



# More than missing a limb

Preventing or dealing with back, hip, knee and shoulder problems



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Limb loss can lead to a variety of problems and impairments unless you take steps to prevent them. The absence of a limb may, for example, impair the mobility on the affected side, which can lead to an overuse, compensation or repetitive movement injury in the remaining sound limb or in another part of your body. Four areas that are commonly affected are the back, hip, knee and shoulder. And these injuries can really be a pain—both figuratively and literally.

## Back Problems

Because the back is so willing to “help out” during daily activities, it is easily injured. The back (usually the lower back) tries to compensate for decreased or abnormal motion of the legs during walking, and this additional stress is sometimes more than the back can handle.

If you use a prosthesis, it is crucial that you learn to walk properly with the limb. By making sure that your prosthesis fits properly and participating in gait (walking) training with your physiotherapist, you can help ensure that you walk in a way that minimises the strain on your back.

Trunk stabilisation and strength are important for everyone, they are even more critical for someone with a lower extremity amputation. A back that is stable and strong is much less likely to be injured.

Amputees who use wheelchairs can also develop back problems due to constant fixed positioning of the trunk, which can result in muscle tightness.

Maintaining good posture throughout the day, stretching your hip and trunk muscles, focusing on exercises for the lower stomach and back will help you avoid these problems.



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### Hip and Knee Problems

It is also fairly common for those with a lower extremity amputation to have hip or knee pain in their residual or sound limb.

Immediately after limb amputation, the body quickly attempts to decrease its use of the residual limb because of pain or apprehension. Unfortunately, this attempt to protect the residual limb can place increased strain on the sound limb.

When the amputee swings their prosthetic leg forward the muscle control is different to the sound limb, this can place additional strain on the hip and lead to injury. In addition, when they try to avoid putting weight on their residual limb to protect it when they walk, they often put increased weight on their sound limb. This additional weight can cause injury to their knee. Today, prosthetic limbs are made to be functional, not to be used as a crutch or an assistive device. Unfortunately, people who don't know how to walk properly with their prosthesis sometimes use it more like a weight bearing crutch.

Walking with good equal weight on both the sound and prosthetic leg will assist in decreasing hip and knee pain and help prevent more debilitating injuries. Physiotherapy to work on gait training and improving muscle balance can help you achieve a much more symmetrical walking pattern.

In addition to using your prosthesis properly, it is essential that you increase your stability and strength in the hip and knee

muscles in both your residual and sound limb. Good muscle control will assist you to use your prosthesis with less effort and reduce the strain on joints.

Amputees who use wheelchairs can also develop hip and knee problems due to the trunk and lower extremities being fixed in one position for a lot of the day, which can result in muscle tightness. Hip and leg range of motion exercises are important for those who walk and those who use wheelchairs and will help you decrease soreness and tightness in the joints.

### Shoulder problems

Overuse and repetitive motions generally cause most shoulder pain, and this pain can be initiated or exacerbated by an upper extremity amputation. Shoulder problems may occur as a result of increased use of the sound limb or altered or repeated motion of the residual limb during prosthetic use. The discomfort or tightness commonly felt between the lower shoulder, neck and upper back can be very problematic.

Overhead activities, whether performed daily or during the occasional "weekend painting project," can increase shoulder pain, especially if the individual has neglected stretching, strengthening and stabilisation exercises of the shoulder muscles, primarily the rotator cuff.

Stretching before and frequent breaks during upper body activities can assist in decreasing overall shoulder pain. In addition,

a slow progressive exercise program that does not increase pain during the exercise, but which may result in a feeling of muscle fatigue for one or two days following it, should aid in decreasing overall pain.

Amputees who use wheelchairs especially manual wheelchairs, should focus on shoulder and arm strengthening exercises as directed by your healthcare provider to assist in reducing pain that may have been caused by propelling your wheelchair. It is also important to maintain good sitting posture in the wheelchair, to enable you to propel the wheelchair more efficiently and to avoid injury to the shoulder.

### General information

Ideally, extremities should be used equally to keep your joints free from pain. Proper muscle function will help strengthen your muscles, prevent injury, and alleviate joint stress.

In addition, an active exercise program that includes stretching and strengthening will help prevent injury and allow good blood flow to maintain healthy joints. The key is to start slow and work your way up to performing daily activities and exercises that help reduce the pain in the part of your body that is hurting. Though people with amputations have an increased chance of having joint pain in certain areas, it can be prevented or dealt with through commitment to an active exercise program.



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### Prevention

Amputees who have no joint pain can do a variety of things to decrease the chance of further medical problems. The tips mentioned on the next page are a good beginning. It is important that you start listening to your body to get a good understanding of how it is holding up to your daily activities.

### Conclusion

Today, people with amputations have a better quality of life and better physical abilities than they did in the past, regardless of whether they are elite athletes or older people with diabetes who use a wheelchair.

Learning how to prevent or deal with back, hip, knee or shoulder pain is a crucial part of gaining as much independence as possible. Understanding that you can live without the constant fear of injury or constant joint or muscle pain is a good start. Doing something about it is the next step. You should contact your doctor or physiotherapist to help you establish a proper treatment plan for your specific concern. You should always consult with your doctor or physiotherapist before beginning any exercise program.

### Tips to Help with Joint Pain

- Stretch before any activity.
- Establish a good exercise program, especially one devoted to your problem areas. (Inquire about aquatic exercises, which can be easier on the joints).

- Be aware of your posture, whether you are at rest or active. Ask yourself questions like, "How's my posture? Am I standing up straight, or am I slouching, putting extra stress on my back? Where is my weight in standing? Is it on both legs equally?"
- Ensure you have a good understanding of the therapy you have received during your rehabilitation.
- Maintain a well-balanced diet, and inquire about a weight reduction diet with your doctor if you are overweight or obese. (Obesity is a major cause of weight-bearing joint pain)
- Understand that if certain exercises tend to increase pain while you are doing them or afterward, those exercises may be doing more harm than good. If you have this experience notify your therapist or doctor.
- Consult with your doctor about pain management options. Especially if you are dealing with severe or chronic pain. Don't just suffer in silence

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