



起搏器发生器更换后 患者须知

打电话给谁

- 如果你有关于约诊的问题，请打电话给心脏病诊所，电话号码 206.598.4300。
- 如果你有关于手术、术后护理或你的起搏器跟踪门诊的问题，请在 _____ 星期一至星期五上午 8 时至下午 4 时 30 分打电话给你的电生理学护士。
- **所有的紧急问题，请拨打 911 号码。**
- 周末、节假日或营业时间之外时段，请拨打电话号码 206.598.6190，请要求寻呼应召电生理学（EP）护理医生。电生理学护理医生是与你的主治电生理学医生合作的医生。这些医生专门负责护理植入起搏器的患者。

伤口护理

- 如果你有以下症状，请**立即**拨打以上一个电话号码：
 - 红肿
 - 肿胀
 - 流液
 - 发烧体温超过 99.5°F (37.5°C)
 - 寒颤
 - 有关于伤口的任何担忧或疑问
- 在手术后 24 小时内取下敷料（绷带）。你的伤口已用皮胶封上。
- 你可以在手术 48 小时后洗淋浴，但在伤口**完全**愈合之前，请勿将切口浸在水中。
- 在伤口**完全**愈合之前，请勿在切口上涂乳液或粉。
- 避免触摸起搏器或周围部位。不要用手戳碰或转动起搏器。

- 如果汽车安全带穿过起搏器植入部位，在安全带上加衬垫。在伤口完全愈合之前，始终在安全带上使用衬垫。
- 在向我们洽询之前，**不要让任何人用手指或器械戳碰切口**。如果健康护理服务提供者认为在向你提供护理时需要这样做，请让他们给电生理学护理医生打电话，**然后再做**此类检查或程序。
- 会在手术 7-14 天后对你的伤口进行检查。请**务必**接受这次约诊和所有跟踪门诊。

**请查看你的护士给你的门诊记录页，
了解你的跟踪门诊日期和时间。**

活动限制

旅行

如果你在手术后头两周有旅行计划，请向你的医生洽询，了解详细指示。

其他事项

- 请遵守你的医生有关开车和性行为的指示。
- 在你从事任何需要挥动手臂的活动（例如游泳、打高尔夫球、打网球或吸尘）或做可能伤害肩膀或伤口部位的事情（例如射击、摔跤或踢足球）之前，向你的医生洽询。根据你的治疗计划，这些限制可能延续三个月或更长时间。
- 继续避免用手触摸起搏器或周围部位。不要用手戳碰或转动起搏器。

长期特别注意事项

旅行

- 始终随身携带起搏器身份证。
- 如果你必须通过金属探测器检查，将你的起搏器身份证交安检员，并告诉他们你可能会触发警报器。你还应当携带一张带有此类信息的卡片，卡片应用你将访问或旅行经过的国家使用的语言填写。
- 尽管有些研究显示金属探测器对起搏器不构成风险，大多数制造商仍然建议需要当心。
 - 你可以穿过金属探测拱门，但不要在拱门内逗留或靠在拱门上。

- 如果使用金属探测棒，请安检员避免在起搏器上方挥动探测棒或将探测棒放在起搏器上方。
- 如果当你在金属探测器近旁时，感到头晕或心跳加快（心悸），走到离金属探测器更远的地方。你的起搏器应当立即开始正常运作。
- 有些机场和其他地点使用的身体扫描器不会对你的起搏器有任何影响。
- 始终随身携带一份完整的最新药单。药单应包括每天服用剂量、服药频率和服药原因。
- 始终将药物放在随身携带的包中。**不要**将药物放在托运行李中。
- 携带你的健康护理服务提供者的电话号码，以防出现紧急情况。

磁场

每天在我们的周围很多物体中存在磁铁或磁场，很多物体会产生磁场。其中包括：

- 带马达的小电器
- 立体声扬声器
- 天然气发动机
- 手机
- 台式和便携式计算机
- 电焊机
- 无线电对讲机
- 磁共振成像（MRI）机器
- 商店内的防盗装置
- 金属探测器

在大多数此类物品（例如微波炉和搅拌器）附近是安全的，但有些物品则会产生较强的磁场，干扰起搏器运作。

请参阅第 4、5、6 页中有关磁场来源的一些一般性建议和防范措施。

详情请向你的起搏器制造商洽询。

注释：所有的建议均假设你使用的装置已适当接地、正常运行，且用于预定用途。

手机

如果你遵守以下规定，**大多数**手机是安全的：

- 将手机保持在距离你的手术部位至少 6 英寸（15 厘米）的位置。
- 将手机放在与起搏器**相反的一侧**的耳朵上打电话或接听电话，以防出现故障。
- 携带手机时，将手机放在至少距离植入部位 6 英寸（15 厘米）的位置。大多数手机即使不在使用也会继续发出信号。

无线电发射机

无线电发射机（例如无线电对讲机、步话机和远程控制玩具）可能对你的起搏器产生干扰。以下是与此类物体保持的距离指南：

生成的功率（瓦特）	应保持的距离
3 瓦特	12 英寸（30 厘米）
25-199 瓦特	3 英尺（1 米）
200 瓦特或以上	10 英尺（3 米）

如果你对无线电发射机的功率输出不确定，请打电话给制造商。

汽车发动机和带小马达的工具或电器

- 大多数带马达的小电器或手持工具可安全使用，条件是装置已接地、正常运行、且放在建议的与身体距离的位置，以确保装置的安全和适当运行。
- 在操作汽车发动机时需要当心。将起搏器与运行的汽车发动机至少保持 24 英寸（60 厘米）的距离。

电动牙刷

- 将电动牙刷柄至少保持在距离你的起搏器 1 英寸（2.5 厘米）的位置。
- 充电器和你的起搏器之间至少保持 6 英寸（15 厘米）的距离。

医疗手术或装置

请务必让为你做手术的人了解你植入了起搏器。绝对不要假设参与你的健康护理的每一个人知道这一点。始终向参与你的护理的人确认和提醒他们，确保安全。

在接受以下手术或使用以下装置时须采取防范措施：

- 电烙术（使用电流切除多余的组织、封闭血管或切开切口的外科手术）
- 放置中央静脉导管（放入大静脉内输送药物的导管）
- 碎石术（一种使用冲击波击碎肾脏、膀胱和子宫内结石的手术）
- 超声波（一种成像技术）
- 电蚀（除毛发）
- 体外心脏电复律或除颤（使不正常心律恢复正常的程序）
- 磁共振成像（MRI）机器

注释： 目前，植入起搏器的患者在 MRI 机器内或附近是**不安全的**。但有些新型起搏器可以在 MRI 机器附近。除非你的起搏器是可以安全接触 MRI 的型号，否则**应避免接受所有 MRI 检查**。

- 带有绕在颈部周围用于探测声音和向扩音器发送数字信号电线的助听器

注释： 在使用此类助听器之前，请打电话向你的起搏器制造商洽询。

- 放射疗法（通常在癌症治疗中使用）
- TENS（经皮电子神经刺激，一种控制疼痛的装置）
- 身体脂肪测量仪

其他防范措施

很多起搏器制造商建议你还应当**避免在以下物体的周围或使用以下物体：**

- 电弧焊机
- 气动电锯
- 感应炉，例如干燥炉
- 磁疗床垫或枕头
- 电炼钢炉
- 电介质加热器（使用无线电波或微波加热的加热器）
- 输电塔（如果你在限制区内）
- 手提钻机
- 晕眩枪

牙科作业

- 请告诉你的牙医你植入了起搏器。通常，你无需担心牙医使用的任何装置会干扰你的起搏器。
- 如果在手术前你不需要因牙科程序服用抗生素，在植入起搏器后也不需要服用抗生素。如果你有疑问，请向你的医生咨询。

你的起搏器

本手册仅包括有关你的植入装置的一般防范措施。每台装置可能会有需要考虑的特殊防范措施。

如果你对哪些因素会给你的起搏器带来问题，请与制造商联系，了解有关你的新植入装置的详细信息。以下是四家制造商的联系信息：

Biotronik

www.biotronikusa.com

800.547.0394

Guidant/Boston Scientific

www.guidant.com

866.GUIDANT (866.484.3268)

www.bostonscientific.com

888-272-1001

Medtronic

www.medtronic.com

800.551.5544

800.328.2518

St. Jude

www.sjm.com

800.681.9293

800.328.9634

有问题吗？

你的问题非常重要。
如果你有任何问题或担忧，请打电话给你的医生或健康护理服务提供者。

心脏病诊所：
206.598.4300

After Your Pacemaker Generator Change

What you need to know

Who to Call

- If you have questions about your appointments, call the Cardiology Clinic at 206.598.4300.
- If you have a question about your procedure, care after your procedure, or your pacemaker follow-up, call your EP Nurse _____ at _____ weekdays between 8 a.m. and 4:30 p.m.
- **For all urgent concerns, call 911.**
- Weekends, holidays, or after hours, call 206.598.6190 and ask for the Electrophysiology (EP) Fellow on call to be paged. The EP Fellow is a doctor who works with your primary electrophysiologist. These doctors specialize in caring for patients with pacemakers.

Wound Care

- Call one of the numbers above **right away** if you have:
 - Redness
 - Swelling
 - Drainage
 - Fever above 99.5°F (37.5°C)
 - Chills
 - Any concerns or questions about your wound
- Remove your dressing (bandage) within 24 hours after your surgery.
- Your wound was closed with skin glue. You may shower 48 hours after your surgery, but do not soak your incision until it is **completely** healed.
- Do not put lotion or powder on your incision until it is **completely** healed.
- Avoid touching the area over or around your pacemaker. Do not poke or twist your pacemaker.

- Add some padding to your seat belt strap if it crosses over your pacemaker implant site. Keep this padding in place until your wound is completely healed.
- **Do not let anyone poke or probe your incision** with fingers or instruments before checking with us first. If a healthcare provider feels this needs to be done to provide your care, have them call the EP Fellow **before** doing this type of exam or procedure.
- Your wound will be checked 7 to 14 days after your surgery. It is **very** important that you go to this appointment and all your follow-up visits.

See the appointment page you were given by your nurse for the dates and times of your follow-up appointments.

Activity Restrictions

Travel

If you have travel plans in the first 2 weeks after your surgery, please check with your doctor for more instructions.

Other

- Follow your doctor's instructions about driving and sexual activity.
- Check with your doctor before you do activities that involve swinging your arm (such as swimming, golfing, tennis, or vacuuming) or doing things that can injure your shoulder or wound site (such as shooting a gun, wrestling, or playing football). These restrictions could last 3 months or longer, based on your treatment plan.
- Continue to avoid touching the area over or around your pacemaker. Do not poke or twist your pacemaker.

Special Long-Term Precautions

Travel

- Always carry your pacemaker identification card.
- If you must pass through a metal detector, hand your pacemaker identification card to security staff and tell them that you might set off the alarm. You may also want to carry a card with this information in the language(s) of the country (or countries) you will visit or travel through.
- Although some studies show there are no risks to pacemakers from metal detectors, most manufacturers still suggest being cautious.
 - You may walk through the metal-detection arch, but do not stay inside the arch or lean on the sides of the structure.

- If a metal-detection hand wand is used, ask security staff to avoid waving or holding it over your pacemaker.
- If you feel dizzy or have fast heartbeats (*palpitations*) when you are near a metal detector, move farther away. Your pacemaker should begin to work properly right away.
- Body scanners that are used in some airports and other locations will not have any effect on your pacemaker.
- Always carry a complete list of your current medicines. Include their doses, how often you take them each day, and why you are taking them.
- Always carry your medicines with you in your carry-on bags. Do **not** pack them in your checked luggage.
- Carry phone numbers for your healthcare providers in case of emergency.

Magnetic Fields

Magnets or magnetic fields are found in or are created by many items we are around every day. Some of these are:

- Small appliances with motors
- Stereo speakers
- Gas engines
- Cell phones
- Desktop and laptop computers
- Welding machines
- CB radios
- Magnetic resonance imaging (MRI) machines
- Anti-theft devices in stores
- Metal detectors

Most of these items, such as microwaves and blenders, are safe to be close to, but some create magnetic fields that are strong enough to interfere with how your pacemaker works.

Some general recommendations and precautions for sources of magnetic fields are listed on pages 4, 5, and 6. **For more details, contact the manufacturer of your pacemaker.**

NOTE: All recommendations assume that the equipment you are using is properly grounded, is in proper working order, and is being used for its intended purpose.

Cell Phones

Most cell phones are safe if you:

- Keep your phone at least 6 inches (15 centimeters) from your surgery site.
- Hold it to your ear on the **opposite side** of your pacemaker to avoid problems.
- Carry your phone in a location that is also at least 6 inches (15 centimeters) away from your implant site. Most cell phones continue to send a signal even when they are not in use.

Radio Transmitters

Radio transmitters such as CB radios, walkie-talkies, and remote-control toys may interfere with your pacemaker. Here are guidelines for distances to keep from these items:

Watts Generated	Distance to Keep from It
3 watts	12 inches (30 centimeters)
25 to 199 watts	3 feet (1 meter)
200 watts or more	10 feet (3 meters)

If you are unsure about the power output of your radio transmitter, call the manufacturer.

Car Engines and Tools or Appliances with Small Motors

- Most small appliances or hand tools with motors are safe to use when the item is grounded, in good condition, and is held the recommended distance from your body for safe and proper operation.
- Use caution when working on car engines. Keep your pacemaker at least 24 inches (60 centimeters) away from a running car engine.

Electric Toothbrushes

- Keep the toothbrush handle at least 1 inch (2.5 centimeters) away from your pacemaker.
- Keep at least 6 inches (15 centimeters) between the charger and your pacemaker.

Medical Procedures or Equipment

Be sure the person who is doing your procedure knows you have a pacemaker. Never assume everyone involved in your healthcare knows this. It is always safer to be sure and to remind those involved in your care.

Take precautions with these procedures or devices:

- *Electrocautery* (a surgical procedure that uses an electric current to remove unwanted tissue, seal off blood vessels, or create an incision)
- Placement of a *central venous catheter* (a catheter that is placed in a large vein to deliver medicine)
- *Lithotripsy* (a procedure that uses shock waves to break up stones in the kidney, bladder, or ureter)
- Ultrasound (an imaging technique)
- Electrolysis (hair removal)
- External *cardioversion* or *defibrillation* (a procedure to bring an abnormal heart rhythm back to normal)
- Magnetic resonance imaging (MRI) machines

Note: At this time, MRI machines **are not safe** for patients with pacemakers to be in or around. But, some new pacemakers can be near an MRI machine. **You must avoid all MRI exams** unless your doctor tells you that your pacemaker is MRI-safe.

- Hearing aid with a coil around the neck that detects sounds and sends digital signals to the amplifier

Note: Before using this type of hearing aid, call your pacemaker manufacturer.

- Radiation therapy (usually used in cancer treatment)
- TENS (*transcutaneous electrical nerve stimulation*, a pain-control device)
- Body-fat measuring scales

Other Precautions

Many manufacturers of pacemakers recommend that you also **avoid being around or using these items:**

- Arc welders
- Gas-powered chainsaws
- Induction furnaces such as kilns
- Magnetic (therapy) mattress pads or pillows
- Electric steel furnaces
- Dielectric heaters (heaters that use radiowaves or microwaves to heat)
- Electrical transmissions towers (if you are **inside** a restricted area)
- Jackhammers
- Stun guns

Dental Work

- Tell your dentist that you have a pacemaker. Usually, you will not need to be concerned that any of the devices the dentist uses will interfere with your pacemaker.
- If you did not need antibiotics for your dental procedures before your surgery, then you will not need antibiotics now that you have a pacemaker. If you have questions, please ask your doctor.

Your Pacemaker

This handout covers **only** general precautions you may need to take with your implanted device. Each device may have special precautions to consider.

If you have any questions about what might cause problems for your pacemaker, please contact the manufacturer for more specific information about your newly implanted device. Here is contact information for 4 pacemaker manufacturers:

Biotronik

www.biotronikusa.com
800.547.0394

Guidant/Boston Scientific

www.guidant.com
866.GUIDANT (866.484.3268)
www.bostonscientific.com
888-272-1001

Medtronic

www.medtronic.com
800.551.5544
800.328.2518

St. Jude

www.sjm.com
800.681.9293
800.328.9634

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

Cardiology Clinic:
206.598.4300