



Patient Information
Tests and Procedures

Ultrasound/Vascular Lab

Vascular Lab:
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Ultrasound/Vascular Lab – Ankle Brachial Index (ABI)

What is the test?

- People who have leg pain when exercising may need an evaluation to make sure that they have normal blood flow through their leg arteries. Doppler ultrasound is a painless way to detect blood flowing through a small artery. It uses sound waves and a type of sonar detection system to make noise when blood flow is detected. show the amount

How do I prepare for the test?

- No Prep

What happens when the test is performed?

- You will lay on a table and (depending on your size) a technician or doctor will wrap blood pressure cuffs around your ankles and both upper arms. He or she will squirt some clear jelly onto the top of your foot to help the Doppler sensor slide around easily and to help conduct sound waves through your skin. The sensor, resembling a wand or a pen, will be placed against your skin in this jelly.
- Each blood pressure cuff will be inflated to a higher pressure. Just as when you have blood pressure measurements taken in your arm, the inflated blood-pressure cuff will temporarily cut off circulation in the leg. As the cuff is deflated, the Doppler sensor on the foot detects the moment when blood flow starts up again by making a noise that sounds like your heartbeat. Checking the air pressure of the deflating cuff at this time shows the leg blood pressure
- For comparison, you will also have a blood pressure checked in each arm using the Doppler technique. The whole test usually requires close to 45 minutes.
- Some patients have their leg pressures checked both before and after exercise. If this is the case for your test, you will be asked to walk on a treadmill for a short time and then will have the test repeated afterward. The exercise version of this test requires more time to complete.

Must I do any thing special after the test is over?

- The gel will be wiped off. You will have no side effects from this test.
- Your physician will receive the results within 24-48 hours.

If there is any thing we can do to make your more comfortable while in the Ultrasound Department, please do not hesitate to ask.

Ultrasound/Vascular Lab – Arterial Arm Duplex

What is the test?

- Ultrasound is a painless way to show the amount of blood flow in the arm arteries. Ultrasound uses sound waves and a type of sonar detection system to generate a black and white picture. This picture allows your doctor to see if there is narrowing of your arm arteries, which is usually caused by cholesterol deposits. Narrowed arm arteries are caused by poor circulation to the arms and feet, so this test is often used to evaluate patients who have PVD. (poor blood flow to the arms)

How do I prepare for the test?

- No preparation is necessary.

What happens when the test is performed?

- A sonographer or doctor will first squirt some clear gel onto one side of your arm to help the ultrasound sensor slide around easily and then will place the sensor against your skin in this gel. The sensor looks like a microphone. When the sensor is in place, a picture will appear on a video screen, and the sonographer or doctor will move the sensor back and forth on your arm to see the arteries inside from different views. During the test, the machine will make a noise that sounds like your heartbeat – this shows that it is measuring the blood flow through the artery. The other arm will be checked in the same way. This test usually requires between 30 and 45 minutes.

Must I do any thing special after the test is over?

- The gel will be wiped off. You will have no side effects from this test.
- Your physician will receive the results within 24-48 hours.

If there is any thing we can do to make you more comfortable while in the Ultrasound Department, please do not hesitate to ask.

Ultrasound/Vascular Lab – Arterial Doppler with Pressures -Arm

What is the test?

- People who have arm pain when exercising may need an evaluation to make sure that they have normal blood flow through their arm arteries. Doppler ultrasound is a painless way to detect blood flowing through a small artery. It uses sound waves and a type of sonar detection system to make noise when blood flow is detected. show the amount

How do I prepare for the test?

- You will probably be asked to change into a hospital gown.

What happens when the test is performed?

- You will lay on a table and (depending on your size) a technician or doctor will wrap blood pressure cuffs around your arms in three or four locations. He or she will squirt some clear jelly onto the top of your wrist to help the Doppler sensor slide around easily and to help conduct sound waves through your skin. The sensor, resembling a wand or a pen, will be placed against your skin in this jelly.
- Each blood pressure cuff will be inflated two times. The first time the cuff is inflated, it will only be inflated part way (to a gentle pressure) and it will send a signal to a machine next to you about the size of your leg and how elastic your arteries seem to be as the pressure is increased. A wavy line that signifies your blood flow will appear on a screen.
- The second time each cuff is inflated, it will be inflated to a higher pressure. Just as when you have blood pressure measurements taken in your arm, the inflated blood-pressure cuff will temporarily cut off circulation in the arm. For many patients, this briefly causes some cramping pain in the arm. As the cuff is deflated, the Doppler sensor on the wrist detects the moment when blood flow starts up again by making a noise that sounds like your heartbeat. Checking the air pressure of the deflating cuff at this time shows the arm blood pressure
- After all the cuffs on one side have been tested, the other arm will be checked in the same way. For comparison, you will also have a blood pressure checked in each arm using the Doppler technique. The whole test usually requires close to 45 minutes.
- Some patients have their arm pressures checked both before and after exercise. If this is the case for your test, you will be asked to walk on a treadmill for a short time and then will have the test repeated afterward. The exercise version of this test requires more time to complete.

Must I do any thing special after the test is over?

- The gel will be wiped off. You will have no side effects from this test.
- Your physician will receive the results within 24-48 hours.

If there is any thing we can do to make your more comfortable while in the Ultrasound Department, please do not hesitate to ask.

Ultrasound/Vascular Lab – Arterial Graft, Fistula

What is the test?

- Ultrasound is a painless way to show the amount of blood flow in the arterial graft or fistula. Ultrasound uses sound waves and a type of sonar detection system to generate a black and white picture. This picture allows your doctor to see if there is narrowing of your arterial graft or fistula which is usually caused by cholesterol deposits.

How do I prepare for the test?

- No preparation is necessary.

What happens when the test is performed?

- A sonographer or doctor will first squirt some clear gel onto one side of your arm/ leg to help the ultrasound sensor slide around easily and then will place the sensor against your skin in this gel. The sensor looks like a microphone. When the sensor is in place, a picture will appear on a video screen, and the sonographer or doctor will move the sensor back and forth on your arm/ leg to see the graft/ fistula inside from different views. During the test, the machine will make a noise that sounds like your heartbeat – this shows that it is measuring the blood flow through the artery. This test usually requires between 30 and 45 minutes.

Must I do any thing special after the test is over?

- The gel will be wiped off. You will have no side effects from this test.
- Your physician will receive the results within 24-48 hours.

If there is any thing we can do to make your more comfortable while in the Ultrasound Department, please do not hesitate to ask.

Ultrasound/Vascular Lab – Arterial Leg Duplex

What is the test?

- Ultrasound is a painless way to show the amount of blood flow in the leg arteries. Ultrasound uses sound waves and a type of sonar detection system to generate a black and white picture. This picture allows your doctor to see if there is narrowing of your leg arteries, which is usually caused by cholesterol deposits. Narrowed leg arteries are caused by poor circulation to the legs and feet, so this test is often used to evaluate patients who have PVD. (poor blood flow to the legs)

How do I prepare for the test?

- No preparation is necessary.

What happens when the test is performed?

- A sonographer or doctor will first squirt some clear gel onto one side of your leg to help the ultrasound sensor slide around easily and then will place the sensor against your skin in this gel. The sensor looks like a microphone. When the sensor is in place, a picture will appear on a video screen, and the sonographer or doctor will move the sensor back and forth on your leg to see the arteries inside from different views. During the test, the machine will make a noise that sounds like your heartbeat – this shows that it is measuring the blood flow through the artery. The other leg will be checked in the same way. This test usually requires between 30 and 45 minutes.

Must I do any thing special after the test is over?

- The gel will be wiped off. You will have no side effects from this test.
- Your physician will receive the results within 24-48 hours.

If there is any thing we can do to make your more comfortable while in the Ultrasound Department, please do not hesitate to ask.

Ultrasound/Vascular Lab – Arterial Doppler with Pressures Leg

What is the test?

- People who have leg pain when exercising may need an evaluation to make sure that they have normal blood flow through their leg arteries. Doppler ultrasound is a painless way to detect blood flowing through a small artery. It uses sound waves and a type of sonar detection system to make noise when blood flow is detected. show the amount

How do I prepare for the test?

- You may want to wear shorts for this exam and you will need to have bare feet during the test. If you are not wearing shorts, you will probably be asked to change into a hospital gown.

What happens when the test is performed?

- You will lie on a table and (depending on your size) a technician or doctor will wrap blood pressure cuffs around one of your legs in four or five locations. He or she will squirt some clear jelly onto the top of your foot to help the Doppler sensor slide around easily and to help conduct sound waves through your skin. The sensor, resembling a wand or a pen, will be placed against your skin in this jelly.
- Each blood pressure cuff will be inflated two times. The first time the cuff is inflated, it will only be inflated part way (to a gentle pressure) and it will send a signal to a machine next to you about the size of your leg and how elastic your arteries seem to be as the pressure is increased. A wavy line that signifies your blood flow will appear on a screen.
- The second time each cuff is inflated, it will be inflated to a higher pressure. Just as when you have blood pressure measurements taken in your arm, the inflated blood-pressure cuff will temporarily cut off circulation in the leg. For many patients, this briefly causes some cramping pain in the calf or thigh. As the cuff is deflated, the Doppler sensor on the foot detects the moment when blood flow starts up again by making a noise that sounds like your heartbeat. Checking the air pressure of the deflating cuff at this time shows the leg blood pressure
- After all the cuffs on one side have been tested, the other leg will be checked in the same way. For comparison, you will also have a blood pressure checked in each arm using the Doppler technique. The whole test usually requires close to 45 minutes.
- Some patients have their leg pressures checked both before and after exercise. If this is the case for your test, you will be asked to walk on a treadmill for a short time and then will have the test repeated afterward. The exercise version of this test requires more time to complete.

Must I do any thing special after the test is over?

- The gel will be wiped off. You will have no side effects from this test.
- Your physician will receive the results within 24-48 hours.

If there is any thing we can do to make your more comfortable while in the Ultrasound Department, please do not hesitate to ask.

Ultrasound/Vascular Lab – Carotid Doppler

What is the test?

- Ultrasound is a painless way to show the amount of blood flow in the carotid arteries inside your neck. Ultrasound uses sound waves and a type of sonar detection system to generate a black and white picture. This picture allows your doctor to see if there is narrowing of your carotid arteries, which is usually caused by cholesterol deposits. Narrowed carotid arteries are one cause of strokes, so this test is often used to evaluate patients who have had a stroke or who might be at high risk for strokes.

How do I prepare for the test?

- No preparation is necessary.
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What happens when the test is performed?

- A sonographer or doctor will first squirt some clear gel onto one side of your neck to help the ultrasound sensor slide around easily and then will place the sensor against your skin in this gel. The sensor looks like a microphone. When the sensor is in place, a picture will appear on a video screen, and the sonographer or doctor will move the sensor back and forth on your neck to see the arteries inside from different views. During the test, the machine will make a noise that sounds like your heartbeat – this shows that it is measuring the blood flow through the artery. The other side of your neck will be checked in the same way. This test usually requires between 30 and 45 minutes.

Must I do any thing special after the test is over?

- The gel will be wiped off. You will have no side effects from this test.
- Your physician will receive the results within 24-48 hours.

If there is any thing we can do to make your more comfortable while in the Ultrasound Department, please do not hesitate to ask.

Ultrasound/Vascular Lab – Vein Mapping

What is the test?

- Ultrasound is a painless way to show the location and size of a vein in the arm or leg. Ultrasound uses sound waves and a type of sonar detection system to generate a black and white picture. This picture allows your doctor to see if there is a blockage in a vein inside your arm/leg, which is usually caused by a blood clot. Your doctor might suspect that you have a blood clot if you have pain or swelling in one arm. This is also done before an operation on your veins for a dialysis graft or bypass surgery

How do I prepare for the test?

- No preparation is necessary. You will probably be asked to change into a hospital gown.

What happens when the test is performed?

- A sonographer or doctor will first squirt some clear gel onto the inside of your arm or leg to help the ultrasound sensor slide around easily and then will place the sensor against your skin in this gel. The sensor looks like a microphone.
- When the sensor is in place, a picture will appear on a video screen, and the sonographer or doctor will move the sensor up and down along your arm/ leg to view the veins under the surface from different views. As he or she moves the sensor along your arm, the sensor will be pressed into your skin firmly every few inches, too see if the veins change their shape when they are put under pressure.
- During the test, the machine will make noise that sounds like ocean waves or like your heartbeat- this shows that it is measuring the blood flowing through the vein. The other arm/ leg will be checked in the same way. This test usually requires 30 minutes. If your arm is swollen and sensitive to the touch before you have this test, you may have some tenderness from the sensor against your arm/leg; however, most people do not have any pain or discomfort.
- Once the vein is located a mark will be placed on your skin and will trace the vein under the skin. These marks will be connected with a black marker for your doctor. It is important not to wash off these marks. This is a guide for your doctor where your vein is under your skin

Must I do any thing special after the test is over?

- The gel will be wiped off. You will have no side effects from this test.
- **Do not let any one wash off the skin markers**
- Your physician will receive the results within 24-48 hours.

If there is any thing we can do to make your more comfortable while in the Ultrasound Department, please do not hesitate to ask.

Ultrasound/Vascular Lab – Venous Doppler Upper Arm

What is the test?

- Ultrasound is a painless way to show the amount of blood flow in the veins inside your arms. Ultrasound uses sound waves and a type of sonar detection system to generate a black and white picture. This picture allows your doctor to see if there is a blockage in a vein inside your leg, which is usually caused by a blood clot. Your doctor might suspect that you have a blood clot if you have pain or swelling in one arm

How do I prepare for the test?

- No preparation is necessary. You will probably be asked to change into a hospital gown.

What happens when the test is performed?

- A sonographer or doctor will first squirt some clear gel onto the inside of one of your arms to help the ultrasound sensor slide around easily and then will place the sensor against your skin in this gel. The sensor looks like a microphone.
- When the sensor is in place, a picture will appear on a video screen, and the sonographer or doctor will move the sensor up and down along your arm from the neck to the hand to view the veins under the surface from different views. As he or she moves the sensor along your arm, the sensor will be pressed into your skin firmly every few inches, too see if the veins change their shape when they are put under pressure.
- During the test, the machine will make noise that sounds like ocean waves or like your heartbeat- this shows that it is measuring the blood flowing through the vein. The other arm will be checked in the same way. This test usually requires 30 minutes. If your arm is swollen and sensitive to the touch before you have this test, you may have some tenderness from the sensor against your arm, however, most people do not have any pain or discomfort.

Must I do any thing special after the test is over?

- The gel will be wiped off. You will have no side effects from this test.
- Your physician will receive the results within 24-48 hours.

If there is any thing we can do to make your more comfortable while in the Ultrasound Department, please do not hesitate to ask.

Ultrasound/Vascular Lab – Venous Doppler Lower Leg

What is the test?

- Ultrasound is a painless way to show the amount of blood flow in the veins inside your legs. Ultrasound uses sound waves and a type of sonar detection system to generate a black and white picture. This picture allows your doctor to see if there is a blockage in a vein inside your leg, which is usually caused by a blood clot. Your doctor might suspect that you have a blood clot if you have pain or swelling in one leg.

How do I prepare for the test?

- No preparation is necessary. If you are not wearing shorts, you will probably be asked to change into a hospital gown.
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What happens when the test is performed?

- A sonographer or doctor will first squirt some clear gel onto the inside of one of your thighs to help the ultrasound sensor slide around easily and then will place the sensor against your skin in this gel. The sensor looks like a microphone.
- When the sensor is in place, a picture will appear on a video screen, and the sonographer or doctor will move the sensor up and down along your leg from the groin to the calf to view the veins under the surface from different views. As he or she moves the sensor along your leg, the sensor will be pressed into your skin firmly every few inches, too see if the veins change their shape when they are put under pressure.
- During the test, the machine will make noise that sounds like ocean waves or like your heartbeat- this shows that it is measuring the blood flowing through the vein. The other leg will be checked in the same way. This test usually requires 30 minutes. If your leg is swollen and sensitive to the touch before you have this test, you may have some tenderness from the sensor against your leg, however, most people do not have any pain or discomfort.

Must I do any thing special after the test is over?

- The gel will be wiped off. You will have no side effects from this test.
- Your physician will receive the results within 24-48 hours.

If there is any thing we can do to make your more comfortable while in the Ultrasound Department, please do not hesitate to ask.