The Psychological consequence of a bypass operation: all of the things about a heart bypass operation that your physicians were too busy to tell you!

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THE PSYCHOLOGICAL CONSEQUENCE OF A BYPASS OPERATION:
All the things about a Heart Bypass Operation That Your Physicians Were Too Busy to Tell You!

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PREFACE – THE BEGINNING

It was Saturday morning, about 2 AM. I awoke with a strange tingling feeling in my left arm -- almost as though I had hit my funnybone by accident. Well, it had been the Jewish holiday called "Simchat Torah" the night before when you dance around carrying the scrolls of the law, lift kids up to your shoulders, keep moving until you're exhausted and then come back for more... so it was a muscle spasm of some sort, I thought.

I took three Tylenol, went back to bed, but somehow it seemed to get worse. I've always found that a hot bath relaxes and soothes my muscles like nothing else, so I ran a hot bath, got in, and waited for the tingling to go away. It didn't; it seemed to get worse and to spread up to my shoulder now. I got out of the bath to meet the worried expression of my wife.

"What's wrong?", she said.

"I have a muscle spasm of some sort in my arm" , I said, "It seems to be getting worse. I'll just go to bed and try to sleep it off."

"It's a heart attack", she said.

"No, I don't think so. I don't feel any pain in my heart."

"Let's go to the hospital. Better safe than sorry."

And strange to tell, I agreed with her (so I may have myself suspected something was more wrong than a muscle spasm). We got our clothes on, I asked her to drive -- that really scared her; I never let her drive if I'm in the car -- and in five minutes we were at the Emergency entrance of the Genesee Hospital. I opened the car door,
the guard came out, I called to him, "I think I may be having a heart attack" and he said, "Don't move! Stay right there, sir".

And then things happened in a whirl. I was on a stretcher, wheeled in through the doors, needles in my arm, electrocardiogram recordings being taken, morphine being dripped in to kill pain, and the doctor saying, "Yes, you're in the middle of a heart attack right now." Into the Intensive Care Unit, blood pressure every two hours, blood samples, nurses in and out, everything so quick...

On Sunday, I felt pretty good; I even started to convince myself that perhaps they had been mistaken. At 8 AM a nurse asked me if I'd like to have some visitors; I said yes and one of my friends and his wife came in and talked with me for 20 minutes. When a nurse came in to take a blood sample again I said, "When will I be released?" She looked at me quizzically; "Your enzyme levels are still increasing; this means that estimates of heart damage can't be completed yet. I don't think you'll be getting out anytime soon."

So much for my idea that it might all be a mistake. My friends were pretty shocked and left quickly; I didn't blame them as I was pretty shocked myself. I found it hard to believe that it was happening to me -- true I was overweight about 30 pounds, true I hadn't been doing any exercise to speak of, true that I had been feeling a bit faint when walking up hills, but just let this whole thing blow over and I would correct all those things. I'd diet, I'd exercise, I'd watch out for myself, just let it blow over...

On Monday the cardiologist came to see me. He told me that the enzyme activity didn't look good, and he'd ordered an angiogram for the next day to see just how extensively blocked the coronary arteries were. If there was major blockage, then I'd have to be scheduled for a heart bypass operation.

By Tuesday morning, I was on the table in the examining room with a thin tube containing dye threaded up through my femoral artery (a blood vessel in the upper leg that leads directly to the heart). I had had an angiogram the previous year and on that occasion all I felt was a hot flush in the heart region when the dye was injected; there really was no pain but I wasn't much aware of what was happening either. This time, I was much more awake and aware of things -- perhaps I received a smaller dose of Valium or perhaps I was more nervous this time.
"Look here", the cardiologist said and I turned to look at a bank of video monitors. On the screen a dot of ink appeared in a flow of liquid and quickly dissolved. One thin line snaked off to the side, then disappeared.

"See that? That's the circumflex artery. 90% blocked. It should go all the way around but the line ends here. Now here..." and another drop of dye appeared, swirled, small lines radiating out, "That's the left main coronary artery. 70% blocked. Here..." drop swirling, dissolving, "that's the right coronary artery. 65% blocked". And so on.

I realized I was looking at my own beating heart; seeing for myself the blockages, the arteries, the blood flow! Crazy.

Twenty minutes later I was back in the Intensive Care Unit. He walked in and said, "Four, maybe five, arteries need to be bypassed. I'll see if I can set the operation up for Thursday." That afternoon I was taken by ambulance to a hospital in Rochester that specializes in bypass operations; new room, new nurses, same worries.

Wednesday my wife and I spent "quality time"; talking, laughing, discussing things. Yes, I did discuss "What if"; what to do in the event that I didn't come out of it and so on, but we were more upbeat than depressed and that was great. Friends and relatives visited too and the time passed fairly quickly.

Thursday at 10 AM I was wheeled into the operating room for a quintuple bypass. I have only praise for the cardiologist, the cardiac surgeon, the nurses, the hospital, etc. They were fine -- as far as caring for the physical aspects of my body was concerned.

What I found astonishing is that no one seemed to be concerned with the psychological aspects of the operation. Such things as:

What is the impact of the operation on a person who had always been a "take-charge" person and now finds himself dependent on others?

Are there personality changes that occur and if so what are they and what should be done when they show?

What pains can be expected to occur, in what areas of the body, to what intensity, and why? When is a pain a "good sign" of tissue mending and when is it a warning flare of infection or difficulty?
I found myself twisted by uncontrollable emotional effects that rationally I knew were strange, I found myself spending money on an unneeded Emergency Room visit at 9 PM for something that I could easily have self-diagnosed as normal healing if I had just known what the signs were. I found myself in crying jags; me, who last cried 18 years ago when my mother died.

Research has shown that understanding what to expect makes it easier to adjust to events. If I, a Psychology Professor who has taught psychology for 24 years found myself bewildered and uncertain, then perhaps it would be useful to others to share what I learned through my own experiences. And hence this booklet.

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LEARNING THAT YOU NEED A BYPASS

What reactions occur when you find out you need bypass surgery?

The most common emotion you'll experience is depression; you will often break into tears without warning or simply lie in the hospital bed silent and withdrawn. You may however, attempt to cover your depression by talking continually and seeming inappropriately gay and unconcerned. You may obsessively review your life in your mind, going over again and again what you could have done differently or what you will do differently if you come through the operation successfully. You may feel anger when you think of other people you know who exercise less than you do or who weigh much more than you do or who are less-caring people than you are and yet who have not needed bypass surgery. You may think that "It's just not fair" or "How could G-d have made this happen to me and not to those people". Most often you will try to give some instructions to your family, discussing your will, what should or should not be done if you don't survive, and what has to be done to put your affairs in order before you go to surgery.

What is the typical reactions of family members at this point?

Family members often use denial as a defense mechanism against the possibility of death of a loved one. When you’re depressed and cry, family members may turn their heads away, or try to distract you by relating unimportant incidents that have occurred to family
members recently. When you try to discuss what should be done if you die, your family members may refuse to let you finish the sentence saying instead, "Oh, don't be silly. You're not going to die so there's no sense in discussing it."

*Is this a good way to handle your emotional needs at this time?*

In general, no. It is better if they can offer emotional support to you and if they express their own feelings to you honestly. If they can say "I feel frightened also but I know that you're going to be OK. We love you and know that everything will go well" will give you more comfort than denying your emotions and theirs. Ask them to listen carefully when you talk about your wishes in the event you die; tell them that trying to distract you will only lead you to raise the issue again later. Tell them that if they love you they must listen to what you are saying. And remember, they also are facing emotional challenges that are unusual and difficult for them.

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**WHY DOES ANYONE NEED A BYPASS OPERATION?**

*What does the heart do?*

The heart is a giant pump whose function is to push the blood around the body. To live, all the cells in your body must get rid of carbon dioxide gas produced in their normal functioning and receive a fresh supply of oxygen to continue their work. To do this, the heart pumps blood to the lungs where the carbon dioxide in the blood is exchanged for oxygen. The oxygenated blood then returns to the heart where it is pumped to the entire body.

However, the heart also needs oxygenated blood for its cells to live, so small arteries (called coronary arteries) deliver blood to the heart cells themselves. If any of these arteries become clogged, the heart cells they supply will not get the oxygen they need to survive and will begin to die. The heart itself will then begin to lose its ability to pump and the person experiences pain, faintness of breath, dizziness, and other symptoms. What makes the arteries clog?

Arteries can clog for several reasons: a build-up of cholesterol within the artery because of what we eat; a narrowing of the arteries due to nicotine if we smoke; genetically some people are born with narrower arteries than others; and sometime illness leaves
invisible rough spots within an artery that serve as a focal point for a build-up.

_Why can't they just clean out the clogged arteries?_

There is at present no known method for safely removing cholesterol once it has been deposited on the artery wall. However, bypass surgery may not always be necessary to help heart problems; another technique often used is called "balloon angioplasty". A very thin tube is run up to the clogged heart artery. When the obstruction is reached, a tiny balloon is inflated which flattens the cholesterol against the artery wall and therby widens the artery. This is less expensive than a bypass and doesn't require a major hospital stay.

_Then why have a bypass operation at all?_

For single-vessel and some two-vessel coronary artery disease, balloon angioplasty is actually the preferred method. It does have some drawbacks though; in 1/4 to 1/3 of the cases the vessel re-blocks within six months of the operation and then the operation has to be repeated. It is also not indicated for significant left main artery disease as any re-closure of the artery might be fatal. Therefore, if there is blockage in three or more coronary arteries or in the main coronary artery, most doctors agree that what must be done is to bypass (physically go around) the clogged arteries, to give an alternative pathway for the blood to reach the heart cells that otherwise will die.

_How can they bypass the clogged arteries?_

Imagine you had a pipe in your house that had become clogged with rust so little water was getting through. One way to handle the situation would be to take a new piece of pipe, join it to the old pipe before the rusty section began and rejoin it after the rusty section. You'd leave in the original pipe (since it might cause more damage to try to remove it) but the water would be able to flow through the new clean open pipe as well as the old rusty one. That's precisely what they do in a coronary bypass operation.

_How many of the arteries will be bypassed in this way?_

That depends on how many are clogged; the cardiologist and the cardiac surgeon look over the angiogram and decide how many need to be replaced. The more replaced, the longer the
operation and the more chance that something might go wrong. On the other hand, there'd be no sense in not bypassing an artery that is 30% clogged and perhaps having to repeat the operation in a couple of years. There are five major branches of the coronary artery; most bypass operations involve three to all five of them.

Where do they get the "new pipes" to bypass the arteries?

There is a vein in each of your legs called the Small Saphenous Vein. This collects blood from cells in the leg and transports it to a collection point where it joins other blood collected from other veins and eventually is sent to the heart to be oxygenated. Fortunately, there are other veins that do pretty much the same thing; collect blood from the leg and carry it to collection points. When the surgeon needs a tube to use to bypass one or more coronary arteries, he removes part of this vein, cuts it to size, and uses it as the bypass artery; if he needs two or more tubes, he removes longer section of the vein from your leg. For all five coronary arteries, the incision will extend from your ankle almost to your groin.

Why don't they just use plastic tubes or a donor artery?

Our body has a built-in protection system called the immune system that causes it to fight against and try to destroy any foreign tissue or material that is introduced into the body. The immune system can be suppressed, but this requires very powerful drugs and leave the person open to many other infections. It is better by far to use the body's own tissue which won't be rejected than to introduce any foreign substance into the body. Also, • It is roughly the same size as a coronary artery. • Veins do not develop cholesterol deposits as do arteries. • Plastic tubes tend to develop blood clots. • The vein is not essential and can be removed usually without any long-term ill effects. Therefore, it is almost universally used as a replacement for bypasses.

What about eating and drinking?

Generally, eating is permitted through supper of the night before the operation, and drinking till midnight of that day. Food in the stomach needs time to digest and water to be absorbed into the body; the surgeons wish to avoid the possibility of vomiting during and after the operation when the digestive system has stopped. Partially digested food or remaining water could get into your lungs under those conditions causing difficulties.
What is actually done during the operation?

If you're squeamish, now is a good time to move to the next question! If not, in very crude outline, leaving out many finer points, here's what's done:

Step 1: The heart is protected by the breastbone and the ribs. To reach the heart and begin the surgery, your body is strapped down to the operating table.

Step 2: Your breastbone is cut through and lifted temporarily to the side so that your heart is exposed.

Step 3: Since fluid (blood, lymph, etc.) will begin gathering in the chest cavity as the bone is cut and the operation continues, a one-inch incision about four inches above the bellybutton and a tube is inserted to allow fluids to drain out throughout the operation.

Step 4: An incision is made in the leg, the Small saphenous vein is removed, and the incision is closed with "invisible stitches" (stitches that can't be seen from the outside).

Step 5: Your blood is switched to run through a "heart/lung" machine which will pump your blood through your body while removing the carbon dioxide and infusing oxygen, so that temporarily your heart and lungs are not needed to keep you alive.

Step 6: Once it is clear that the heart/lung machine is functioning well, your heart is electrically stopped so that the surgeon can begin work on it. Time is now extremely important.

Step 7: The actual bypass begins with the surgeon cutting off a piece of the Small saphenous vein of an appropriate size for the artery he is working on. He then sews one side of the vein to one side of the clogged artery and the other to a place after the clogged artery. He repeats this for each of the arteries that are being bypassed. The incision in the leg begins at the upper thigh and extends down the leg as far as necessary to produce the necessary veins -- in a quintuple (5 arteries) bypass, it reaches to the ankle.

Step 8: If the surgeon chooses, he may take the Internal mammary artery or mammary vein, free it from the smaller vessels
that it connects to in the chest wall, and use it in addition to or instead of using the Saphenous vein.

Step 9: After all sewing is completed, the heart is electrically restarted and the blood slowly fed back to your heart from the heart/lung machine. The surgeon carefully watches to see there are no "leaks" in the stitching of the arteries and no abnormalities in the heart-beats.

Step 10: If all is well, your breastbone is brought back into place and a wire is placed through the top of the ribs around the breastbone to hold it in place so that it can eventually grow together again.

Step 11: You are unstrapped from the table and placed in a Recovery Room often called a Coronary Surgery Intensive Care Unit. The tube draining fluids will be removed in twelve or so hours if all is well.

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After the Saphenous vein is removed, what happens to the blood that used this path to return to the heart?

The blood in the leg finds other pathways to return to the heart. In order to prevent the blood from pooling in the leg, you are told to wear an elastic stocking on that leg. This will force the blood upward as you walk and aid it in establishing new paths to reach the heart. Your leg may swell a bit during this process but the swelling normally goes down within a week or so.

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AFTER THE BYPASS

Can I have visitors in the Recovery Room?

Most hospitals allow only the immediate family into the Recovery Room. Although the person is aware of what is happening around him he is often unable to talk or move around and may appear "out of it". However, it is good to have the family members say encouraging things to the person, telling him several times that the operation was a success, that everything is going fine, that they love
him and will stay with him while he is recovering. This support will ease his mind even though he is temporarily unable to respond.

Where do you go after the Recovery Room?

From the Recovery Room you'll be placed in a regular room on the Cardiac Floor; there the nurses will help you as your body starts to repair the necessary damage done during the operation.

When will I eat and drink again?

The nursing staff will wait until they hear your stomach "grumble" before allowing you to have food or water. The sounds in your stomach give indication that the digestive system is more-or-less back on track and ready (and willing) to handle food and water again. This generally takes place between 24 and 48 hours after the operation is completed.

I was given a device with a tube and told to practice sucking air in while keeping a small ball between two lines. What's that about?

Anytime you lie down for long periods of time especially since you've been on a heart-lung machine that has breathed for you, there is a possibility that the capacity of your lungs for pulling in air may decline. This may result in shallow breathing that will not bring in enough oxygen to feed the cells of your body. To avoid this, you must train yourself to take deep breaths. The device helps you see the rate at which you are bringing in air and the amount of air you are inhaling so that you can retrain yourself to breathe deeply if you aren't presently doing so.

How is the best way to breathe deeply?

Fortunately, the best way to breathe correctly is not to raise your chest up (which would hurt after the bypass), but to pull your diaphragm downwards. In other words, you should breathe by forcing your diaphragm down as far as possible and then relaxing it to expel the used air. If you do this, your amount and rate of air input should increase and shallow breathing disappear.

How long do I have to use the machine?

As with everything, your doctor will tell you when to stop. In general, if you are breathing deeply and slowly on a regular basis
you no longer need to monitor your breathing and can stop using the device.

*What kind of medicines can I expect to receive after the operation?*

That of course depends on your cardiac surgeon and cardiologist. In general, though, you'll probably be given:

*SLEEPING PILLS*: Usually it is difficult to sleep well particularly during the first few days. All your normal sleeping positions may involve parts of the body that are painful to move. The sleeping pill helps you to ignore them.

*Pain-suppressants*: May be a prescription drug or may be some non-prescription drug like aspirin or Tylenol® or Excedrin®.

*Stool softeners*: Softens your stools so that you don't have to push to defecate which would cause pressure on your breastbone.

*BLOOD-THINNERS*: Prevents the blood from clotting in your leg while the body works out new routes to return the blood to the heart replacing that of the Saphenous vein which was removed.

You may also be given a suggestion to take vitamins, especially Vitamin C, Vitamin E and beta carotene, which appear to help build up your body's resistance to cardiac disease (although this is by no means certain).

*What is the difference between a pacemaker and a bypass operation? Can you need to have both done?*

Your heart has an internal clock that tells it when to start the electrical impulse that begins its pumping action. Sometimes the clock begins to miss a beat or to fire early or late. In each case, the pumping action may become defective. A pacemaker is an electronic device that prompts the heart to begin beating at the proper time. It has nothing to do with the arteries being clogged and therefore you may need a pacemaker whether or not you had a bypass operation.

*When do I go home?*

The normal time on the Cardiac Floor after a bypass ranges from four to seven days, depending on how the surgeon
assesses your recovery to be progressing. The actual time will depend on such things as your general health before the operation, the degree of caution that the cardiac surgeon feels is necessary, whether you have someone at your home who is able to take care of you, and many other details.

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**GOING HOME**

_How do I get home from the hospital?_

By the time of your release, you should be able to walk short distances by yourself. The hospital probably will insist on wheeling you in a wheelchair to the exit door for insurance reasons; from that point, most people are picked up in a car by family members and driven home.

_What are your emotions likely to be when you arrive home?_

Logically, you might expect yourself to feel profoundly grateful that you are alive. Humans are not logical creatures, however, and there are a multitude of emotions that you may feel and exhibit to others.

_What different kind of emotions are often shown?_

You might have "emotional storms"; angry, crying, screaming fits which may pass relatively quickly leaving you wondering what that was all about.

You might fall into a deep depression and keep saying things like "My life is over; things will never be the same."

Another common response is to swing emotionally from laughing to crying without warning; tears may suddenly spring to your eyes without your even consciously knowing why.

You may feel anger at small things; someone may mention retirement and you may scream "I'm not going to retire. My life is not over. No matter what you think, everything's going to be the same".

Regardless of how many of these emotions you experience, the most important thing to remember is that these changes are as natural and normal a consequence of the experience as the pains that are felt in the various areas of the body. Just as the pains will lessen and disappear with time, so will these emotions recede as your mind
adjusts to what must change and what can remain the same or even improve.

*How does your family react to these emotional outbursts?*

That's the question! You see, they may be experiencing conflicting emotions themselves!

They may be fearful, wondering how they will financially support themselves now that you are unable to work for a period of time.

They may be very uncertain of what the future will bring, and be unsure of what they should do to help you.

They may be angry at you especially if you have smoked or been overweight or haven't exercised, and feel that it is your fault that you had the coronary.

They may feel guilty for not urging you to stop overeating or overdrinking, or for thinking about finances when you might die, or feeling angry at you when you have just come through an operation.

In other words, they may be as emotionally mixed-up as you are.

*What then should be done?*

What's needed is understanding and love on the parts of both you and your family. When emotions are being discharged by one or the other, the other members must be supportive and not yell back or accuse either the patient or the family member of lack of concern or love. Be prepared for a week or two when things are working themselves out which may be trying to all concerned.

*I don't have any family members around. I live by myself. How will that affect everything you've been saying?*

It means that you have an extra burden. You will probably need help for at least the first week or two after the operation.

For the physical part of aftercare, if you have a relative or neighbor who is willing to come help out or if you can afford to hire someone to stay in your house to help you that will be good. If neither of these is possible, contact the Social Work Department in the hospital or in your community for assistance.
The psychological part may be harder. You will feel depressed and may not have anyone to help you get through it; you may feel lost, or useless, or ugly, with no one there to counteract those feelings. The best advice is to find a support group in your community (Mended Hearts in Rochester, similar groups in other communities), call them and explain the situation, and keep in phone contact with them until you can attend their meetings. Don't scoff; group support can be emotionally very powerful and helpful.

*What will be the most physically painful part of the operation?*

Strangely enough, it is not anything connected to your heart; it is the incision that was made in your leg to remove the Saphenous Vein. Depending on the number of arteries bypassed, the cut can run almost from your ankle to your thigh. The longer it is, the more painful it will feel. If you have a long incision (four or five arteries bypassed), the incision may be quite painful along its entire length; you may feel that it is infected.

*How can I tell if the leg incision is infected or not?*

There are four signs that a doctor will look for to tell if the incision has become infected:

1. During the normal healing process, the entire incision turns a hot pink color. If any area of the incision turns a bright red instead of hot pink, that is a sign of infection.

2. The entire incision should feel slightly warmer than the rest of the skin but not much warmer when you touch it; if there is an area that feels much hotter than the rest, that's a sign of infection.

3. There should be no pus or other matter seeping out of the incision, nor should any of the stitches have come apart revealing an open wound; if either of these things occur, that's a sign of infection.

4. Some swelling of the leg and ankle region is normal. If the leg swells excessively, that may also be a sign of infection.

Of course if in doubt you should consult your physician; but as a general rule, it's probably normal healing if the incision hurts quite a bit but is a uniform hot pink color, has a uniform heat over the
entire incision, and shows no pus or bursting stitches or excessive swelling -- take two aspirin and call in the morning...

**Why do I have to wear support stockings?**

The blood that normally is collected by the Saphenous Vein has to find alternative paths to get back to the heart. If there is no pressure on that area of the body, the blood might instead pool in the foot area, forming clots that could travel through the blood stream to the heart and cause another heart attack. The support hose helps limit swelling in the legs by mechanically compressing the outer veins. This also increase the flow of blood through the deeper veins and decreases the likelihood that you'll suffer from "phlebitis" (clot formation).

If you have three or less arteries bypassed, your surgeon may feel that just keeping your leg raised is enough to relieve the pressure and drain the blood correctly and you may not have to wear a stocking at all.

**The support stockings cause a lot of pain, especially at the top. What can I do about this?**

Yes, they are uncomfortable to wear and even painful. You can put some gauze or cotton between the top of the stocking and your incision to act as a buffer, but basically just grit your teeth and bear it. It's better than having blood clots. Raising your foot on a high stool when you sit also will relieve the pain.

There's a hole at the foot end of the support stockings that my toes keep slipping through. Why do they make them that way?

The company that makes the stockings puts the hole there so that people who have injured a toe can slip the injured toe through the hole and avoid squeezing it while getting the advantages of support for the rest of the foot. If it bothers you (and it bothered me a lot!) you can buy support stockings that don't have that hole.

**How long will it take until the leg incision is healed?**

You can expect the incision to continue to bother you for 8-10 weeks, although the maximum pain occurs up to about 3 weeks after the operation. The scar from the incision will never disappear completely.

**What's the next most painful thing?**
Sneezing or coughing. You will be astonished at the amount of pain one sneeze or one cough will produce! The reason is simple. Your breastbone was cut through to allow the surgeon to get at your heart. To allow the breastbone to grow together after the operation, the two halves must be put into close contact with each other. The surgeon does this by passing a wire through your muscle roughly in line with your nipple and about three inches closer to the breastbone and running the wire across to the same spot on the other side. This serves to anchor the two halves to one another. When you sneeze or cough, the sudden motion tends to pull on this wire and to drive the breastbone halves apart. Pain galore!!! Don't sneeze or cough if you can at all avoid it; if you develop a cold, taking a soothing cough/sneeze suppressant is probably a good idea (of course, ask your doctor first). However, there are times when you must sneeze or cough.

*What do you do then?*

Be sure to have a pillow nearby; grab the pillow to your chest and press in hard just before you start sneezing or coughing. It will help somewhat. Clasping your arms around each other will also relieve some of the strain on the wire and breastbone. A good laugh has the same painful effect for the same reason; it stretches the breastbone. Don't read David Barry during this stage of recovery.

*I feel a point of pain on each side of my chest. Is that from the wire holding together the breastbone?*

No, actually that's where they had to clamp the breastbone open to allow the surgeon to work on the heart. That will stay painful for about 4-6 weeks, particularly if you stretch that area by reaching for something overhead or to the side without turning your body.

*Why should I have pain lifting my arms above my head?*

When you are put on the operating table, your arms also were held back to get them out of the way. The arm muscles are strained in this position for the several hours the operation takes. Since the shoulder muscles are attached to the chest wall, anything that causes them to be stretched or to contract will pull on the chest and cause pain. The pain should lessen in a week or so.

*Why do I have trouble sleeping at night?*
Trouble sleeping may be due to several reasons:

Since your arms have been strained, if you normally sleep with your arm over your head you won't be comfortable doing this.

Since you have the leg incision, if you normally sleep with one leg over the other you won't be comfortable doing this either. Forcing yourself to try to sleep in unusual positions causes sleep difficulties. These will clear up as your arm strain disappears and your leg incision loses its pain.

You probably find yourself catnapping during the day. It's not unusual for people after bypass to take 3 or 4 naps during the day. The reason is that residue of a general anesthetic remain in the body for up to two weeks after an operation, leaving you feeling logy. Naturally, a lot of sleep during the day makes it less likely you'll sleep through the night. You may also find trouble sleeping if you have nightmares or recurrent thoughts that occur as you lie in your bed. It is not unusual to obsessively review again and again in your mind events connected to the heart attack.

What can I do about this?

Sitting and sleeping with a small pillow on your chest is a good idea to relieve discomfort. Actually, most of these problems will pass with time anyway and if you can ride them out without any medicines you're probably better off. If you can't, your physician may prescribe a sleeping pill or a tranquilizer as a temporary relief. It is extremely important that you tell your physician about any medications that you are taking for other conditions. Many medicines may by themselves be helpful but taken along with other medicines may cause confusion, disorientation, and even physical damage to the body.

Why am I cold much of the time? I need a blanket or a heater when I read even when others are comfortable with the room as it is.

Blood provides warmth to the areas of the body. If you have lost some blood during the bypass operation, your body will feel cold until your blood supply builds up again. After any operation, the temperature regulating system of the body becomes a bit erratic. You may have sweats as well as chills, feel too warm as well as too cold. Generally, the need for additional warmth will disappear in about 2-4 weeks.
What psychological problems can I expect to have?

There are a multitude of psychological problems that often occur after the operation, and forewarned is forearmed...

1. Nightmares: Some people have nightmares about the heart situation, particularly if it was a "close call" to getting help. The nightmares may include feelings of falling, or trying to escape from some horrible thing which is trying to get you, or being in danger and no one responding -- all of which are dreams of helplessness. There is little that can be done to stop these dreams, and it's by no means clear that it would be good to stop them if you could -- it may be the mind's way of coming to terms with the situation.

2. Lack of motivation: Feelings that nothing is worth doing, particularly things that you had been concerned with previously. There may be a lack of desire to get out of bed, or inability to decide for several minutes running whether to put on your slippers or your shoes, or not caring to open your mail. This will pass with time; it can be helped by having whomever is taking care of you insist on your getting dressed, insist on your opening your mail, and so on; in other words, prod you to do things that will tie you back into the normal world that you had temporarily left.

3. Secondary Gain: You may subtly sabotage you own recuperation process if the state of being sick has strong advantages for you. For example, if your job is a boring one and no one paid any attention to you, or if you were retired and had nothing to do all day that interested you, you may unconsciously enjoy the attention that you receive due to being ill and therefore without being aware of it work to extend the illness period to maintain the attention. (Note that I say "unconsciously"; if you do this purposely, that's a different story.)

4. Anger: You may experience bursts of anger that will surprise you. This anger may be directed at:
   * **Yourself** (why did I allow myself to get so fat and to eat the wrong foods?);
   * **Others around you** (why didn't my doctor pick up my heart problem at my last checkup before I had the attack?);
   * **Fate or God** (why did this have to happen to me? Joe smokes like a fiend; Jane must have a cholesterol count ten times what I have; Sam never does any exercise; why did it happen to me and not them?)
5. Depression: If you've rarely cried in your life before, be prepared to cry now. Almost all bypass persons fall into depression despite being assured by their doctor and lots of other people that their life will be the same or better than it was before the operation. You may cry because you feel that things will never be the same despite what people tell you, you may cry because some of your friends are so nice to you, you may cry because you try to do something you could always do and find you can't, or you may cry without knowing why you're crying -- you are watching some TV program and suddenly your eyes are full of tears.

6. Self-disgust: You look in the mirror and see the incision on your chest or you look down and see the incision on your leg, and you think to yourself, "Who would ever want to sleep with me now? I'm mutilated". Feelings of revulsion are quite common, particularly at the early stages of recuperation when the leg incision is crusty and scabby. The scabs fall off by themselves in about 4 weeks, the incisions heal (sometimes leaving visible scars, sometimes not), but in any case you have to adjust to the way you look and accept it, as will any partner with whom you have a half-way decent relationship.

What about sexual relations? Are they likely to trigger another attack? Are there any positions or acts to avoid?

Sexual relations uses about as much energy as walking up a couple of flights of stairs. When you can walk stairs without any problem, you can engage in sexual relations without concern. Obviously, your chest is going to be a sensitive area while your breastbones are healing, so tight hugging will be off your list for a while. In general, if it feels good it isn't bad for you.

My spouse is pushing me to have sex, but I just don't have any sexual feelings after the bypass. Is that normal?

The bypass may trigger many different psychological effects that can influence your sexual feelings in general, and for your spouse in particular.

You may find yourself lacking energy in the evening and thinking more of sleep than of sex.

You may fear that you are not attractive because of the scars and therefore reject your spouse before he/she has a chance to reject you.
You may have read or heard of someone dying during sex or having a second heart attack; although not consciously aware of it, you may harbor a fear that it could happen to you.

You may have had a decline of sexual feelings for your spouse before the attack yet felt obligated to have sexual relations; now that you're "sick" you have a "legitimate" reason for putting off getting together again.

All or any of these things may contribute to a decline in your sexual interest and lead you to express anger if your spouse brings up the issue.

**What should I do about it?**

Sexual relations is an important part of any intimate relationship and it is important to show your spouse affection through sex. If you're afraid of having sexual relations because you fear putting too much stress on your heart or because you fear being rejected due to self-disgust, having sexual relations successfully will clear that up quickly.

If you are too tired to have sex in the evening, try having sex in the morning or in the early afternoon instead.

Sometimes a change of sexual positions may be all that is needed to get things moving again. If you fear pressure on your chest region try side-by-side positions.

Perhaps what is needed is an extra effort on both your parts to renew the romance in the marriage -- perfume, sexy underclothing, arousing novels or videos, all are legitimate to stimulate sexual interest again.

If all of these fail, then sexual feelings may only be the tip of the iceberg. It could be that you need marital counseling to help rekindle the spark. Just as there was nothing wrong in going to a cardiologist when you had trouble with your physical heart, there should be no more shame or embarrassment in going to a marital counselor if you have trouble with your "psychological heart".

**Is it a heart problems to feel numbness in the breast region near my heart?**

No. You will feel numbness if you had the Mammary Artery moved (see Step 8 in the description of the bypass process). In the course of moving that artery, nerves had to be cut. Until they grow back, the area will feel numb. If you are a woman, wearing a brassiere will feel very strange: you can feel your right breast in its cup but may not feel your left breast at all or only partially. If a man, the numbness
will not feel quite as dramatic but it will still feel odd. The numbness should start to disappear in 4-6 weeks, but it may not totally disappear for a year.

*Is there numbness anywhere else in the body?*

Yes, the side of your leg will feel numb where the Saphenous Vein was removed since those nerves were cut also, but since we're not very sensitive to that part of our body anyway you may not even notice it.

*My doctor insists that I take a shower every day. Is there any special reason for this?*

There are several reasons why a shower every day during recovery is a good idea:

1. When you take a shower you are likely to examine your body. This will help you detect anything that might be going wrong early while it can be relatively easily fixed. Stitches can come apart, rashes can break out from medicines that have been prescribed, discharges can come from the place where the tube was placed in your abdomen, and so on. A careful examination of your body before a shower will help you catch them quickly.

2. You probably spent a lot more time lying down in warm places under blankets or sweaters or by a heater. Naturally, you perspire more in warm situations, and body odor can get offensive without you being aware of it.

3. Cleansing your body ensures that germs don't have a chance to build up in any of the areas where incisions were made; soap has a mild antiseptic action and helps prevent infection of these areas.

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**GETTING BETTER**

*I'm feeling better at this point; any cautions for me?*

Yes, don't overdo it. You should build up to exercise slowly. Walk a small distance to begin with, then each day extend it a bit further. If you feel tired, stop and rest; there is nothing that says
you must complete a distance on Tuesday just because you did it on Monday. The one sure thing is that there will be ups and downs in the recovery process. Don't get discouraged when this happens; it's usual and normal to feel on top-of-the-world on one day, and have aches and pains return on the next.

*Everyone mentions exercise but I don't like to do it. How important is it really?*

Very important. Exercise, stopping smoking if you currently do it, and good diet are the three most important things you can do to prevent a reoccurrence of a heart problem. Exercising doesn't mean lifting 200-pound barbells; walking, swimming, and arm and leg exercises at home are just as useful to maintain good health. An excellent way to make sure that you're getting the right type and amount of exercise is Cardiac Rehabilitation.

What is Cardiac Rehabilitation?

At the present time, there are three phases to Cardiac Rehabilitation:

Phase 1: Persons who feel quite weak after their bypass or who have other medical complications besides the heart condition should exercise only under constant supervision of a doctor in a medical setting. The exercises are carefully graded; they start with the simplest raising and lowering of arms and legs and very gradually go on from there, so that there's no danger of accidentally causing any additional medical problems.

Phase 2: After the doctor feels you're strong enough to leave Phase 1 you may enroll in Phase 2; some people may begin with Phase 2 if there is no contraindications or medical complications after the bypass. Exercise is done under the supervision of trained nurses rather than doctors, the level of exercise is much higher, and you're more responsible for regulating your own level of exercise than was the case in Phase 1.

Phase 3: Many YMCA's, Jewish Community Centers, and other organizations have formed groups of people who have had heart problems and who know they should exercise. These groups are generally led by rehabilitation counselors who individually evaluate the group members and set goals based upon the person's degree of
problem, physical fitness, and willingness to exercise. Some exercises are done by the group as a whole; others are done by the individual.

*Why not just do exercises alone at home?*

There are several reasons why group exercises might be better for you than exercising at home:

1. Things are often more fun when done in groups. What might seem tedious if done in the privacy of your home can be enjoyable when done among people who you have come to like and respect.

2. The counselors can make sure that you are doing just the right amount of exercise for that stage of your recovery. Too little and you won't get the advantage of exercising: too much and you might strain yourself.

3. There is an incentive to keep up the exercise with a group that doesn't exist when you exercise by yourself. There's a social cohesion that leads you to go even if the day is dreary and you don't feel like exercising, and that is important since you should make exercising as regular a part of your life as showering and eating.

*What about diet?*

You probably know everything that I could say about diet but I'll say it anyway. If you're like the average American you are overweight, eat too much cholesterol (meat, fried foods, butter) and saturated fats, and know it's wrong. Well, one of the good consequences of the bypass is that for several weeks you've probably had little appetite. You may already have dropped 10-15 lbs. just from eating (or not eating) the hospital food combined with loss of appetite. That's good; try to keep it up and perhaps even lose more weight.

*How can I do that?*

There are dozens of diet books around. However, the simplest way is to cut down on high cholesterol foods like meat, butter and eggs, and instead switch to vegetables and fruits. Try making one meal a day completely vegetarian, using no-cholesterol butter and egg substitutes. There are cook books that contains recipes for these kinds of items; buy one and experiment.
Another idea is to have a scale and a chart in your bathroom by the shower stall; every day just before your shower, weigh yourself on the scale and make a mark on the chart for the weight. Don't worry about daily fluctuations up or down; after a week or so you can see the tendency of the line. We have a psychological defense called "denial"; you may find yourself saying, "I went overboard yesterday. I'll just skip weighing myself today and do it tomorrow." Resist this; it is important to weigh yourself every day, and even if you loaded up one day it will even out over the week or month.

*What are the consequences if I don't exercise and diet?*

About one out of six bypass patients need a second bypass operation at some time in their lives. It is even more common to need a second operation if balloon angioplasty was performed rather than a bypass. The best way to avoid needing a second operation is to eat correctly, exercise correctly, and in general take better care of your body than you did in the past.

*How soon can I go back to work?*

There are so many factors that interact that only your doctor can tell you that. However, if your work is one that doesn't require much physical strength (for example, a teacher, secretary, or computer programmer) it is not unreasonable to expect to be able to return to work within 8 weeks after the bypass. If your work does require physical lifting, until your breastbone has healed well you should not return to work -- that may take 12-16 weeks.

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And that's about it. By the time you return to work or to your normal leisure activities if you are retired, you should feel at least as good as you did before the bypass. In all likelihood, you'll feel better than before the operation. Your heart is now getting sufficient blood for the first time in a long time, and you may find that you can do things that you haven't been able to do in a long time: ride a bicycle, walk up stairs without feeling stressed, or engage in sports activities that you had decided you wouldn't be able to do again.

You now have the world open to you again; use it well!