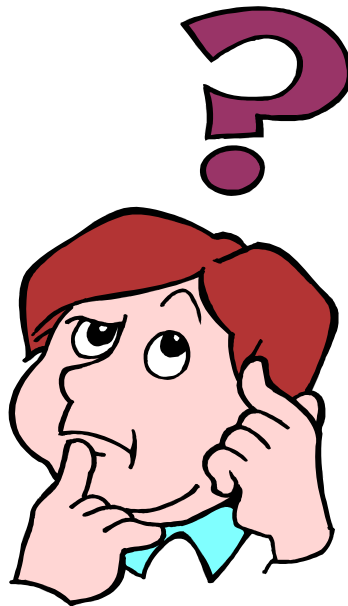


*Asking:*

**Constructing the Patient Focused,  
Searchable  
Clinical Question**



**Structuring the search  
for information and evidence**

# Introduction:

A clinical question is generally defined as a question pertaining to a health care provider's management of a patient or population of patients that is answerable through print or electronic resources. Clinical questions can be divided into two general categories: background and foreground questions.

**Background clinical questions** can usually be answered by information from textbooks, websites and hospital or office information resources such as patient history files. Background questions typically focus on general information needed or a specific concept (an intervention, an aspect of a disease or disorder, the determination of possible therapies). Background questions generally begin with a question root such as who, what, when, why, or how. A good background question might include: what are effective massage or manipulative therapies for carpal tunnel syndrome.

**Foreground clinical questions** usually seek to find relevant, sometimes individualized, evidence from primary research publications or secondary, synthesized publications built from primary research papers. Foreground questions typically include three to four component terms or key words focused on the patient, intervention, comparison to the intervention and outcome desired. of the PICO components

**The PICO question** is a convenient and conventional format to use when composing good clinical questions to direct an evidence-based search of research literature. PICO stands for Patient, Intervention, Comparison and Outcome; thus, there are four components of a good clinical question based on the PICO format.

The various components of the good clinical question can be thought of as **data fields** that will aid in the search for evidence and answers. The component terms can be used as key text words when using a search engine or database management system (DBMS – a “search engine” for databases). In addition, databases are often set up with searchable data fields, indexed terms and controlled vocabulary terms such as the National Library of Medicine's PubMed medical subject headings or “MeSH terms.”

Tailoring the clinical question's component terms will help define and refine searches of medical literature databases. Each component term can be used as a search term when searching the internet and web pages with search engines or databases using a database management system (DBMS).

Background questions are composed of fewer components, broader terms and return more numerous (and sometimes less relevant) results. Background terms can often be substituted with specific synonyms can found in the controlled vocabulary links of a database to produce a more specific search.

Foreground questions typically use three or four component terms. Foreground questions use more specific terms and often return fewer but more relevant results.

**Patient:**

Defining the patient characteristics is essential. A specific, narrow definition will provide very applicable evidence for that particular patient, but may limit the evidence too much so that important evidence is excluded from search results. A common error is to specify a particular narrow age range when it is unlikely to make any difference to the eventual outcome of the intervention. Race or sex can be essential to some health issues, but inclusion may limit the retrieved results. Be prepared to search with and without some terms and limits such as age, sex and race. Be specific without becoming too narrow. Consider key words and phrases that will allow a health care provider imagine the patient in front of you. Try not to include irrelevant or extraneous information or terms.

**Intervention:**

An intervention component may be broad or narrow. When seeking “best evidence,” several interventions may be specified in separate foreground questions. Broad phrases (“What is most effective?”) often lead to background questions. Searching for background information from reliable, high quality resources such as current textbooks, guidelines, reference handbooks and websites such as Natural Standards, Natural Medicine, AHRQ, and MedLine Plus can help narrow the intervention component so a good foreground clinical question can be composed from a background question. A specific intervention should suggest something that will influence the desired outcome.

**Comparison:**

The comparison component often is the “second half” of the intervention component. In therapy questions, intervention A might be compared to a well-known or standard therapy. For diagnosis questions, the comparison is often the “gold standard” diagnostic. Prognosis or etiology questions may include a factor which may affect the patient population in some way. In some cases, including symptoms (e.g., chronic cough, low serum iron) or exposure factors (e.g., second hand smoke) in this component may provide a way to narrow the search without excluding essential results.

**Outcome:**

The last component of the PICO format is the Outcome. The “outcome” is what the clinician hopes to accomplish. An outcome should be patient oriented (taking patient values, expectations, preferences and priorities into consideration), definable, measurable, and clinically relevant. In many cases, there will be more than one relevant, important outcome that depend on what aspect of care is needed or desired. Each outcome can be defined in a separate PICO question. Outcomes should not be vague (“feel better”) since vague phrases are not measurable and will not help define a search strategy for relevant evidence. Outcomes such as “decrease pain” or “decrease the time to return to normal activities” and “increase physical function” which can be defined and measured may restrict a search, but should be considered once again when evaluating results from a search (i.e., when evaluating the methods section of selected results for relevance to the PICO question).

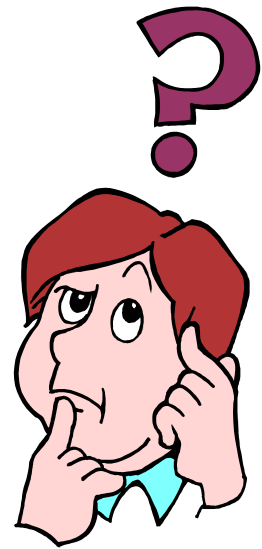
# Ask a focused, “searchable,” clinical question

**P** Patient, population, condition

**I** Intervention, (therapy, diagnosis, exposure)

**C** Comparison (alternative)

**O** Outcome



- Determines what information we need
  - Identifies what we know (patient scenario)
  - Identifies what we don't know (knowledge gap)
  - Identifies what we need to know
  - Background (general) information
  - Foreground (specific, current) information & evidence
  
- Establishes a framework for searching the medical and scientific literature for evidence
  - Structured search strategy
  - Use PICO component key word synonyms as “data fields” for a search
  - Use key word components to refine search queries

## Composing a good, searchable, clinical question

To compose a good clinical question, consider key criteria for Patient, Intervention, Comparison and Outcome.

### Background / broad:

What are the appropriate indications for [procedure X]?

### Foreground / more specific:

Does [procedure X] improve [certain outcomes] for [certain types of patients]?

OR

For [what types of patients] is there strong, (peer-reviewed) evidence that [procedure X] improves [certain outcomes]?

In some cases, in order to better define the clinical “knowledge gap,” background questions may be composed in order to focus an information seeking strategy that will enable the clinician to revise their question into a focused, foreground, evidence seeking clinical question. The clinician will typically use controlled vocabulary lists in medical literature databases such as the medical subject headings (“MeSH terms”) in PubMed or subject terms in EBSCOhost and CINAHL. Alternatively, the clinician can narrow the clinical question and thus the search bibliographic databases of the medical literature using compiled evidence websites such as

- Natural Standard ([www.naturalstandard.com](http://www.naturalstandard.com)),
- Natural Medicines Comprehensive Database ([http://www.naturalmedicines.com/member\\_home.asp](http://www.naturalmedicines.com/member_home.asp))
- The US federal Agency for Healthcare Research and Quality ([www.ahrq.gov](http://www.ahrq.gov)) and
- The US National Library of Medicine’s MedlinePlus ([www.nlm.nih.gov/medlineplus/](http://www.nlm.nih.gov/medlineplus/)).

To refine a clinical question in order to focus a search, broader component terms are replaced with more specific terms. Adding terms will also refine or narrow searches, resulting in fewer, more relevant results. Each intervention and outcome may be included in separate questions with an appropriate comparison component.

In the associated assignment, you will read several patient scenarios and compose appropriate background and foreground, evidence seeking clinical questions using the PICO format. These PICO questions will be used In future exercises where you will have the opportunity to construct and perform searches of the medical literature databases.

# The Background Question

## Used to find general information

- question root (who, what, when, why, how...)
- specific concept: intervention, comparison alternative disorder or disease, or aspect of the disorder

## Examples:

- **What are** [effective CAM therapies] for [mild to moderate depression OR seasonal affective disorder] in [adults]?
- **How** does [chiropractic therapy OR chiropractic manipulation] affect [mild to moderate depression OR seasonal affective disorder] in [adults]?
- **What are** [effective botanical supplements] as [alternatives for prescription medication] for relief of [mild to moderate depression OR seasonal affective disorder] in [adults]?
- For [adults] with [chronic (neck /back) pain], **what is** an effective [chiropractic / alternative therapy] to [alleviate symptoms of depression]?

## Where to Look for Answers:

- Look at compiled evidence websites with database management systems (DBMS) to focus your background questions
  - Evidence based summaries and systematic reviews
  - Synthesized information and evidence
- Try limiting your patient population (e.g., “adult, male, asthma”), then running a similar search without the limits (patients with “asthma”)
  - Most databases have fields where limits and filters can be set
  - Save your searches & search strategies
- Many databases have a specific “controlled” vocabulary (Medical Subject Headings – MeSH) that help define diagnosis, interventions and outcomes.
- Textbooks / reference handbooks
- Colleagues, faculty, mentors, professional societies

# The Foreground Question

## Used to find specific, current information

- Patient or population focused
- “Narrows” or focuses the search using more keywords and “data fields”
- Use compiled evidence websites and databases to find alternative terms for patient conditions, interventions, exposures and diagnostic tools
- Substitute synonyms from database controlled vocabulary (Medical Subject Headings in PubMed – MeSH, or “Subject Headings” other databases)
- Clinically relevant outcome

## Examples:

- For [adults with chronic (neck / low back/ lumbar / cervical) pain], does [chiropractic / conservative care / manual therapy / massage / acupuncture] [alleviate symptoms of depression / alleviate pain / increase range of motion / back to work] better than [surgery OR medication]?
- For [adults with mild to moderate depression], will [St. John’s Wort] alleviate chronic [(low) back pain] or [neck pain]?
- For [adults with mild to moderate depression], will [chiropractic] alleviate [(chronic) (low) back pain] or [neck pain]?

## Formatting:

- Is [light therapy] <sup>1</sup> as effective as or better than [prescription drugs] for the [alleviation of symptoms of mild to moderate depression OR SAD OR specific symptoms: insomnia, chronic back pain, mood swings] <sup>2</sup> in [adults] <sup>3</sup>?
  1. Use different therapies or the Complementary an Alternative Medicine limits in PubMed and EBSCOhost (and other databases)
  2. Perform single searches with Boolean operators (AND, OR, NOT – all capitals)
  3. Perform separate searches (save searches in database specific “accounts”)

# Asking Clinical Questions Topics & Patient Scenarios

Using these scenarios or a patient scenario of your own and the PICO form and format, write background and foreground structured clinical questions to begin a search for information and evidence.

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## 1. Musculoskeletal: Osteoarthritis

Patient: A 62 yo female patient has a history of bilateral (R>>L) hip osteoarthritis. Past medical history includes four children but otherwise is unremarkable. She was on rofecoxib (Vioxx) for pain management until discontinued by primary care physician (PCP). Her PCP wants to continue treatment with celecoxib (Celebrex), but she is concerned about possible cardiovascular side effects. She does not tolerate NSAIDs well (GI) and as not found any OTCs that alleviate her pain to any great extent. “Is there something ‘natural’ I can take or something I can do that might help to relieve the pain and stiffness?”

## 2. Diabetes

Patient: Jim, a 35 year old white male, former high school athlete, now busy father and salesman, was diagnosed diabetes. He struggles to control his weight and finding time to exercise. He is about 30 pounds overweight and slightly hypertensive. Recently he has been plagued by serious fatigue and generally poor health, making it extremely difficult for him to spend quality time with his family or keep up with his active life. She says she is tired of being tired, in pain and sick all the time. He has done some research on the internet and is determined to take control of his health. What are some of the most effective CAM therapies to control Type II diabetes and its complications?

## 3. Cardiovascular disorders: Hypertension / heart disease

Patient: Ellen, 55, a regular patient, has lowered her blood pressure from 145/90 to 135/85 by cutting back on smoking, better nutrition, and a regular walking routine upon your advice and encouragement. She is determined to lower his blood pressure to below 120/80, and to lose about 25 middle aged pounds.

## 4. Cardiovascular disorders: Hypertension

Patient: Dennis, a regular patient, has lowered his blood pressure from 145/90 to 135/85 by cutting back on smoking, better nutrition, and a regular walking routine upon your advice and encouragement. He is determined to completely quit smoking and lower his blood pressure to below 120/80. Because you were helpful in the past, he’s returning for more help. Plus, he’s got an article from the Tribune regarding alternative therapies for hypertension.

## 5. Cardiovascular disorders: Coronary Artery Disease

Patient: Jeff, a regular patient and 49 year old white male with angina pectoris and confirmed coronary artery disease, desires to take a greater control of his health issues. His general practitioner has recommended angioplasty and the patient is considering alternative options. He has been researching coronary artery disease on the internet and wants to consider other courses of treatment that are substantiated by solid research evidence.

## 6. Diabetes

Patient: Janet, a 37 year old African American, was diagnosed with adult onset diabetes 10 years ago. She struggles to control her blood sugar levels. She is plagued by serious fatigue and generally poor health, making it extremely difficult for her to spend quality time with her family or keep up with her active friends. She is about 30 pounds overweight and slightly hypertensive. She says she is tired of being tired, in pain and sick all the time. She has done some research on the internet and is determined to take control of her health. What are some of the most effective CAM therapies to control Type II diabetes and its complications?



## 7. Asthma

Patient: A 24 yo male African American presents with symptoms of asthma: recurrent breathing problems, feelings of restricted breathing, tightness in his chest and lungs, tendency to cough and wheeze. Symptoms occur more than twice a week, especially in the Spring and Summer but less than once a day. Nighttime symptoms occur more than twice a month. Exercise and activity aggravate the occurrence slightly, both indoors and outside. He reports strong respiratory and some food allergies. He tends to be slightly hypertensive. Weight is within normal ranges. He exercises vigorously (basketball, running, weight training) at least times per week. There is a familial history of allergy and asthma. He asks, "Is there a way to alleviate the symptoms without constantly using my inhaler?"

## 8. Allergy, hypersensitivity

Patient: Joe is a 10 yo, white, suburban, 5<sup>th</sup> grade soccer player. He has a history of chronic allergies "to just about anything living or that once lived," says his mother. Allergies and chronic respiratory illnesses run on both sides of his family. Joe has been using prescription allergy medications and a short term bronchodilator in a measured dose inhaler before playing soccer. Joe's mother is looking for ways to control Joe's allergy symptoms such as sneezing, nasal itching, itchy eyes and nasal discharge without additional prescriptions and would like to be able to drop the inhaler if possible.

## 9. Metabolic disorders & wellness: Hypothyroidism

Patient: Four months after having her second child, Allie, who has been coming to you through out her pregnancies, mentions that she has not been able to lose her pregnancy weight as well as she had previously. Other symptoms such as fatigue, dry skin and hair, sluggishness, and sensitivity to cold point to a likely diagnosis of "postpartum thyroiditis." Allie's mother and aunts all have hypothyroidism which started in their late forties and early fifties. Allie would rather not start on levothyroxine, and would like to speed up a possible recovery.

## 10. Prevention / wellness: Anxiety and other mental health disorders

Patient: 45-year-old female who is experiencing moderate depression, especially in the dreary winter. After surfing the web, she believes St. John's Wort or other supplement will alleviate her symptoms with less risk than conventional antidepressant medications.

## 11. Prevention / wellness: Depression and other mental health disorders

Patient: A current 25 y/o patient has been feeling very sad lately, but is not sure why. Little things like comments from her co-workers push her to tears. She has trouble sleeping, and when she does, she has nightmares which wake her. She is very concerned about her job, and making ends meet. She has become so concerned that she has avoided going out with friends to save money. Besides, she says, she "just doesn't feel like doing anything," but thinks she'd "better do something, because this is just not like me."

## 12. Prevention / wellness: Preservation of cognitive abilities, prevention of dementia in senior citizens

Patient: 70 yo female worried that her forgetfulness is a symptom of Alzheimer's or age-related dementia. She is a healthy height and weight, mildly hypertensive. She is a widow with 4 grown children and 7 grandchildren. Her parents lived until their late 90s, dying of congestive heart failure and stroke. She has mild osteoporosis and treats the stiffness and pain with occasional NSAIDs. History is otherwise unremarkable. What measures can she take to prevent age related dementia or the onset of Alzheimer's symptoms and to treat her current "forgetfulness?"

### **13. Prevention / wellness: Anxiety and other mental health disorders**

Patient: A current patient brings her 15-year old daughter to you for a consultation. The young woman says she suffers bouts of headaches, abdominal pain, some muscle pain, a rapid, pounding heart rate, a feeling of extreme tightness in her chest and a “panicky feeling that make it difficult to do anything or even think” when she is involved in stressful situations like school exams, looming deadlines for projects, job interviews, and some social situations. She and her parents would rather not resort to prescription drugs to control these feelings and responses because of the recent warnings of adverse reactions in adolescents.

### **14. Pediatric behavioral disorders: Including nutrition (e.g., diet, supplements) and manual therapies**

Patient: A patient brings her 7 year old son to you because his second grade teacher called him "hyperactive" and asked that he be evaluated; his teacher says he's fidgety, his mind wanders, and he requires reminders several times an hour to go back to his seat and keep his mind on his work. His pediatrician hesitates to label him with attention deficit disorder and prescribe well-known medications. His height, weight, and vital signs are normal. He has no significant history, has received all typical vaccines, and takes no supplements, etc. His mother read about the side effects of drugs for ADD and ADHD and would prefer to try life-style, diet and supplements first.

### **15. Pediatric headache:**

Patient: Jason, a 10 year old boy, has been coming home from school periodically over the past 3 months, complaining of pounding and sharp headaches. He runs his hands over the top of his head when describing the throbbing pain, stating that it starts at the back of his head and moves to his eyebrows and temples. He does not experience any flashing lights or light sensitivity, but says sounds bother him. Ibuprofen does not seem to help much and prescription drugs gave him an upset stomach.

### **16. Pediatric / adolescent sports medicine: Wellness - performance nutrition, training and therapy for the high school athlete (including supplements)**

Patient: Joseph is 15 and made the sophomore football team at Waubonsie Valley High School. He begins practice the first week of August which means he'll deal with 90 degree, high humidity days starting at 7:30 am full of sprinting, strength training, agility and technical drills for several hours per day. Joseph will rotate between halfback (receives and runs the ball, blocks and gets tackled) and full back (more blocking) even though he is average height and weight for his age. [[http://en.wikipedia.org/wiki/American\\_football](http://en.wikipedia.org/wiki/American_football)] Joseph and his Dad are pretty excited. His Mom is more reserved and ready to help Joseph prepare and main his top physical wellness while keeping up his grades. She also knows her son is more likely to listen to your advice and program than to her advice, and is willing to bring Joseph in regularly. Based on recent research, what would you include in a training and wellness program for Joseph?

### **17. Pediatric / adolescent sports medicine: Wellness - performance nutrition, training and therapy for the high school athlete (including supplements)**

Patient: Kara is 16 and a Varsity Cross Country runner. She has some respiratory allergies and bouts of asthma symptoms after long runs. Practice is everyday after school and includes running and strength exercises. She has meets at least twice per week on Tuesdays and Saturday mornings. She has pain and stiffness in both knees, but says her left knee is particularly painful. Kara's goal is to run and place at State. At 5'6' and 117, Kara carries a full college prep academic load. Based on current research, what would you include in a training, fitness and therapy program for Kara?

## 18. Rheumatoid syndrome and rheumatoid arthritis

Patient: A 48-year-old man diagnosed with rheumatoid arthritis 6 six months ago presents to clinic complaining of pain and swelling in hands and feet, interfering with normal daily activities and exercise. He has a history of respiratory allergies such as sensitivity to cigarette smoke, animal dander, and Spring and Fall pollens. His PCP recently recommended prednisone and methotrexate, but the patient is wary of side-effects and life-long medication. The patient expresses frustration with the inflammation, swelling, pain and life-style limitations because he had been doing very well the past few months. All vital signs are normal otherwise, eliminating infection. There is no history of familial cardiovascular disease, hypertension or hyperlipidemia. He would like to supplement the prescribed medicines with natural supplements, exercise or other therapies to alleviate symptoms and possibly future joint damage.

## 19. Infertility and pregnancy:

Patient: 32 y/o female and her 33 y/o husband have been trying to become pregnant for 3 years. The couple is getting anxious about their inability to conceive. They are willing to try almost anything, but hesitate at fertility drugs because of the possibility of multiple children.

## 20. Colic / Infant wellness

Patient: A patient brings in her 3 week old infant in for advice. The mother describes the baby as “colicky,” with loud, rhythmic, incessant crying, stretching and kicking her legs and some gassiness. While she seems worse in the evening, the crying and stretching continues all day. Sometime the infant refuses to eat or stops nursing “early.” She isn’t losing weight, but she isn’t growing as fast as her now 3 year old brother did. She also seems to like to be held only in a few, specific positions. Their pediatrician thinks “this will pass.” Your patient would like to make sure she is doing all she can for your new patient, baby Emma.

## 21. Gastrointestinal - Irritable Bowel Syndrome (IBS)

Patient: A healthy, active 33-year-old male who travels frequently for his job as a sales representative was diagnosed with constipation-predominant irritable bowel syndrome (IBS) in his late 20s. Over the past year, the IBS has increased in severity, resulting in cyclical constipation and associated abdominal spasms every 3 to 6 weeks. Until recently, he was able to control his symptoms by carefully managing his diet, maintaining a high fiber intake and avoiding foods that trigger his symptoms. The IBS has begun to interfere with his work productivity, because he must take time off every few months. He has tried lactulose as a laxative, and he has increased his bran fiber intake, but there has been no improvement.

The physical examination reveals a healthy, young man with a body mass index of 26. The cardiovascular and respiratory examinations are normal. His workup at the time of diagnosis by a gastroenterologist included colonoscopy and other laboratory tests to exclude other bowel pathology. There are no bowel symptoms suggestive of peptic ulcer disease. Similarly, there are no "red flags" or systemic symptoms, such as weight loss, that would suggest the presence of other chronic diseases. The abdominal examination, on deep palpation, reveals slight tenderness over the large bowel, mild distension, and an absence of masses. The rectal examination is normal, test results for occult fecal blood are negative, and the blood cell count and metabolic panel are within normal limits.

The mental status examination is normal, with no symptoms of depression and no recent major life stressors, other than a heavy workload. He has a history of 1 depressive episode at age 24 when attending graduate school. Treated over a 6-month period with a selective serotonin reuptake inhibitor (SSRI), he has not had a recurrence.

He is seeking control of his symptoms, and prefers to try dietary, nutritional and lifestyle measures before resorting to medications. What are some options for improving his symptoms?

## 22. Gastrointestinal - Irritable Bowel Syndrome (IBS)

Patient: a 44-year-old woman with diarrhea-predominant IBS that was diagnosed a year ago after she underwent a complete gastroenterologic workup to exclude other pathologies. Her symptoms are persistent, and this causes her

inconvenience at work, limits her social activities, and affects her ability to perform daily functions. Because of her IBS, she leads a sedentary lifestyle.

She has tried an anxiolytic for the abdominal pain and loperamide for the diarrhea, but the abdominal distension, bloating, and painful spasms continue. She takes fiber in various forms, including Metamucil® and wheat bran, but the fiber supplements have little effect on the diarrhea. She admits that life is stressful and has been in counseling for a few months. Her anxiety is not at the point where her therapist has suggested medication. The patient prefers not to start prescription medication for anxiety or stress at this point, figuring controlling IBS symptoms would help her tremendously.

### **23. Musculoskeletal: Low back pain, sciatica**

Patient: You have received a referral for a 38-year-old male client with chronic low back pain. He sustained his injury at work and is employed as a plumber. Acting on the advice of his long-time primary care physician, he notes he is exploring surgery as well as conservative care alternatives – “whatever will help me get back to work and allow me to keep working until I’m an old man.”

### **24. Musculoskeletal: Chronic pain**

Patient: A 30 year old female presents with idiopathic scoliosis. She has internally rotated right shoulder, winging of the right scapula, and rib hump of the right, mid thoracic area. Past medical history reveals no trauma or present illness. She has constant pain that is worse while driving and sitting for extended periods of time. Prone mid and upper thoracic adjustments give the patient temporary, symptomatic relief. Your patient states, “I am tired of the constant ache.”

### **25. Musculoskeletal: Knee injury / pain**

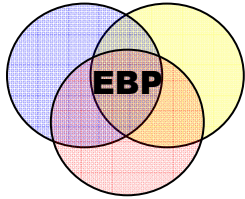
Patient: A post-menopausal, diabetic female aged 54 says she “twisted” her knee while jogging through the park. There is little swelling or bruising, but walking at a brisk pace causes severe pain. The pain interferes with many regular activities including shopping, and climbing stairs. Sitting or lying down alleviates the pain for the most part. She spends most of the day sitting at her desk, but cannot turn her chair and body with her feet to reach other parts of her desk. She must stand up carefully, her hip is “slightly sore” since she stands on one foot to alleviate pain while standing, and she tends to limp slightly. Although she desires to return to exercise as quickly as possible, “Jogging is out of the question,” she states.

### **26. Musculoskeletal: chronic low back pain**

You have received a referral for a 38-year-old male client with chronic low back pain. He sustained his injury at work and is employed as a plumber. In addition to your standard clinical care, you are trying to decide if this man would benefit from using a Transcutaneous Electrical Nerve Stimulation (TENS) unit, acupuncture and other CAM therapy, and from attending a series of group education sessions on chronic pain management.

### **27. Musculoskeletal: Carpal tunnel syndrome, repetitive motion injury**

Patient: Rachael, a 28 year old female has been experiencing symptoms of carpal tunnel syndrome: a gradual increase in frequent burning, tingling, or itching numbness in the palm of her right hand and the fingers, especially the thumb, the index and middle fingers. At times her fingers feel swollen, although there is little or no observable swelling. She wakes up with some stiffness and numbness. Symptoms worsen during the day so that the pain radiates up her arm. She reports that her hand and wrists feel weak and “like they don’t work right.” Although she can feel differences in sharp or blunt touches as well as hot and cold, her grip is weaker in her right hand (she is right handed).



## PICO Form

Topic: \_\_\_\_\_

	<b>Patient, population, problem</b>	<b>Intervention</b>	<b>Comparison</b>	<b>Outcome</b>
<b>Consider</b>	Describe relevant patient characteristics or problem similar to your patient's. Be brief, clear, precise, narrow. Define alternatives.	Determine possible prognostic factors, causes. Background: broad ("what is most effective?") or Foreground / narrow, specific therapy	Alternative therapy. Consider a limiting factor.	Clinical outcome or goal: what do you want to accomplish? What effect do you hope to have? Cure, function, diagnosis; cost, quality of life? Be specific. Think "key words."
<b>Question components</b> <b>Key words</b>				
<b>PICO</b>				

## **Where to Look for Answers:**

### **Access:**

- Informational, Professional or Educational Websites  
Compiled Evidence Websites and Databases  
Current secondary, peer reviewed scientific information
  - “synthesized,” summarized
- Databases of current primary (“original”) research papers and scholarly literature
  - Basic science
  - Clinical science