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Non-Surgical Treatment Pathway

[Terry Kane](#), Registered Physiotherapist #1726 (Calgary, Alberta, Canada)

Note: The information that follows is for educational purposes only and is not a substitute for seeing a licensed healthcare professional face-to-face for a thorough physical examination and treatment recommendations.

Just because you have an abnormal x-ray or MRI, does not mean your symptoms are permanent or that you need to see a surgeon.

There are two categories of orthopaedic surgery;

1. Non-elective surgery where there is a medical condition which requires urgent surgery (some fractures).
2. Elective surgery where there is a medical condition, but the surgery can be scheduled in the future (joint replacement).

As a rule, elective surgery is considered the last option and **only considered if a patient has exhausted non-surgical treatment without improved function.**

This short article describes the stages in the non-surgical treatment pathway of musculoskeletal / orthopaedic injuries.

Step 1: See Your Physician

- The goals of seeing a physician are to;
 1. Rule out medical conditions that require urgent care (examples fractures, dislocations).
 2. To get an accurate and reliable clinical diagnosis as soon as possible.
 3. To start the most appropriate and effective treatment program as soon as possible.
- An accurate clinical diagnosis can only be made from a face-to-face physical examination – *it cannot be done over the phone or internet.*
- Depending on your complaints and physical examination, your physician may;
 1. Refer you for diagnostic tests.
 2. Refer you to a physiotherapist.
 3. Recommend use of a protective device.
 4. Recommend activity modifications at work, at home, or in sports.

Step 2: Protection

- It is important to realize that – *just because your pain has reduced* – does not mean your injury has healed or that it's safe to return to previous activities.
- Stage two consists of a period of protection at the site of injury.
- Protection at the site of injury allows early repair tissue to form and prevents accidental re-injury.
- Premature activity or exercise can result in re-injury and delayed healing.
- Protective devices such as casts, slings, braces, splints, and crutches are often used for a brief period to prevent re-injury.
- It is important to know that not all injuries require a protective device.
- Your physician or physiotherapist will determine if you require a protective device.

Step 2: Protection Cont'd

- The length of time that protection is needed depends on:
 1. The tissue that has been injured,
 2. The severity of tissue damage,
 3. The degree of blood flow to the injured tissue
 4. Your age and medical profile.

Your physician or your physiotherapist will determine how long you will need to protect your injured tissue before safely progressing to stage three.

Stage 3: Range of Motion & Early Strengthening

- Although protecting a joint can be helpful, prolonged protection can lead to joint stiffness as well as a loss in muscle strength (known as muscle atrophy)
- Stage three consists of gentle exercises to restore the joint range of motion and prevent loss of muscle strength.
- Exercises are performed carefully during this stage to prevent disturbing repair tissue at the site of injury.
- Your physiotherapist will prescribe safe and appropriate exercises *–based on your injury and stage of tissue healing.*

Stage 4: Restoring Muscle Strength

- Stage four consists of restoring full muscular strength and endurance – *without disturbing repair tissue at the site of injury.*
- Your physiotherapist will select safe and appropriate strength exercises based on your injury, symptoms, and stage of tissue healing.
- You will be encouraged to practice a home exercise program and told to return to your physiotherapist for updated exercises.

Stage 5: Restoring Neuromuscular Function

- Stage five consists of rehearsing neuromuscular motor skills or tasks.
- To allow our injury to heal, we tend to be less active while we wait.
- This period of inactivity can decrease how well we perform motor skills (lose our muscle memory).
- The goal in this stage is to restore the speed, accuracy and endurance in performing skills or tasks we need at work or in sports.
- Learning to walk, run or climb stairs are examples of motor skills we perform every day.
- Typically, the more we practice these skills, the better we perform them. (*“practice makes perfect”*)
- During this stage, your physiotherapist will design a safe and appropriate exercise program to improve performance of specific work or sports skills.

Stage 6: See Your Physician for Medical Clearance

- Stage six consists of seeing your physician for medical clearance before returning to work full duties and/or sports.
- Returning to work without medical clearance can result in delayed healing, chronic pain, and permanent disability – *that may not be correctable through surgery.*

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