In view of the variety of gamma camera systems that are commercially available, it is difficult to incorporate every acquisition/acquisition parameter adequately into a few simple charts. Single-headed systems have different acquisition parameters than triple-headed systems, and both are different from dual-headed systems. One must also consider the radiopharmaceutical(s) and imaging protocols one employed. Acquisition parameters will vary depending on these variables.

This chapter highlights:

- Acquisition parameters
- Processing parameters

Once the purchase of a gamma camera has been made, it is advisable that a professional application specialist visit the laboratory to train the technical staff in applying the vendor-recommended acquisition and processing protocols. This is crucial for optimal results.

Nuclear cardiology tests are to be performed under general physician supervision. That is, the medical director is responsible on an ongoing basis for the training of nonphysician personnel who actually perform the diagnostic procedures, for protocols and policies, and for the appropriate maintenance of necessary equipment and supplies.

All acquisition parameters listed in Table 6-1 are based on the “Updated imaging guidelines for nuclear cardiology procedures” (1) (on line: www.asnc.org; menu: library and resources: guidelines and stan-
Additional information on accepted standards for performing myocardial perfusion imaging can be found in the Society of Nuclear Medicine Procedure Guidelines for Myocardial Perfusion Imaging (on line: www.snm.org/policy/new_guidelines_1.html).

A review of clinical indications for myocardial perfusion imaging can be found on line: www.acc.org/clinical/radio/57252.pdf and in: Guidelines for clinical use of cardiac radionuclide imaging 2 (these Guidelines are currently under revision).

The time interval from injection of radiopharmaceutical to the start of imaging is:

<table>
<thead>
<tr>
<th></th>
<th>Exercise</th>
<th>PharmStress</th>
<th>Rest</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1-201</td>
<td>10 min</td>
<td>10 min</td>
<td>30 min</td>
</tr>
<tr>
<td>Tc-99m-agent</td>
<td>15 min</td>
<td>45 min</td>
<td>45 min</td>
</tr>
</tbody>
</table>

### ACQUISITION PARAMETERS

The acquisition parameters are listed in Table 6-1. In this and following tables doses are given in mCi. Note: 1 mCi = 37 MBq. The following subsections are comments on the individual parameters listed.

#### Dose

It is prudent to institute weight criteria for the choice of imaging agents, Tl-201 or Tc-99m-agent, and imaging protocols, one-day or two-