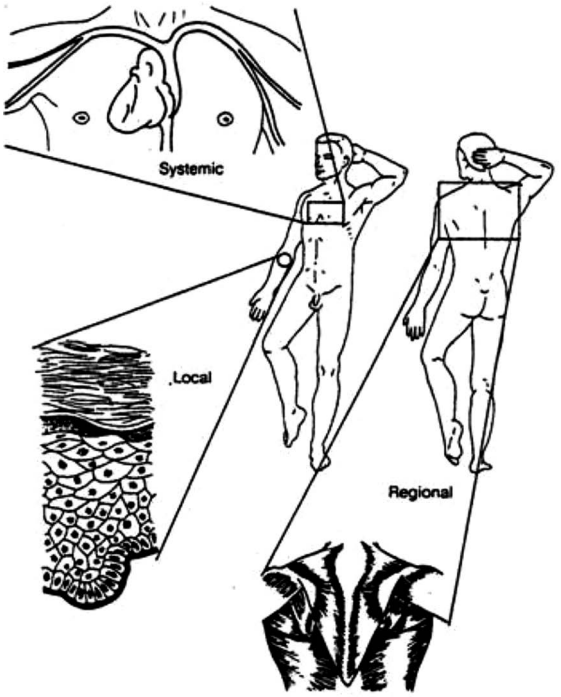

FIGURE 60.1 Specific regions targeted for particular therapy following the local application of various topical products (11).

60.3 PHARMACEUTICAL EQUIVALENCE

According to the FDA, a generic product is required to demonstrate both pharmaceutical equivalence (PE) and BE to be declared therapeutically equivalent to a reference product, the reference listed drug (RLD) (12). A generic product is said to be pharmaceutically equivalent if it contains the same active ingredient in the same amount and same type of dosage form as the RLD. However, it is important to emphasize that pharmaceutical equivalence does not imply bioequivalence per se, as differences in the excipients and/or the manufacturing process can lead to differences in the product performance. According to 21 CFR 314.94 (9) for topical dosage forms, it is necessary for the generic product to have the same excipients and be qualitatively (Q1) and quantitatively (Q2) equivalent to the RLD. Hence, the term *pharmaceutical equivalence* relates to formulation Q1/Q2 sameness where the test and RLD products are qualitatively and quantitatively the same. In addition, as a further requirement, the microstructure, arrangement of matter, and the state of aggregation of the formulation should be established (Q3). Publication of FDA Product-Specific Guidances for Generic Drug Development (13), as well as the recently published draft guideline in 2018 by the EMA (14), address the importance of aspects of the quality (Q1) and equivalence of topical products where the concept of pharmaceutical equivalence is extended to include more comprehensive associated properties such as quantitative (Q2), microstructure aspects (Q3), and product performance. Unfortunately, terms such as "equivalence," "similar," and "sameness," among others, have entered the realm of semantics when describing the development and requirements for market approval of generic semisolid dosage forms intended for local action, thereby creating misunderstandings in the use of methodologies to assess the safety and efficacy of such products to demonstrate BE.