



AOTA Approved Provider #4023



Course Title: Therapeutic Modalities 114

Course Subtitle: Thermal Agents: Hot and Cold

Course Description:

Therapeutic Modalities 114, Hot and Cold, is a 4- hour course designed for the clinician using thermal agents, both heat and cold, in practice. This course reviews basic physical principles and physiological effects of applying heat and cold on patients. Various indications, contraindications, precautions, application techniques and documentation issues will be covered in this comprehensive lesson. Case studies will be used to highlight key concepts and clinical application. At the end of this lesson, the learner will have a greater understanding of how to safely and effectively use thermal agents as part of a treatment plan.

Upon the completion of the course and successfully answering 10 interactive multiple-choice questions, the learner will complete a satisfaction survey and receive a completion certificate for .4 AOTA eligible CEU's.

Course Length: 4 hrs

Course Authors: Michelle Cameron, MD, PT, OCS

Course Instructor: Joanne Brown, MS, OTR/L, CHT, MLD/CDT

Course Objectives:

- Describe the principles of thermal energy, including modes of transfer
- Define cryotherapy and thermotherapy and describe its hemodynamic, neuromuscular and metabolic effects
- List and describe 5 indications for the use of cold and heat
- List 5 contraindications and precautions for the use of cold and heat
- Describe the application techniques for cold and heat
- Review clinical documentation for the use of cold and heat
- Review 3 case studies for the use of cold and heat to increase awareness of clinical application

Outline of Content:

Hour 1:

Physical Principles of Thermal Energy

Specific Heat

Modes of Heat Transfer

Cryotherapy

Effects of Cold

Hemodynamic Effects

Neuromuscular Effects

Metabolic Effects

Uses of Cryotherapy

Inflammation Control

Edema Control

Pain Control

Modification of Spasticity

Symptom Management in Multiple Sclerosis

Facilitation

Cryokinetics and Cryostretch

Contraindications and Precautions for Cryotherapy

Contraindications for the Use of Cryotherapy

Precautions for the Use of Cryotherapy

Adverse Effects of Cryotherapy

Hour 2:

Application Techniques

General Cryotherapy

Cold Packs or Ice Packs

Ice Massage

Controlled Cold Compression Unit

Vapocoolant Sprays and Brief Icing

Documentation

Examples

Clinical Case Studies

Case Study 6-1: Post-operative Pain and Edema

Case Study 6-2: Lateral Epicondylitis

Case Study 6-3: Delayed-Onset Muscle Soreness

Hour 3:

Thermotherapy

Effects of Heat

Hemodynamic Effects

Neuromuscular Effects

Metabolic Effects

Altered Tissue Extensibility

Uses of Superficial Heat

Pain Control

Increased Range of Motion and Decreased Joint Stiffness

Accelerated Healing

Infrared Radiation for Psoriasis

Contraindications and Precautions for Thermotherapy

Contraindications for the Use of Thermotherapy

Precautions for the Use of Thermotherapy

Adverse Effects of Thermotherapy

Application Techniques

General Superficial Thermotherapy
Hot Packs
Paraffin
Fluidotherapy
Infrared Lamps
Other Means of Applying Thermotherapy

Hour 4:

Documentation

Examples

Clinical Case Studies

Case Study: Osteoarthritis of the Hands

Case Study: Low Back Pain

Case Study: Ulcer Caused by Arterial Insufficiency

Choosing Between Cryotherapy and Thermotherapy

Cryotherapy

Thermotherapy