**Nonpharmacological Intervention**

Appropriate use of **nonpharmacologic therapy** as an adjunct to pharmacologic agents can enhance pain prevention, management, and treatment. These methods of pain control typically are used for chronic pain but may also be appropriate adjuncts to treatment of acute pain. **Many basic lifestyle changes can reduce pain.** For example, controlled exercise and weight management are used to decrease joint stress and improve muscular support of the joints.25,26 Although home care varies with the condition, even simple environmental accommodations can benefit the pet and prevent or reduce discomfort. These include easy access to litter boxes (no hood, ramp, or stairs and a low-entry side); soft bedding; raised food and water dishes; nonslip floor surfaces, especially in food and litter areas; baby gates to prevent access to stairs; modified access to outdoors, especially in hot or cold weather; and appropriate warm-up prior to exercise And lastly, positive, consistent interaction with the pet can improve the animal's demeanor.

**Quality in-hospital care** may include the use of soft padded bedding during illness or surgery to enhance comfort, warm water or air blankets to decrease pain and facilitate recovery from anesthesia, reduction of patient anxiety by minimizing the length of a hospital stay, and gentle and respectful patient handling. It is also beneficial to decrease visual and auditory stimulation and separate dogs and cats within the hospital setting. Shy or anxious cats should have a box or similar structure in their cage to provide a hiding place.

An array of medical approaches can be grouped under the umbrella of "complementary and alternative medicine." Use of some of these methods is controversial, in part because of the lack of scientific study and published evidence about them. Additional research is needed to elucidate both the benefits and uses of complementary and alternative medicine. Of all the complementary procedures used for pain management, acupuncture is most supported by evidence; its use in humans is endorsed by the National Institutes of Health.27

If **alternative medical approaches** are used, it is essential that the procedure or therapy be performed with the full and informed consent of the client and under applicable state laws. Where training or certification is available, the modality must be administered by individuals trained or certified in its use and limitations.b As with administration of pharmacologic agents, patients receiving alternative modalities should be periodically reassessed to determine the efficacy of treatment.

**Nutrition** is one of the most popular of "alternative" modalities. Nutraceuticals, such as glucosamine and chondroitin, may decrease joint inflammation and assist in cartilage repair, although a large meta-analysis conducted in human medicine indicated the need for further study.28,29,30,31,32 There is evidence that omega-3 fatty acids decrease inflammation in cartilage of dogs with osteoarthritis, and dietary intervention can improve clinical signs in osteoarthritic dogs.33,34,35 Chondroprotective agents such as polysulfated glycosaminoglycans have been demonstrated to modify the progression of osteoarthritis by maintaining chondrocyte viability via the inhibition of cartilage degradation pathways.36,37 At this time, most of the research that has been conducted to assess the roles of nutraceuticals and chondroprotective agents has been conducted in dogs. However, there are anecdotal reports of improved function in cats receiving chondroprotective agents.

**Rehabilitation therapy** (i.e., the application of physical therapy techniques to animals) may be used to return a patient to normal function following surgery or trauma or as a part of a long-term strategy to manage pain. Rehabilitation includes techniques such as cryotherapy, heat therapy, massage, stretching, passive range-of-motion exercise, hydro-therapy, therapeutic exercise, use of dryland or underwater treadmill, and strength-building.

Additional therapies that fall under the rehabilitation umbrella include low-level laser, ultrasound, and transcutaneous electrical nerve stimulation (TENS). Some veterinary practices have incorporated these therapies on the basis of extrapolation from human medicine and anecdotal reports of their success. Currently there is insufficient published evidence of efficacy in dogs and cats to make specific recommendations about the use of these therapies.

Although **chiropractic intervention** occasionally has been used to treat chronic pain, chiropractic methods potentially can cause injury through the use of inappropriate technique or excessive force. Currently there are no clear standards for when chiropractic intervention should be applied or who is qualified to use chiropractic manipulations. Practitioners who have received formal training in animal chiropractic manipulation (typically 100–140 contact hours) report positive results in their patients experiencing chronic pain. There is currently insufficient published evidence of efficacy in dogs and cats to make specific recommendations about the use of chiropractic intervention.

**Pharmaceutical and nonpharmaceutical intervention can be combined for pain management**. For example, a cat with osteoarthritis is given both drug therapy and a reduced calorie diet for weight loss. The cat also may benefit from acupuncture, massage, physical rehabilitation techniques, and care in handling. In the home, the pet's quality of life can be enhanced by such environmental modifications as soft bedding, ramps or steps that allow the cat to use its favorite places, nonslip floor surfaces, and food dishes raised to the height of the cat's elbow.

Source: https://www.aahanet.org/Library/PainMgmt.aspx