



Figure 7-2 This is a thermogram of the legs, indicating that the right leg is 1 C colder than the left leg.

ceiling. This filters down through a porous ceiling, thus producing an even cooling of the room. The draft-free air conditioning system should maintain a constant temperature of 68 to 70 F.

The second critical consideration is the posture of the patient. The skin temperature of the patient should be allowed to equilibrate with the temperature of the room; this normally requires a 10-minute equilibration period. The patient should sit or stand, with the part to be examined totally bare. No part of the body should touch another part of the body, especially in the area to be examined. All jewelry and other apparel should be removed, if possible. Obviously, a leg or arm cast cannot be removed, but elastic bandages, watches, bracelets, rings, eyeglasses, and other artificial adornments are typical causes for artifact production. After the cooling period, the thermographic instrument is either focused or applied to the skin. A corrective middle temperature is of utmost importance, because any change in the setting between examinations eliminates any basis of comparison.

The other important requirement is the establishment of a protocol and technique for measuring and photographing the results obtained with thermographic procedures. This means establishment of a uniform

7 The Use of Thermography in the Diagnosis of Pain Syndromes

Nelson H. Hendler
Cynthia A. Cimini

The use of thermography has gained widespread acceptance in the field of medicine, but for many physicians the entire process is somewhat enigmatic. With the currently available techniques, one can now evaluate the presence or absence of both chronic and acute nerve root irritation, headache, and a variety of vascular disorders. As a diagnostic tool, thermography may well represent an enormous step in the ability to evaluate chronic pain problems.

The word thermogram means a "heat picture." A thermogram is a picture of the heat emitted from the body (see Figures 7-1 and 7-2). No radiation is involved in the process; therefore, there is no hazard to the patient or to the clinician. The thermogram may be a photograph in either black and white or color, or may be obtained using a variety of photographic and recording techniques involving videotape and heat-sensitive paper. The recording techniques can be manipulated so that high-contrast photographs are obtained, demonstrating clear-cut temperature differences, or can be modified so that gradations of temperature may be documented through the use of the tone film.