```
   num1 = 1.234
   w = 0
End
```

If you use a local name that is the same as the global name, and if you want to refer to a global in the current data folder, you can omit the <path to …> part of the declaration:

```
Function GoodExample3()
   SVAR gStr1            // Refers to gStr1 in current data folder.
   NVAR gNum1            // Refers to gNum1 in current data folder.
   WAVE wave0            // Refers to wave0 in current data folder.

   gStr1 = "The answer is:"
   gNum1 = 1.234
   wave0 = 0
End
```

GoodExample3 accesses globals in the current data folder while GoodExample2 accesses globals in a specific data folder.

If you use <path to …>, it may be a simple name (gStr1) or it may include a full or partial path to the name.

The following are valid examples, referencing a global numeric variable named gAvg:

```
   NVAR gAvg= gAvg
   NVAR avg= gAvg
   NVAR gAvg
   NVAR avg= root:Packages:MyPackage:gAvg
   NVAR avg= :SubDataFolder:gAvg
   NVAR avg= $"gAvg"
   NVAR avg= $("g"+ "Avg")
   NVAR avg= ::$"gAvg"
```

As illustrated above, the local name can be the same as the name of the global object and the lookup expression can be either a literal name or can be computed at runtime using $<string expression>.

If your function creates a global variable and you want to create a reference to it, put the NVAR statement after the code that creates the global. The same applies to SVARs and, as explained next, to WAVEs.

Put WAVE Declaration After Wave Is Created

A wave declaration serves two purposes. At compile time, it tells Igor the local name and type of the wave. At runtime, it connects the local name to a specific wave. In order for the runtime purpose to work, you must put wave declaration after the wave is created.

```
Function BadExample()
   String path = "root:Packages:MyPackage:wave0"
   Wave w = $path          // WRONG: Wave does not yet exist.
   Make $path
   w = p                   // w is not connected to any wave.
End

Function GoodExample()
   String path = "root:Packages:MyPackage:wave0"
   Make $path
   Wave w = $path          // RIGHT
   w = p
End
```

Both of these functions will successfully compile. BadExample will fail at runtime because w is not associated with a wave, because the wave does not exist when the "Wave w = $path" statement executes.

This rule also applies to NVAR and SVAR declarations.