

PAIN MEDICINE: “USING THE TOOLS OF THE TRADE”

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Because care-givers who care for patients in pain have different perspective on pain, have different knowledge bases or skills to diagnose chronic pain conditions and have differing capabilities or differing “tools” in their own personal tool box, patients with chronic pain must know that, depending on who they see to manage their pain, they may get different diagnoses and different treatment care plans. There is a saying that is appropriate here, “**IF YOU ARE A HAMMER, EVERYTHING LOOKS LIKE A NAIL.**” Patients should also know that not all physicians know all of the possible “tools of the trade” to treat patients in pain. Some physicians only practice non-invasive pain management and some physicians only offer invasive therapies. Some physicians offer both non-invasive and invasive therapies in their practice. It is the purpose of this article to introduce patients in pain to both invasive and non-invasive therapies and to offer the concept of a **PAIN TREATMENT CONTINUUM**, which is this author’s attempt to place these therapies in logical sequence. **Figure #1** is a listing of therapies by invasiveness.

Tools of the Trade:

Non Invasive Therapies	Invasive Therapies
Exercise	Medication management
Psychologic pain management	Anesthetic blocking techniques
Physical and occupational therapies	Spinal cord stimulators
Biofeedback	Implanted pumps for pain
Chiropractic manipulation	Peripheral nerve stimulators
Nutritional therapy	Surgery
Massage therapy	Chemical, surgical or thermal nerve destruction
Psychotherapy	
Complimentary medicine	

Figure #1 This figure lists possible therapies for pain management, “the tools of the trade”, to be used in pain management listed in order of increasing levels of invasiveness. This list might not be all inclusive and might also raise some controversy as to which therapies are more invasive than others.

Non-invasive therapies include psychologic pain management, rehabilitational pain medicine through physical and occupational therapies and alternative pain relieving therapies such acupuncture, acupressure, meditation/relaxation, nutrition, Qui-gong, etc. The purpose of psychologic pain management is to increase awareness and understanding of the painful experience, promote activity that is not harmful or activating of the painful experience, increase relaxation time and promote behaviors that are healing and reduce behaviors that perpetuate the chronic painful experience. Interventional pain management includes medication management of pain, nerve blocking with local anesthetics, destruction of painful nerves, implantable devices for pain control such as morphine pumps or spinal cord stimulators, and surgery for pain.

Medicines used for pain control include short and long-acting narcotic medications, non-narcotic pain medications, muscle relaxants, antidepressants, and anticonvulsant medications. Although not approved by the Food and Drug Administration (FDA) for pain control, the antidepressants and anticonvulsion medications do have pain relieving properties, especially in patients with pain emanating from the nervous system, or neuropathic pain. These antidepressant and anticonvulsant medications are called **adjuvant medications**. Non-narcotic pain relieving medications include Tylenol and the non-steroidal anti-inflammatory agents (NSAIDs), such as aspirin or ibuprofen, etc.. Narcotic pain medications are either short or long-acting and if patients are in constant pain it is much preferred to use long-acting narcotics instead of short-acting narcotics. Sometimes other medications are used for pain control and these agents include: steroids, anti-hypertensive medications, oral local anesthetics, etc.

Thinking Algorithmically: Using a Pain Treatment Continuum:

An algorithm is a step-by-step plan to achieve a goal. We present to you here an algorithm for the logical use of pain treatments that suggests using more non-invasive, less costly therapies before resorting to more invasive and more costly therapies. We call this algorithm a **PAIN TREATMENT CONTINUUM**.

In the early 1970's, because of the growing awareness by the public that it was not acceptable for patients dying from disease such as cancer to die with unrelieved pain and suffering, the World Health Organization (WHO) provided guidelines for pain management for the dying patient. These guidelines are still used today by most caregivers who treat dying patients in pain. **See figure #2**

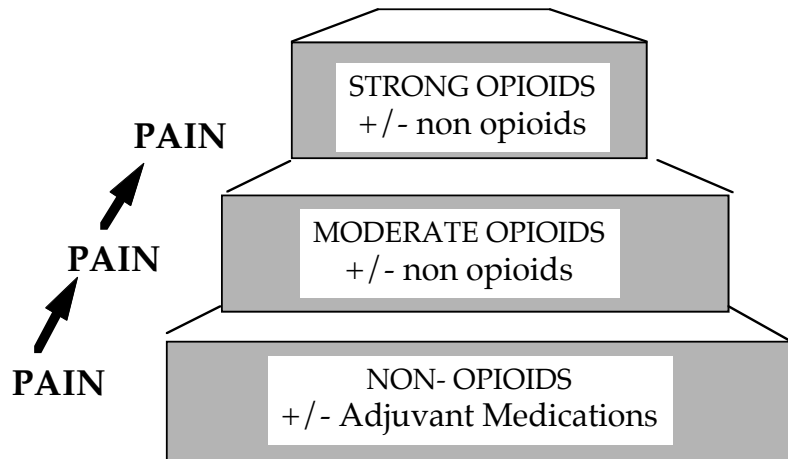


Figure 2: World Health Organization (WHO) Narcotic Ladder: The WHO guidelines suggest steps for pain control. For mild pain, the guidelines suggest using non-narcotic pain reliever with or without an adjuvant medication (medications that do have pain relieving properties not approved by the FDA for pain control.) If pain persists the guidelines suggest adding a mild narcotic to the above therapy. If pain still persists after the addition of a mild narcotic the guidelines suggest going to a strong narcotic.

The WHO guidelines group cancer related pain by severity into mild, moderate, and severe pain and suggest matching the strength of pain medications to the severity of the pain complaint of the patient. Non-narcotic medications such as the NSAIDs and adjuvant medications (antidepressants and/or anticonvulsant medications) are suggested for mild to moderate cancer pain. Weak to moderate strength narcotics such as codeine containing medications such as Tylenol with codeine and hydrocodone containing medications such as Vicodin, Lortab, or Norco, in combination with non-narcotic and adjuvant medications are suggested for moderately severe cancer pain. Potent narcotics such as morphine, together with non-narcotics and adjuvant medications, are suggested for strong and severe cancer related pain. Approximately 50-80% of patients dying of cancer, depending on the type of their pain, should have their pain well controlled using these WHO guidelines.¹

Because there are also therapies to choose from for the treatment of chronic nonmalignant pain (pain from disease that is not life-threatening), it is suggested by this author that these patients, as in cancer patients, be treated using an **PAIN TREATMENT CONTINUUM** such as the one suggested by the WHO for cancer patients. Obeying a time-honored medical principle of using more simple, less invasive, and least costly interventions before using more invasive, more costly therapy, it is suggested that a plan of treatment (algorithm) that uses therapies in this order be used. According to this suggested **PAIN TREATMENT CONTINUUM**, least invasive and least costly therapies, are used before more costly and invasive therapies. This plan suggests either using one therapy at a time or more than one therapy at a time, abandoning those that do not work, and advancing to more invasive therapies, as in climbing a ladder. **See figure #3.**

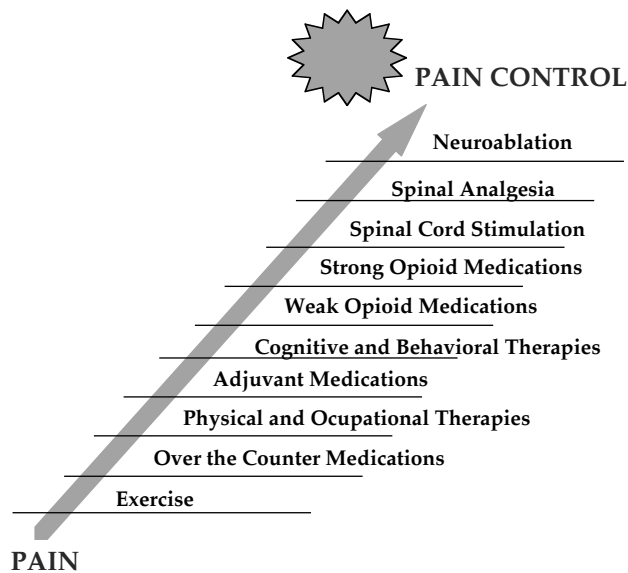


Figure #3 The Pain Treatment Continuum is a suggested algorithm (step by step plan) for the appropriate use of possible pain management therapies. These therapies are listed in order of increasing invasiveness. These therapies can be used one at a time or more than one can be used at one time..

An example of using more than one suggested therapy, at one time, is the patient who continues to have back and leg pain after back, spinal surgery who is on aspirin, Vicodin, an antidepressant such as Elavil, who is participating in physical therapy and a

psychologic oriented pain management program. This patient may also have had an epidural steroid injection in his/her back to allow her/him to participate in physical therapy.

When All Else Fails:

Because the WHO “ladder” to pain control only provides good pain relief in only 50-80% of patients depending on what type of pain that they have, and because interventional approaches do work, we also propose the addition of interventional strategies to the WHO ladder as a “fourth rung of the ladder.” See figure #4.

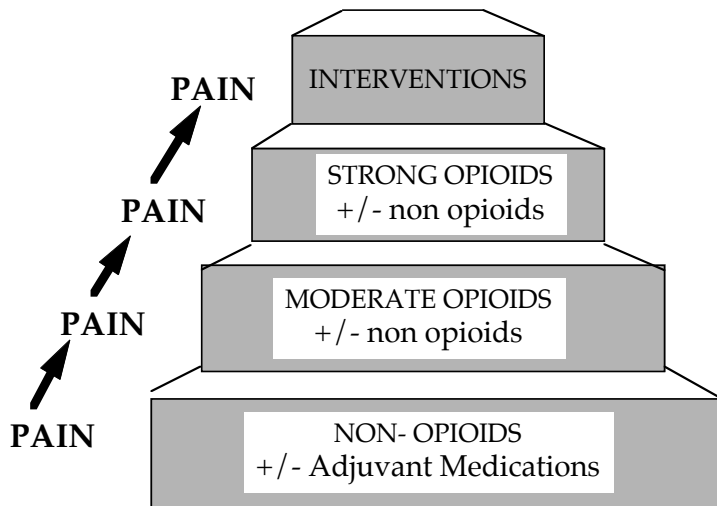


Figure 4: The “fourth rung of the ladder” Because the WHO ladder approach only provides adequate pain management to only 50-80% of patients suffering from pain of terminal illness, and because interventional approaches do work, we propose the addition of invasive therapies to the WHO ladder as a “fourth rung of the ladder.”

Interventional strategies, as last resort interventions, “**when all else fails**”, include, for examples, anesthetic nerve blocks, epidural steroid injections, continuous spinal pain relieving techniques with implanted catheters and external pumps, neurodestructive techniques and implantable devices for pain such as spinal cord stimulators and morphine pumps.

This introduction to using algorithms (step-by-step plans) for pain control is only to introduce you to the concept. Please discuss using these PAIN TREATMENT CONTINUUMS with your physician. Treatment plans should be individualized for each patient because each and every one of you are different and special.

i World Health Organization, Cancer Pain Relief, 2nd ed., World Health Organization,
eds., Geneva, 1989.