

Transmyocardial Laser Revascularization Surgery

What is Heart Laser Surgery?

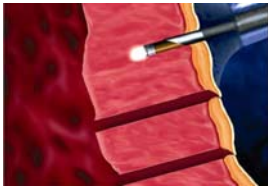
[TransMyocardial laser Revascularization](#) (TMR) is a surgical intervention used to relieve [angina](#) by applying a laser to the heart muscle.

How does TMR work?

At this point, the reasons for how TMR works to relieve [angina](#) are not fully understood. However, there are several theories:

- It may directly increase the blood flow to your heart muscle
- It may damage nerves to the heart
- It may stimulate the growth of new small vessels to feed your heart

How is a TMR performed?



The procedure is completed under [general anesthesia](#), and it is often done in conjunction with other open-heart operations. A series of 20-45 channels are created by laser beam that runs through your heart muscle. These channels are no bigger in diameter than a common sewing needle.

How long does a TMR take?

If the procedure is done with another surgery it will only add an extra 20 minutes onto the original surgery time. If it is done as a stand alone procedure it takes from one hour to ninety minutes.

Is there much blood loss?

The hole in the surface of the heart seals over almost immediately. Usually the small amount of bleeding that does occur can be controlled by applying moderate pressure. It is unusual to lose enough blood to require a [transfusion](#).

Where are the channels created?

The channels are created by applying laser beam energy around an area where the blood flow in your heart has been impeded by blockages in the [coronary arteries](#). This treatment is used if a traditional bypass is deemed unsafe, or the blockage is in an inoperable location.



Am I a candidate for TMR?

Yes, if:

- You have angina due to [cardiovascular disease](#).
- Your angina has not been relieved by [traditional interventions](#).
- Your heart muscle is healthy around the affected area.
- You may be having additional [Coronary Artery Bypass \(CAB\)](#) surgery in other treatable portions of the heart.

No, if:

- You are unable to undergo [general anesthesia](#).
- You have had a heart attack ([MI](#)) within the last three weeks.
- You have a [chronic lung disease](#).
- You have current [Congestive Heart Failure \(CHF\)](#).
- You have severe heart rhythm problems.

What are the risks of TMR?

The risks are the same as those associated with any other surgery where you are placed under [general anesthesia](#).