Early Onset Preeclampsia: One of the Remaining Great Challenges in Obstetrics[1]

Early onset preeclampsia (EOPE) is defined as preeclampsia resulting in the delivery of the fetus before 34 weeks' gestation. EOPE contributes more to the morbidity and mortality of pregnant mothers and babies than the more frequent, late onset form.[2-4] **EOPE is a more commonly occurring condition than Down syndrome.**

1 in 200 Early onset preeclampsia pregnancies[12,13]

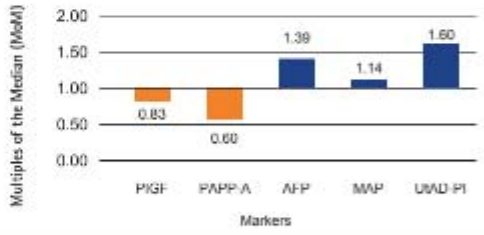
1 in 700 Down syndrome (trisomy 21) live births[14]

Early risk assessment of EOPE allows a valuable window of opportunity for education, increased monitoring and prophylactic intervention, including low-dose aspirin, to significantly decrease the severity and/or incidence of the disease.[9-11] To date, there has been no reliable way to detect early onset preeclampsia, particularly for patients experiencing their first pregnancy. Until now.

PreeclampsiaScreen℠ | T1: Earlier Insight Means More Opportunity

PreeclampsiaScreen℠ | T1 is a first-of-its-kind serum screening test that analyzes three biochemical markers in the mother's blood: PAPP-A (pregnancy-associated plasma protein-A), PlGF (placental growth factor) and AFP (alpha fetoprotein). Together, these three biochemical markers can contribute to accurate prediction of risk for early onset preeclampsia in the first-trimester.[15-21]

MoM in Early Onset Preeclampsia



Multiple of the median (MoM) expresses how far a test result deviates from the norm for an entire population. Shown here, values of various markers associated with early onset preeclampsia fall either above or below the norm.

*MAP = mean arterial pressure; UtAD-PI = uterine artery Doppler pulsatility index

Earlier Insight with PreeclampsiaScreen℠ | T1

	Biochemistry + History + MAP + UtAD-PI
Markers	PlGF, PAPP-A, AFP, MAP, UtAD-PI
Gestational age (ultrasound dated)	11 weeks, 1 day–13 weeks, 6 days
Detection rate at 5% FPR*	91%
Requirements	5 ml maternal serum in SST tube or red top tube, MAP and UtAD-PI measurement

*False positive rates are representative of a general screening population. Rates may vary depending on history. Risk cutoff in each case is 1 in 50.

Early Preeclampsia Screening Improves Clinical Focus

In 2,000 pregnancies, 10 cases of EOPE are expected[12,13,22]	
Screening	Detected EOPE Cases
No screening	
Maternal history	
Biochemistry	
Biochemistry + MAP	
Biochemistry + MAP + UtAD-PI	

PreeclampsiaScreen℠ | T1 enables accurate risk assessment of early onset preeclampsia, allowing for earlier detection, intervention and management of the pregnancy.

Research Supports Earlier Intervention

Research has shown that a combination of maternal factors and biomarkers can provide effective first-trimester screening of EOPE. Additionally, for decades, the use of low-dose aspirin for the prevention of preeclampsia has been an important research question, and more than 50 trials have been conducted around the world to assess its effect.[23] Still more research is being conducted, with further insights to come.

Prediction and Prevention of Early Onset Preeclampsia:

The Impact of Aspirin after First-Trimester Screening

The Park study includes a prospective analysis of two consecutive cohorts of patients screened for EOPE using history, MAP, UtAD-PI and PAPP-A between 11 and 13 weeks. The screening algorithm detected 92% of EOPE (10% FPR), while aspirin given to patients screened as high risk for EOPE reduced the disease prevalence by 90%.[24]

	Observational		Interventional		
Patients	3,066		2,717		Sequential Cohorts
Testing	MAP UtAD PAPP-A Demographics		MAP UtAD PAPP-A Demographics		Same Screening Algorithm
Screening Results	2,760 Screen (-)	360 Screen (+)	2,453 Screen (-)	264 Screen (+)	9.7–9.9% FPR
Treatments				LDA	<16 Weeks
Outcomes	1 EOPE	11 EOPE	0 EOPE	1 EOPE	90% Reduction in Prevalence
	92% Detection				

Risk Factors for Preeclampsia

- Having high blood pressure before becoming pregnant
- High blood pressure or preeclampsia in previous pregnancies
- Having a mother or sister who had preeclampsia
- In vitro fertilization
- First pregnancy
- Pregnancy with more than one baby
- Maternal age younger than 20 or older than 40 years
- Certain health conditions, such as diabetes, kidney disease, rheumatoid arthritis or lupus
- Obesity
- African-American or Caribbean descent

Having one or more of these risk factors does not mean that a patient will develop preeclampsia, but it may point to the need for early screening to help further evaluate and assess risk.

About NTD Labs

For more than 30 years, NTD Labs has pioneered the research and development of prenatal screening protocols for ONTDs, Down syndrome, trisomy 18 and trisomy 13. Today, NTD Labs serves universities, medical centers, hospitals, laboratories, obstetricians and maternal fetal medicine specialists worldwide—providing risk assessment services that help healthcare professionals and patients make more informed decisions.

For more information about PreeclampsiaScreen℠ | T1, please contact your NTD Labs Genetics Account Executive, call us at **1-888-NTDLABS** (683-5227) or visit **www.ntdlabs.com/preeclampsia**

References
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NTD | Eurofins Clinical Diagnostics

80 Ruland Road, Suite 1, Melville, NY 11747
www.ntdlabs.com | 1-888-NTD-LABS (683-5227)

Patient Information Brochure

PreeclampsiaScreen℠ | T1

Early Onset Preeclampsia

Earlier Insight Means More Opportunity

NTD Eurofins Clinical Diagnostics

What is early onset preeclampsia?

Early onset preeclampsia is defined as preeclampsia that results in the delivery of the baby before 34 weeks' gestation. It can be more severe than the later, more common form of preeclampsia and can even be life-threatening in rare cases.

When babies are born earlier than expected, they usually spend time in the neonatal intensive care unit (NICU) and, in some cases, may face possible lifelong disabilities. Early onset preeclampsia can also put mothers at future risk for cardiovascular disease.

Although there is no cure for preeclampsia, medical research suggests that some steps may be taken during pregnancy to prevent it, delay its onset or lessen its symptoms. These may include increased monitoring and prophylactic intervention, including low-dose aspirin.

Preeclampsia: Earlier Insight Is Better

Early onset preeclampsia is a potentially serious condition that occurs in approximately 1 in every 200 pregnancies. It's important to assess your risk for early onset preeclampsia as early as possible in your pregnancy so that if you are at risk, steps may be taken to protect your health and the health of your baby.

What is preeclampsia?

Preeclampsia is a sudden increase in blood pressure and protein in the urine after the 20th week of pregnancy, or in the absence of protein in the urine, any of the following:

- Thrombocytopenia (platelet counts < 100,000/microliter)
- Renal insufficiency
- Impaired liver function
- Pulmonary edema
- Cerebral or visual symptoms

Preeclampsia can lead to eclampsia, or convulsions, posing serious health implications for mother and baby. Symptoms of preeclampsia may include:

- High blood pressure (≥140/90 mmHg)
- Swelling in the face, hands and feet (although swollen feet are common during pregnancy)
- Weight gain of more than five pounds in a week
- Other problems such as headache, blurred vision, abdominal pain and nausea

Who's at risk for preeclampsia?

Preeclampsia affects about 5%–7% of all pregnancies. While the early onset form of preeclampsia is not as common as the late onset form, early onset preeclampsia contributes more to the morbidity and mortality of pregnant mothers and babies.[1-5] Occurring in upward of 1 in 200 pregnancies,[6,7] early onset preeclampsia is a more commonly occurring condition than Down syndrome.[8,9]

Risk factors for preeclampsia include:

- Having high blood pressure before becoming pregnant
- High blood pressure or preeclampsia in previous pregnancies
- Having a mother or sister who had preeclampsia
- In vitro fertilization
- First pregnancy
- Pregnancy with more than one baby
- Maternal age younger than 20 or older than 40 years
- Certain health conditions, such as diabetes, kidney disease, rheumatoid arthritis or lupus
- Obesity
- African-American or Caribbean descent

Having one or more of these risk factors does not mean that you will develop preeclampsia, but it may point to the need for early screening to help further evaluate and refine your risk.

First-trimester preeclampsia screening can help your doctor assess your risk profile earlier and more accurately than by using your history alone. The sooner you know, the more opportunity there is to prevent early onset preeclampsia or delay its onset.

A first-trimester test can help.

PreeclampsiaScreen℠ | T1 is an advanced blood test that helps determine your risk for early onset preeclampsia. It measures the presence of three biological "markers" of preeclampsia in the mother's blood: PAPP-A (pregnancy-associated plasma protein-A), AFP (alpha fetoprotein) and PlGF (placental growth factor). When detected at certain levels, these markers can indicate a higher risk of early onset preeclampsia.

Your medical history and demographic information (e.g., height, weight, ethnicity and smoking status) are also needed to provide an accurate risk assessment for early onset preeclampsia. Your doctor may also include these additional biophysical measurements:

- Mean arterial pressure (MAP) involves taking exact blood pressure measurements from both arms
- Uterine artery Doppler pulsatility index (UtAD-PI) is a special type of sonogram (ultrasound) that measures the blood flow between you and your baby

What does the test involve?

PreeclampsiaScreen℠ | T1 can be ordered at the same time as other first-trimester screening tests (such as screening for Down syndrome) and requires only a simple blood draw. Your doctor may also choose to order additional measurements, including MAP or UtAD-PI, which may involve a visit to an ultrasound center.

The earlier you know, the earlier you and your doctor can take steps to prevent or delay the onset of preeclampsia.

Your doctor will receive your results in just 1-2 days from sample receipt at the laboratory and will discuss them with you.

What if the test shows that I am at risk?

Most women are not at risk for early onset preeclampsia. However, if your results show that you are at an increased risk, your doctor will discuss your level of risk with you, along with any follow-up steps necessary to manage this risk during your pregnancy.

The earlier you know, the better.

Determining your risk for early onset preeclampsia during your first-trimester can help protect your health and the health of your baby. The earlier you know, the earlier you and your doctor can take steps to prevent or delay the onset of preeclampsia. Your doctor can help you decide what is best for you and your pregnancy.

Learn more about early onset preeclampsia. Speak with your doctor or contact us at **1-888-NTD-LABS** (683-5227) or visit **www.ntdlabs.com/preeclampsia**.

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