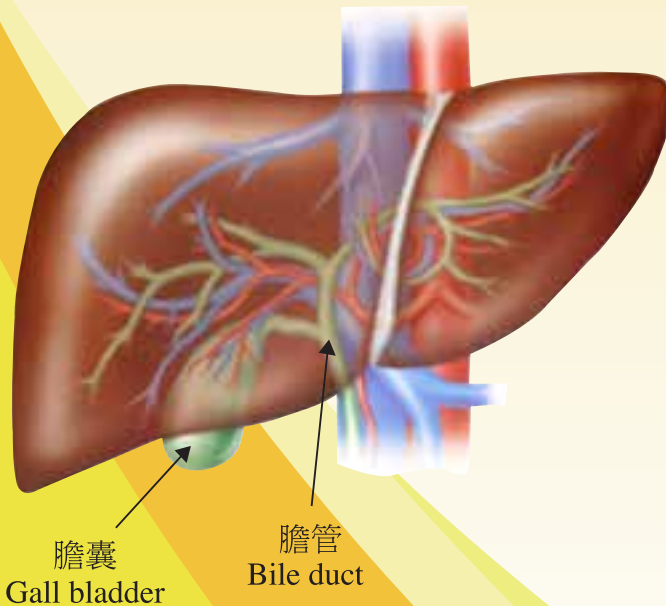





瑪麗醫院  
Queen Mary Hospital

# 活體肝捐贈者資訊

## Information to Liver Donor



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# 活體肝捐贈資料

## 活人捐肝（活體肝）

現在的醫療技術可以從活人身上取出部分肝臟植入接受者體內。在1989年，這種手術首次應用于兒科病人，1994年起開始應用於成年病人。移植肝臟的大小，取決於捐贈者與接受者的體型配對。左邊肝臟（大約35%）或右邊肝臟（大約65%）都可以移植。手術後，捐贈者剩餘的肝臟在兩至三個月內即可增生至原來的大小。

選擇活體肝移植，必須**格外小心權衡接受者與捐贈者的利益和危險**。

### 接受者的利益

- 病情惡化前進行肝移植，成功率較高
- 避免等候期間死亡的危險（等候期間總體死亡率為40%，在深切治療部等候的死亡率為90%）

### 捐贈者的危險

- 體檢與外科手術造成的不適、痛楚與併發症
- 需留醫7-10天，甚至更久
- 需停止工作6-8星期，甚至更久
- 永久的外科疤痕（見圖一、二），有些甚至發展成肥厚性疤痕（見圖三）

- 大約 20% 的機會出現併發症（傷口感染、切口疝、出血、膽漏、膽管問題、肝衰竭、感染、肺炎或其它併發症）
- 可能死亡（風險估計：捐贈左葉肝臟的死亡率為 0.1%，捐贈右葉肝臟的死亡率為 0.5%）

### 活體肝捐贈者須注意事項：

- 打算捐贈肝臟者應停止服食中藥、補品及任何健康食品，以免造成不明原因的肝功能波動
- 捐贈手術後，一年內不應飲用含酒精飲料，亦不應服食中藥、補品及任何健康食品，以免造成肝功能損害

### 甚麼人適合做活體肝捐贈者？

捐贈肝臟最重要的原則是：**絕對自願，無任何強迫因素或金錢或物質利益的驅使。**

捐贈者應該清楚明白以下各點：

1. 手術會帶來痛苦和危險（併發症發生率為 20%），甚至死亡
2. 捐贈後，接受者手術未必成功（接受者手術成功率平均為 90%）
3. 捐贈決定完全出於個人願望，與家庭或醫務人員

的外來壓力無關

4. 任何器官捐贈都不會有任何金錢報酬
5. 捐贈者有權在任何時候，無需任何理由，撤銷捐贈決定

除上述各點之外，要成為合適的活體肝捐贈者還需要具備以下的條件

- 年齡在18歲至60歲之間
- 身心狀況良好
- 身高體重指數值(BMI)少於30
- 與受贈人血型吻合
- 非乙型，丙型肝炎或愛滋病帶菌者
- 無酗酒或濫用藥物習慣
- 過往未曾接受上腹手術
- 非懷孕者
- 術前和術後均得到親人支援和照顧

任何人士祇要清楚明白以上事項及符合條件而且絕對自願者，肝臟移植小組都會考慮接受其為活體肝捐贈者。準捐贈者需要接受一系列的評估檢查，包括：

1. 健康評估 - 包括病歷篩檢
2. 驗血
3. 臨床心理學家評估
4. 電腦掃瞄顯影以評估左，右肝臟的大小

此外，有些準捐贈者還需要以下的身體檢查：

- 乳房造影或乳房超聲波檢查(適用於年齡四十歲或以上的女準捐贈者)
- 運動心電圖 (適用於五十歲或以上，或血脂測試偏高的準捐贈者)
- 肝動脈造影；或
- 皮外肝臟活組織檢查(如需要)

視乎臨床情況而定，一系列的評估檢查為時需半天至一星期。當中如有報告不正常，評估步驟可能立即終止。確定捐贈後，院方在某些情況下須根據香港法例向人體器官移植委員會申報，取得批准後方可進行手術。

## 捐贈者手術

根據接受者的體型和需要，捐贈者會捐出左側肝段（約25%）、左葉肝（約35%）或右葉肝（約65%）。捐贈者手術前一天會以輕瀉劑暢通腸道，手術前約6小時不得飲食。手術會以全身麻醉進行。若外科醫生懷疑捐贈者不適合捐出肝臟，他會在捐贈者近臍位置通過一個小割口進行內視鏡檢查；否則，他會在捐贈者身上開一個長切口。圖一、二顯示切口的一般位置和大約的長度。當外科醫生確定捐贈者的肝臟正常，適合進行捐贈手術，他會首先切除捐贈者的膽囊，並在膽囊管插管，以進行術中膽管造影術。切除膽囊的原因是它在肝臟表面的中間位置，妨礙外

科醫生切割肝臟。失去膽囊對捐贈者往後的生活質素並無影響。接著，外科醫生會把相關的出入流血管和膽管分離，然後因應不同的捐贈手術在肝臟表面進行切割。在所有相關的出入流血管被分離和結紮後，捐贈的肝臟部分會被切除，最後縫合身體切口。

手術需時約 8 小時，但有可能更長。捐贈者手術在下列情況下可能中止：

1. 發現捐贈者的肝臟異常，不適合作捐贈
2. 在接受者開腹手術後發現其不適合接受肝臟移植

瑪麗醫院的肝臟移植組對術前評估捐贈者和接受者是否適合接受手術非常謹慎，但開腹手術後的意外發現，有可能導致手術中止。即使捐贈手術沒有完成，捐贈者的腹部也會留下一個傷口。

捐贈者手術與接受者手術是同時進行的，這樣才能配合病肝切除和新肝植入的時間。

如有任何問題，請聯絡瑪麗醫院肝臟移植聯絡主任：

- 何姑娘，關姑娘，或植姑娘，電話：2255 5800
- 林姑娘，電話：2255 3634

\*\*\*\*\*完\*\*\*\*\*

如圖(一)



如圖(二)



如圖(三)



肥厚性疤痕

# Information to liver donor

## Living Donors

It is now technically feasible to remove part of the liver from a living person and transplant it to a patient who needs a new liver. The operation has been developed for children since 1989 and for adult patients since 1994. Depending on the size matching of the donor and the recipient, either the left side (about 35%) or the right side (65%) of the liver will be removed. The liver remnant in the donor will grow to its original size in 2 to 3 months' time.

In considering the option of living donor liver transplantation, you should *carefully balance the benefits for the recipient against the risks for the living donor.*

### Benefits for the recipient:

- Earlier transplantation before the recipient's condition deteriorates
- Avoid the risk of death while waiting for a cadaveric liver graft (40% overall and 90% for patients in intensive care unit)

### Risks for the donor:

- Pain, discomfort, and complications of the investigations and the surgical procedure
- Average hospital stay of 7 to 10 days or longer
- Average loss of work of 6 to 8 weeks or longer
- A permanent surgical scar (see photo 1 and 2), some may develop into hypertrophic scar (see photo 3)



- Complication rate of about 20% (wound infection, hernia, bleeding, bile leakage, bile duct problems, liver failure, infection, pneumonia and other medical complications)
- Possibility of death (estimated death rate of 0.1% for donating left lobe of the liver; 0.5% for donating right lobe of the liver)

### Points to note for the living donor:

- In order to avoid unstable liver function of unknown cause, the potential donor should stop taking Chinese herbal medicine, tonic medicine, supplements or any oral health products
- Within the first year after donor operation, in order to avoid damage to the liver function, the donor should not take any alcoholic drinks, Chinese herbal medicine, supplements or health food

### Who is a suitable living donor?

The most important criterion for a living liver donor is ***true voluntarism without any element of coercion***. Anyone who would consider acting as a living liver donor should understand clearly the following points

1. that the donor operation carries suffering and risks (complication rate of 20% and the possibility of death);
2. that the recipient operation may not be successful (average success rate 90%);
3. that his/her decision for donation should be out of his/her own wish without any external pressure from hospital staff or other family members;

4. that there is not and will not be any financial gain related to the act of donation; and
5. that he/she has the right to withdraw at any time without the need of giving any reason to do so.

Besides, to be considered an eligible candidate, the donor must:

- Be between the ages of 18 and 60
- Be in good physical and mental health
- Have a body mass index (BMI) less than 30
- Have a blood type compatible with that of the recipient
- Not a hepatitis B, hepatitis C or human immunodeficiency virus (HIV) carrier
- Not an alcoholic or a drug misuser
- Have no upper abdominal surgery before
- Not pregnant now
- Have a strong support system before and after the surgery

The liver transplant team will consider anyone who understands and meets the above criteria and has demonstrated true voluntarism as a potential living donor. This potential donor will then undergo series of evaluation process including:

1. Health assessment including medical screening
2. Blood tests
3. Clinical psychologist assessment,
4. CT scan liver with contrast and volumetry measurement,

Some potential donors may need:

- Mammogram or USG breast (for female age  $\geq 40$ )
- Treadmill (for donor age  $\geq 50$  or hypercholesterolemia)

- Hepatic arteriogram, and
- Percutaneous liver biopsy (if necessary)

Depending on the clinical situation, these procedures will usually take half a day to a week. If abnormal result is shown, the evaluation process may stop immediately. If potential donor is fit, in certain cases, the Law requires that an approval be obtained from the Human Organ Transplant Board before the transplant can be performed.

### **Description of donor operation**

Depending on the size and requirement of the recipient, the donor may donate the left lateral segment (about 25%), the left lobe (about 35%), or the right lobe (about 65%) of the liver. On the day before the operation, the donor will have his/her bowel cleared by laxative. He/she is not allowed to eat or drink for about 6 hours before the operation. The operation is done under general anesthesia. If there is suspicion of the donor's suitability for liver donation, the surgeon may perform a laparoscopy through a tiny umbilical wound. Otherwise, a long skin incision will be made. Please see photo 1 and 2 for the usual location and approximate length of the incision. After deciding the liver is normal and suitable for donation, the surgeon will remove the gallbladder and cannulate the cystic duct for operative cholangiography. The gallbladder is removed because it lies in the midplane of the liver and will interfere with the liver transection. The absence of the gallbladder in the donor will not affect his/her quality of life afterwards. Next, the relevant inflow and outflow blood vessels and the bile duct are freed. The liver is then transected at the plane depending on the type of liver donation. Finally, the donated part of the liver is removed

after all the relevant inflow and outflow blood vessels are divided and ligated. The wound is then sutured.

The duration of the operation is approximately 8 hours, but it may be longer. There are possibilities that the donor operation is stopped because of the following reasons:

1. The donor liver is found to be abnormal and not suitable for donation.
2. The recipient is found for various reasons not suitable for liver transplantation after laparotomy is performed.

The Transplant Team at Queen Mary Hospital is meticulous in preoperative assessment of the donor and the recipient for their suitability of transplantation, but there is always possibility of unexpected finding at laparotomy that deters the transplant operation. In this situation, the donor may have an abdominal wound even though he/she has not gone through the donor operation.

The donor operation is performed simultaneously with the recipient operation in order to match the time of removal of the diseased liver and implantation of the new liver.

If you have any questions, please contact the liver transplant coordinators, Queen Mary Hospital:

- Ms. Ho, or Ms. Kwan, or Ms. Chik; Tel.: 2255 5800
- Ms. Lam; Tel.: 2255 3634

\*\*\*\*\*End\*\*\*\*\*

Surgical wound photo

Photo 1



Photo 2



Photo 3



Hypertrophic scar

