Two microporous biodegradable polyesters, i.e. polyglycolic acid (PGA; polyglycolide) and poly-D,L-lactic acid (PDLLA; polylactide), were obtained by solid-state polymerization reaction from the sodium salts of the corresponding α-hydroxycarboxylic acids after washing out the by-product sodium chloride. The polymers were shaped by cold uniaxial pressing, by hot uniaxial pressing, and by extrusion at elevated temperature. Due to the special microporosity of the polymers, the introduction of drugs is possible at moderate temperature. The release kinetics of the model drug phenylalanine and of the anti-tumor drug goserelin (an LH-RH agonist) from compacted polymer samples were fast (approx. 2 days). The release kinetics of goserelin were corrected for the decomposition of the drug. External coatings with PDLLA or PLLA obtained by immersion in polymer solution strongly slowed down the release kinetics in the case of the PDLLA coating, giving an almost linear release during 100 days. A coating with PLLA was unsuitable to slow down the release kinetics.