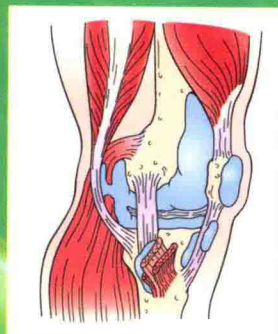


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SIXTH EDITION



David J. Magee

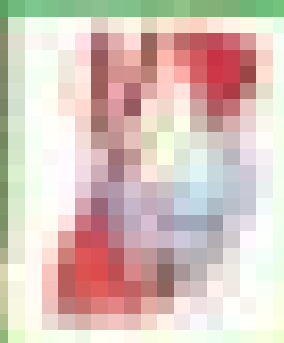


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SEVENTH EDITION



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ORTHOPEDIC PHYSICAL ASSESSMENT

SIXTH EDITION

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*To my parents,
Who taught me to pick a goal in life
and to take it seriously*

*To my family,
Bernice, Wendy, Shawn,
Dolly, Theo, Harry, Tommy, and Henry
My reason for being*



"Grandpa's Boys"

Preface to the Sixth Edition

This sixth edition is a culmination of a dream I have had for many years. When the first edition was published in 1987, I hoped at that time that I would be able to develop a series of books that would meet the needs of rehabilitation clinicians in the area of musculoskeletal conditions. With the assistance of the other editors, James Zachazewski, Sandy Quillen, and Rob Manske, and with a number of experts in their respective fields, my dream has become a reality with the **Musculoskeletal Rehabilitation Series**, with *Orthopedic Physical Assessment* being one of the four books in the series.

In this edition of *Orthopedic Physical Assessment*, information has been updated in all of the chapters as it has been previously in other editions. In addition, and in response to a number of requests, I have put the references back into the book and moved the tables on the reliability and validity of many of the special tests to the Evolve website, where they are available for those who want them. Reliability studies for testing show variability in their outcomes, so I decided to highlight key tests using different icons because the value of the tests have been demonstrated clinically and/or statistically that they contribute to determining what the problem is. Hopefully this will help students and clinicians determine which tests could be effective depending on the pathology being presented.

This book, as the title suggests, is about assessing for musculoskeletal pathology. It is not a pathology textbook. As part of the Musculoskeletal Rehabilitation Series, the companion book to *Orthopedic Physical Assessment* is

Pathology and Interventions in Musculoskeletal Rehabilitation, which goes into much greater detail on pathological conditions and their treatment. As “bookends” to these two books, *Scientific Foundations and Principles of Practice in Musculoskeletal Rehabilitation* provides information on healing of different tissue types, pain and aging, and the principles of different types of practice to treat different musculoskeletal tissue types; and *Athletic and Sport Issues in Musculoskeletal Rehabilitation* deals with more acute injuries and issues related to the more active individual, specific groups, and specific activities as they relate to sport.

Thanks to Elsevier, this edition is in full color. Although some black and white photographs still remain because of their value in demonstrating certain pathologies, I believe these colored additions greatly enhance the book. Not only have several new color photographs and line drawings been added to this edition, access to video clips on assessment and special tests are available on the Evolve website. These videos are identified throughout the book by a video icon .

I am grateful to the people who have provided input and constructive criticism to make the book better. The support of these people, my students, and family are greatly appreciated. The book is what it is because of their help and involvement.

David J. Magee
2014

Acknowledgments

The writing of a book such as this, although undertaken by one person, is in reality the bringing together of ideas, concepts, and teachings developed and put forward by colleagues, friends, clinicians, and experts in the field of musculoskeletal assessment. When the book was first published in 1987, I had no idea of how successful it would be. It has succeeded in becoming more than I could have ever imagined in seven languages.

In particular, for this edition, I would like to thank the following people:

My family, for putting up with my moods and idiosyncrasies, especially at 4 a.m.!

Bev Evjen, my irreplaceable developmental editor and friend. Without her help, encouragement, persistence, and eye for detail, this edition, as with the four previous editions and in fact the whole musculoskeletal rehabilitation series, would not be what it is.



My undergraduate, graduate, and postgraduate students from Canada, the United States, Brazil, Chile, and Japan who provided me with many ideas for revisions, who collected many of the articles used as references, and helped me with many of the tables, especially the reliability and validity tables.

The many authors and publishers who were kind enough to allow me to use their photographs, drawings, and tables in the text so that explanations could be clearer and more easily understood. Without these additions, the book would not be what I hoped for.

Ted Huff, my medical illustrator, whose skills and attention to detail have made a significant contribution to the success of *Orthopedic Physical Assessment* through four editions.

My photographers, Brian Gavriloff and James Tennant, whose photographic talents add immeasurably to the book.

Dr. Andrew Porter for many of the radiographic images he provided for the diagnostic imaging portions of the book.

Dr. Rob Manske for his support and ideas in making the book better and his involvement in the accompanying videos along with Dr. Judy Chepeha. They are true professionals and I am honored to call them friends.

My models, Tanya Beasley, Judy Chepeha, Paul Caines, Lee-Anne Clayholt, Carolyn Crowell, Michelle Cuthbert, Vanessa de Oliveira Furino, Devon Fraser, Ian Hallworth, Nathaniel Hay, Sarah Kazmir, Tysen LeBlanc, Dolly Magee, Shawn Magee, Theo Magee, Tommy Magee, Harry Magee, Judy Sara, Paula Shoemaker, Holly Stevens, Brandon Thome, Joan Matthews-White, and Yung Yung Wong. Your patience and agreement to be models for the many explanatory photographs and videos is very much appreciated.

My colleagues who contributed ideas, suggestions, radiographs, and photographs, and who typed and reviewed the manuscripts.

The people at WB Saunders (Elsevier), especially Jolynn Gower, Christie Hart, Rachel McMullen, and Brandi Flagg for their ideas, suggestions, assistance, and patience.

My teachers, colleagues, and mentors who encouraged me to pursue my chosen career.

To these people and many others – thank you for your help, ideas and encouragement. Your support played a large part in the success and completion of this book.

**David J. Magee
2014**



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Principles and Concepts

A musculoskeletal assessment requires a proper and thorough systematic examination of the patient. A correct diagnosis depends on a knowledge of functional anatomy, an accurate patient history, diligent observation, and a thorough examination. The differential diagnosis process involves the use of clinical signs and symptoms, physical examination, a knowledge of pathology and mechanisms of injury, provocative and palpation (motion) tests, and laboratory and diagnostic imaging techniques. It is only through a complete and systematic assessment that an accurate diagnosis can be made. The purpose of the assessment should be to fully and clearly understand the patient's problems, from the patient's perspective as well as the clinician's, and the physical basis for the symptoms that have caused the patient to complain. As James Cyriax stated, "Diagnosis is only a matter of applying one's anatomy."¹

One of the more common assessment recording techniques is the problem-oriented medical records method, which uses "SOAP" notes.² SOAP stands for the four parts of the assessment: Subjective, Objective, Assessment, and Plan. This method is especially useful in helping the examiner to solve a problem. In this book, the subjective portion of the assessment is covered under the heading Patient History, objective under Observation, and assessment under Examination.

Although the text deals primarily with musculoskeletal physical assessment on an outpatient basis, it can easily be adapted to evaluate inpatients. The primary difference is in adapting the assessment to the needs of a bedridden patient. Often, an inpatient's diagnosis has been made previously, and any continuing assessment is modified to determine how the patient's condition is responding to treatment. Likewise, an outpatient is assessed continually during treatment, and the assessment is modified to reflect the patient's response to treatment.

Regardless of which system is selected for assessment, the examiner should establish a **sequential method** to ensure that nothing is overlooked. The assessment must be organized, comprehensive, and reproducible. In general, the examiner compares one side of the body, which is assumed to be normal, with the other side of the body, which is abnormal or injured. For this reason, the examiner must come to understand and know the wide variability in what is considered normal. In addition, the

examiner should focus attention on only one aspect of the assessment at a time, for example, ensuring a thorough history is taken before completing the examination component. When assessing an individual joint, the examiner must look at the joint and injury in the context of how the injury may affect other joints in the kinetic chain. These other joints may demonstrate changes as they try to compensate for the injured joint.

Total Musculoskeletal Assessment

- Patient history
- Observation
- Examination of movement
- Special tests
- Reflexes and cutaneous distribution
- Joint play movements
- Palpation
- Diagnostic imaging

Each chapter ends with a summary, or *précis*, of the assessment procedures identified in that chapter. This section enables the examiner to quickly review the pertinent steps of assessment for the joint or structure being assessed. For further information, the examiner can refer to the more detailed sections of the chapter.

PATIENT HISTORY

A complete medical and injury history should be taken and written to ensure reliability. This requires effective and efficient communication on the part of the examiner and the ability to develop a good rapport with the patient and, in some cases, family members and other members of the health care team. This includes speaking at a level and using terms the patient will understand; taking the time to listen; and being empathic, interested, caring, and professional.³ Naturally, emphasis in taking the history should be placed on the portion of the assessment that has the greatest clinical relevance. Often the examiner can make the diagnosis by simply *listening to the patient*. No subject areas should be skipped. Repetition helps the examiner to become familiar with the characteristic history of the patient's complaints so that

unusual deviation, which often indicates problems, is noticed immediately. Even if the diagnosis is obvious, the history provides valuable information about the disorder, its present state, its prognosis, and the appropriate treatment. The history also enables the examiner to determine the type of person the patient is, his or her language and cognitive ability, the patient's ability to articulate, any treatment the patient has received, and the behavior of the injury. In addition to the history of the present illness or injury, the examiner should note relevant past history, treatment, and results. Past medical history should include any major illnesses, surgery, accidents, or allergies. In some cases, it may be necessary to delve into the social and family histories of the patient if they appear relevant. Lifestyle habit patterns, including sleep patterns, stress, workload, and recreational pursuits, should also be noted.

It is important that the examiner politely but firmly keeps the patient focused and discourages irrelevant information. Questions and answers should provide practical information about the problem. At the same time, to obtain optimum results in the assessment, it is important for the examiner to establish a good rapport with the patient. In addition, the examiner should listen for any potential **red flag** signs and symptoms (Table 1-1) that would indicate the problem is not a musculoskeletal one or a more serious problem that should be referred to the appropriate health care professional.^{4,5} **Yellow flag** signs and symptoms are also important for the examiner to note as they denote problems that may be more severe or may involve more than one area requiring a more extensive examination, or they may relate to cautions and contraindications to treatment that the examiner might have to consider, or they may indicate overlying psychosocial issues that may affect treatment.⁶

The patient's history is usually taken in an orderly sequence. It offers the patient an opportunity to describe the problem and the limitations caused by the problem as he or she perceives them. To achieve a good functional outcome, it is essential that the clinician heed to the patient's concerns and expectations for treatment. After all, the history is the patient's report of his or her own condition. The clinician should ask questions that are easy to understand and should not lead the patient. For example, the examiner should not say, "Does this increase your pain?" It would be better to say, "Does this alter your pain in any way?" The examiner should ask one question at a time and receive an answer to each question before proceeding with another question. Open-ended questions ask for narrative information; closed or direct questions ask for specific information. Direct questions are often used to fill in details of information given in open-ended questions, and they frequently require only a one-word answer, such as yes or no. In any musculoskeletal assessment, the examiner should seek answers to the following pertinent questions.

TABLE 1-1

Red Flag Findings in Patient History That Indicate Need for Referral to Physician

Cancer	Persistent pain at night Constant pain anywhere in the body Unexplained weight loss (e.g., 4.5 to 6.8 kg [10 to 15 lbs] in 2 weeks or less) Loss of appetite Unusual lumps or growths Unwarranted fatigue
Cardiovascular	Shortness of breath Dizziness Pain or a feeling of heaviness in the chest Pulsating pain anywhere in the body Constant and severe pain in lower leg (calf) or arm Discolored or painful feet Swelling (no history of injury)
Gastrointestinal/ Genitourinary	Frequent or severe abdominal pain Frequent heartburn or indigestion Frequent nausea or vomiting Change in or problems with bowel and/or bladder function (e.g., urinary tract infection)
Miscellaneous	Unusual menstrual irregularities Fever or night sweats Recent severe emotional disturbances Swelling or redness in any joint with no history of injury
Neurological	Pregnancy Changes in hearing Frequent or severe headaches with no history of injury Problems with swallowing or changes in speech Changes in vision (e.g., blurriness or loss of sight) Problems with balance, coordination, or falling Faint spells (drop attacks) Sudden weakness

Data from Stith JS, Sahrman SA, Dixon KK, et al: Curriculum to prepare diagnosticians in physical therapy. *J Phys Ther Educ* 9:50, 1995.

1. *What is the patient's age and sex?* Many conditions occur within certain age ranges. For example, various growth disorders, such as Legg-Perthes disease or Scheuermann disease, are seen in adolescents or teenagers. Degenerative conditions, such as osteoarthritis and osteoporosis, are more likely to be seen in an older population. Shoulder impingement in young people (15 to 35 years) is more likely to result from muscle weakness, primarily in the muscles controlling

Yellow Flag Findings in Patient History That Indicate a More Extensive Examination May Be Required

- Abnormal signs and symptoms (unusual patterns of complaint)
- Bilateral symptoms
- Symptoms peripheralizing
- Neurological symptoms (nerve root or peripheral nerve)
- Multiple nerve root involvement
- Abnormal sensation patterns (do not follow dermatome or peripheral nerve patterns)
- Saddle anesthesia
- Upper motor neuron symptoms (spinal cord) signs
- Fainting
- Drop attacks
- Vertigo
- Autonomic nervous system symptoms
- Progressive weakness
- Progressive gait disturbances
- Multiple inflamed joints
- Psychosocial stresses
- Circulatory or skin changes

the scapula, whereas the condition in older people (40+ years) is more likely to be the result of degenerative changes in the shoulder complex. Some conditions show sex and even race differences. For example, some cancers are more prevalent in men (e.g., prostate, bladder), whereas others occur more frequently in women (e.g., cervical, breast), yet still others are more common in white people.

2. *What is the patient's occupation?* What does the patient do at work? What is the working environment like? What are the demands and postures assumed?⁷ For example, a laborer probably has stronger muscles than a sedentary worker and may be less likely to suffer a muscle strain. However, laborers are more susceptible to injury because of the types of jobs they have. Because sedentary workers usually have no need for high levels of muscle strength, they may overstress their muscles or joints on weekends because of overactivity or participation in activity that they are not used to. Habitual postures and repetitive strain caused by some occupations may indicate the location or source of the problem.
3. *Why has the patient come for help?* This is often referred to as the **history of the present illness** or **chief complaint**. This part of the history provides an opportunity for patients to describe in their own words what is bothering them and the extent to which it bothers them. It is important for the clinician to determine what the patient wants to be able to do functionally and what the patient is unable to do functionally. It is

also essential to ensure that the clinician knows what is important to the patient in terms of outcome, whether the patient's expectations for the following treatment are realistic, and what direction functional treatment should take to ensure the patient can, if at all possible, return to his or her previous level of activity or realize his or her expected outcome.⁸

4. *Was there any inciting trauma (macrotrauma) or repetitive activity (microtrauma)?* In other words, what was the **mechanism of injury**, and were there any predisposing factors? If the patient was in a motor vehicle accident, for example, was the patient the driver or the passenger? Was he or she the cause of the accident? What part of the car was hit? How fast were the cars going? Was the patient wearing a seat belt? When asking questions about the mechanism(s) of injury, the examiner must try to determine the direction and magnitude of the injuring force and how the force was applied. By carefully listening to the patient, the examiner can often determine which structures were injured and how severely by knowing the force and mechanism of injury. For example, anterior dislocations of the shoulder usually occur when the arm is abducted and laterally rotated beyond the normal range of motion (ROM), and the "terrible triad" injury to the knee (i.e., medial collateral ligament, anterior cruciate ligament, and medial meniscus injury) usually results from a blow to the lateral side of the knee while the knee is flexed, the full weight of the patient is on the knee, and the foot is fixed. Likewise, the examiner should determine whether there were any predisposing, unusual, or new factors (such as, sustained postures or repetitive activities, general health, or familial or genetic problems) that may have led to the problem.⁹
5. *Was the onset of the problem slow or sudden?* Did the condition start as an insidious, mild ache and then progress to continuous pain, or was there a specific episode in which the body part was injured? If inciting trauma has occurred, it is often relatively easy to determine the location of the problem. Does the pain get worse as the day progresses? Was the sudden onset caused by trauma, or was it sudden with locking because of muscle spasm (spasm lock) or pain? Is there anything that relieves the symptoms? Knowledge of these facts helps the examiner make a differential diagnosis.
6. *Where are the symptoms that bother the patient?* If possible, have the patient point to the area. Does the patient point to a specific structure or a more general area? The latter may indicate a more severe condition or referral of symptoms (**yellow flag**). The way in which the patient describes the symptoms often helps to delineate problems. Has the dominant or non-dominant side been injured? Injury to the dominant side may lead to greater functional limitations.

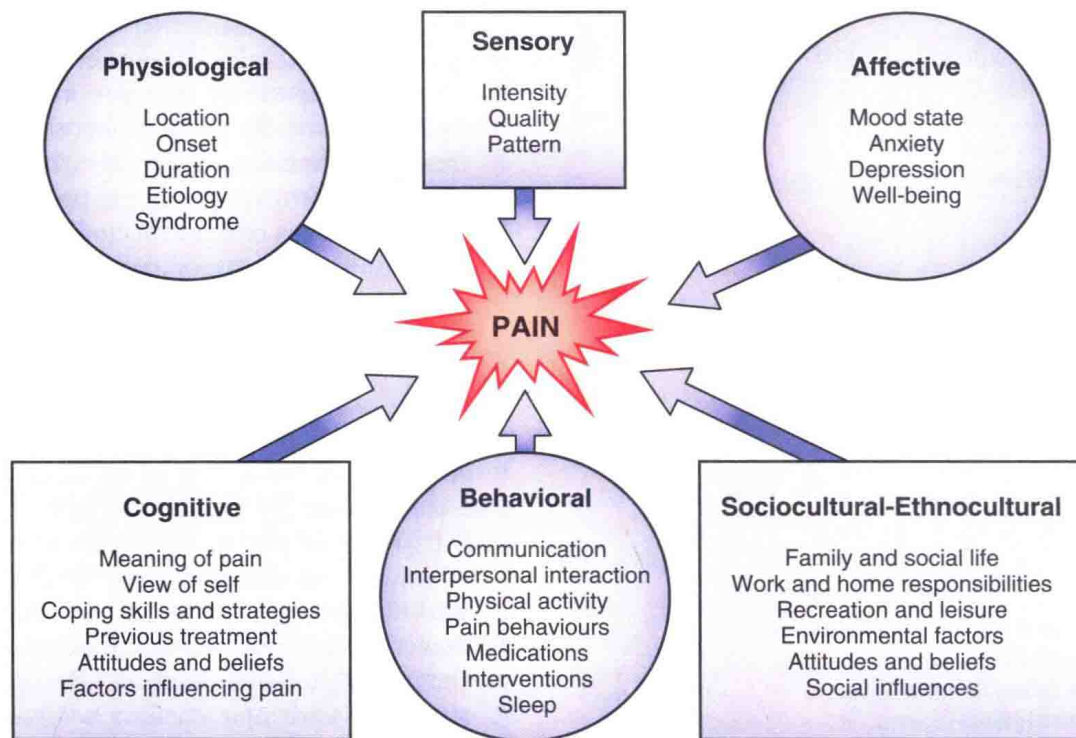


Figure 1-1 The dimensions of pain. (Redrawn from Petty NJ, Moore AP: Neuromusculoskeletal examination and assessment: a handbook for therapists, London, 1998, Churchill-Livingstone, p. 8.)

7. *Where was the pain or other symptoms when the patient first had the complaint?* Pain is subjective, and its manifestations are unique to each individual. It is a complex experience involving several dimensions (Figure 1-1).¹⁰ If the intensity of the pain or symptoms is such that the patient is unable to move in a certain direction or hold a particular posture because of the symptoms, the symptoms are said to be severe. If the symptoms or pain become progressively worse with movement or the longer a position is held, the symptoms are said to be irritable.^{11,12} **Acute pain** is new pain that is often severe, continuous, and perhaps disabling and is of sufficient quality or duration that the patient seeks help. Acute injuries tend to be more irritable resulting in pain earlier in the movement, or minimal activity will bring on symptoms, and often the pain will remain after movement has stopped.³ **Chronic pain** is more aggravating, is not as intense, has been experienced before, and in many cases, the patient knows how to deal with it. Acute pain is more often accompanied by anxiety, whereas chronic pain is associated with depression.¹³ When tissue has been damaged, substances are released leading to inflammation and **peripheral sensitization** of the nociceptors (also called **primary hyperalgesia**) resulting in localized pain. If the injury does not follow a normal healing pathway and becomes chronic, **central sensitization** (also called **secondary hyperalgesia**) may occur. Peripheral sensitization is a local phenomenon whereas central sensitization is a more central process involving the spinal cord and brain. Central

sensitization manifests itself as widespread hypersensitivity to such physical, mental, and emotional stressors as touch, mechanical pressure, noise, bright light, temperature, and medication.^{14,15}

Has the pain moved or spread? The location and spread of pain may be marked on a body chart, which is part of the assessment sheet (see Appendix 1-1). The examiner should ask the patient to point to exactly where the pain was and where it is now. Are trigger points present? **Trigger points** are localized areas of hyperirritability within the tissues; they are tender to compression, are often accompanied by tight bands of tissue, and, if sufficiently hypersensitive, may give rise to referred pain that is steady, deep, and aching. These trigger points can lead to a diagnosis, because pressure on them reproduces the patient's symptoms. Trigger points are not found in normal muscles.¹⁶

In general, the area of pain enlarges or becomes more distal as the lesion worsens and becomes smaller or more localized as it improves. Some examiners call the former **peripheralization of symptoms** and the latter, **centralization of symptoms**.¹⁷⁻¹⁹ The more distal and superficial the problem, the more accurately the patient can determine the location of the pain. In the case of referred pain, the patient usually points out a general area; with a localized lesion, the patient points to a specific location. **Referred pain** tends to be felt deeply; its boundaries are indistinct, and it radiates segmentally without crossing the midline. The term, referred pain, means that the pain

is felt at a site other than the injured tissue because the same or adjacent neural segments supply the referred site. Pain also may shift as the lesion shifts. For example, with an internal derangement of the knee, pain may occur in flexion one time and in extension another time if it is caused by a loose body within the joint. The examiner must clearly understand where the patient feels the pain. For example, does the pain occur only at the end of the ROM, in part of the range, or throughout the ROM?⁹

8. *What are the exact movements or activities that cause pain?* At this stage, the examiner should not ask the patient to do the movements or activities; this will take place during the examination. However, the examiner should remember which movements the patient says are painful so that when the examination is carried out, the patient can do these movements last to avoid an overflow of painful symptoms. With cessation of the activity, does the pain stay the same, or how long does it take for the pain to return to its previous level? Are there any other factors that aggravate or help to relieve the pain? Do these activities alter the intensity of the pain? The answers to these questions give the examiner some idea of the irritability of the joint. They also help the examiner to differentiate between musculoskeletal or mechanical pain and systemic pain, which is pain arising from one of the body's systems other than the musculoskeletal system (Table 1-2).¹⁸ Functionally, pain can be divided into different levels, especially for repetitive stress conditions.

Pain and Its Relation to Severity of Repetitive Stress Activity

- Level 1: Pain after specific activity
- Level 2: Pain at start of activity resolving with warm-up
- Level 3: Pain during and after specific activity that does not affect performance
- Level 4: Pain during and after specific activity that does affect performance
- Level 5: Pain with activities of daily living (ADLs)
- Level 6: Constant dull aching pain at rest that does not disturb sleep
- Level 7: Dull aching pain that does disturb sleep

NOTE: Level 7 indicates highest level of severity.

9. *How long has the problem existed?* What are the duration and frequency of the symptoms? Answers to these questions help the examiner to determine whether the condition is acute, subacute, chronic, or acute on chronic and to develop some understanding of the patient's tolerance to pain. Generally, **acute conditions** are those that have been present for 7 to 10 days,

TABLE 1-2

Differentiation of Systemic and Musculoskeletal Pain

Systemic	Musculoskeletal
• Disturbs sleep • Deep aching or throbbing • Reduced by pressure • Constant or waves of pain and spasm • Is not aggravated by mechanical stress • Associated with the following: ◦ Jaundice ◦ Migratory arthralgias ◦ Skin rash ◦ Fatigue ◦ Weight loss ◦ Low-grade fever ◦ Generalized weakness ◦ Cyclic and progressive symptoms ◦ Tumors ◦ History of infection	• Generally lessens at night • Sharp or superficial ache • Usually decreases with cessation of activity • Usually continuous or intermittent • Is aggravated by mechanical stress

From Meadows JT: Orthopedic differential diagnosis in physical therapy—a case study approach, New York, 1999, McGraw-Hill, p. 100. Reproduced with permission of the McGraw-Hill Companies.

subacute conditions have been present for 10 days to 7 weeks, and **chronic conditions** or symptoms have been present for longer than 7 weeks. In **acute on chronic** cases, the injured tissues usually have been reinjured. This knowledge is also beneficial in terms of how vigorously the patient can be examined. For example, the more acute the condition, the less stress the examiner is able to apply to the joints and tissues during the assessment. A full examination may not be possible in very acute conditions. In that case, the examiner must select those procedures of assessment that will give the greatest amount of information with the least stress to the patient. Does the patient protect or support the injured part? If so, this behavior signifies discomfort and fear of pain if the part moves, usually indicating a more acute condition.

10. *Has the condition occurred before?* If so, what was the onset like the first time? Where was the site of the original condition, and has there been any radiation (spread) of the symptoms? If the patient is feeling better, how long did the recovery take? Did any treatment relieve symptoms? Does the current problem appear to be the same as the previous problem, or is it different? If it is different, how is it different? Answers to these questions help the examiner to determine the location and severity of the injury.
11. *Has there been an injury to another part of the kinetic chain as well?* For example, foot problems can lead

to knee, hip, pelvic, and/or spinal problems; elbow problems may contribute to shoulder problems; and hip problems can contribute to knee problems.

12. *Are the intensity, duration, or frequency of pain or other symptoms increasing?* These changes usually mean the condition is getting worse. A decrease in pain or other symptoms usually means the condition is improving. Is the pain static? If so, how long has it been that way? This question may help the examiner to determine the present state of the problem. These factors may become important in treatment and may help to determine whether a treatment is

helping. Are pain or other symptoms associated with other physiological functions? For example, is the pain worse with menstruation? If so, when did the patient last have a pelvic examination? Questions such as these may give the examiner an indication of what is causing the problem or what factors may affect the problem. It is often worthwhile to give the patient a pain questionnaire, visual analog scale (VAS), numerical rating scale, box scale, or verbal rating scale that can be completed while the patient is waiting to be assessed.^{20,21} The McGill-Melzack pain questionnaire and its short form (Figures 1-2

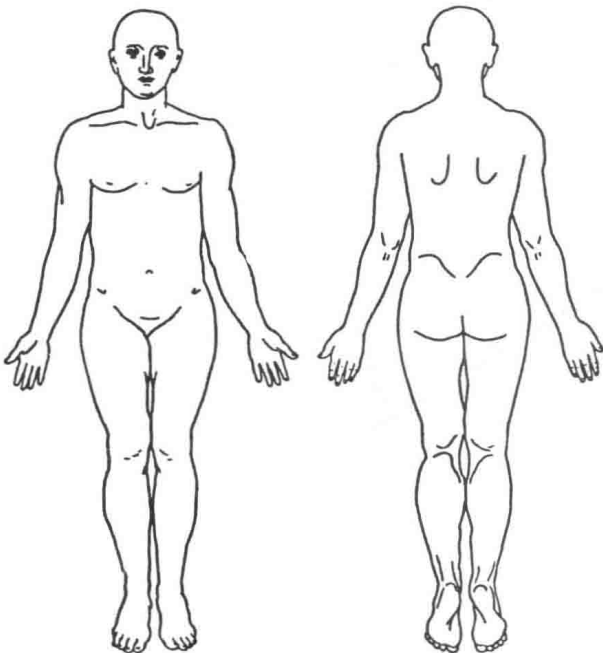
**McGill-Melzack
PAIN QUESTIONNAIRE**

Patient's name _____ Age _____
File No. _____ Date _____
Clinical category (e.g., cardiac, neurological, etc.): _____
Diagnosis: _____
Analgesic (if already administered):
1. Type _____
2. Dosage _____
3. Time given in relation to this test _____
Patient's intelligence: circle number that represents best estimate
1 (low) 2 3 4 5 (high)

This questionnaire has been designed to tell us more about your pain. Four major questions we ask are:
1. Where is your pain?
2. What does it feel like?
3. How does it change with time?
4. How strong is it?
It is important that you tell us how your pain feels now. Please follow the instructions at the beginning of each part.
© R. Melzack, Oct. 1970

Part 1. Where Is Your Pain?

Please mark, on the drawings below, the areas where you feel pain. Put E if external, or I if internal, near the areas which you mark. Put EI if both external and internal.



Part 2. What Does Your Pain Feel Like?

Some of the words below describe your present pain. Circle ONLY those words that best describe it. Leave out any category that is not suitable. Use only a single word in each appropriate category—the one that applies best.

1 Flickering Quivering Pulsing Throbbing Beating Pounding	2 Jumping Flashing Shooting	3 Pricking Boring Drilling Stabbing Lancinating	4 Sharp Cutting Lacerating
5 Pinching Pressing Gnawing Cramping Crushing	6 Tugging Pulling Wrenching	7 Hot Burning Scalding Searing	8 Tingling Itchy Smarting Stinging
9 Dull Sore Hurting Aching Heavy	10 Tender Taut Rasping Splitting	11 Tiring Exhausting	12 Sickening Suffocating
13 Fearful Frightful Terrifying	14 Punishing Gruelling Cruel Vicious Killing	15 Wretched Blinding	16 Annoying Troublesome Miserable Intense Unbearable
17 Spreading Radiating Penetrating Piercing	18 Tight Numb Drawing Squeezing Tearing	19 Cool Cold Freezing	20 Nagging Nauseating Agonizing Dreadful Torturing

Part 3. How Does Your Pain Change With Time?

1. Which word or words would you use to describe the pattern of your pain?

1 Continuous	2 Rhythmic	3 Brief
Steady	Periodic	Momentary
Constant	Intermittent	Transient

2. What kind of things relieve your pain?

3. What kind of things increase your pain?

Part 4. How Strong Is Your Pain?

People agree that the following 5 words represent pain of increasing intensity. They are:

1 Mild	2 Discomforting	3 Distressing	4 Horrible	5 Excruciating
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To answer each question below, write the number of the most appropriate word in the space beside the question.

1. Which word describes your pain right now? _____

2. Which word describes it at its worst? _____

3. Which word describes it when it is least? _____

4. Which word describes the worst toothache you ever had? _____

5. Which word describes the worst headache you ever had? _____

6. Which word describes the worst stomach-ache you ever had? _____

Figure 1-2 McGill-Melzack pain questionnaire. (From Melzack R: The McGill pain questionnaire: major properties and scoring methods. Pain 1:280-281, 1975.)