

NASA-S-66-11932

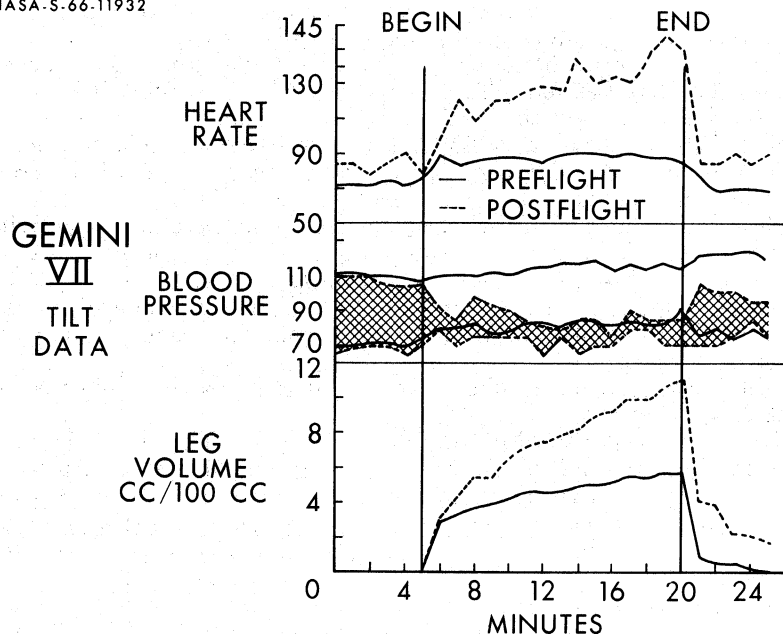


FIGURE 13

Now, these are the preflight pressures, and this is during the tilt period here; this is pretilt 5 minutes, and postflight 5 minutes.

Here is the heart rate, the same thing—this is the one that was done before the flight.

Here is a strain gage placed around the calf, and you can see, here, that there is some pooling that occurs during the preflight tilt. You see some increase in leg volume occurring in the tilted period.

Now, here is what happens postflight. There is an increase in leg volume, there is a marked drop in blood pressure, which you can see here, and there is an increase in heart rate, which you can see here.

Now, the most important variable here has been heart rate, for us. It is the one that is the most reliable thing to follow for response, and we have taken the delta, the change between the preflight and the first and the second postflight tilt in heart rate and plotted them in a manner which you can see on the next slide (fig. 14).

These are the results from all of the Gemini missions, and you can see, here, starting out with a three-orbit mission on your Gemini III, going up, you will see that we have a cluster in here at around the 3- and 4-day period, because during that time, that is where a lot of our missions fell, as you know, in the latter part of the program.

By plotting the first and second tilt deltas, here, as we went out to 4 days and then to 8 days, we found that this was an ever-increasing trend and looked to be almost linear in nature. Projected, it would be way out here, somewhere. In actuality, at 14 days we found that this is what we saw, which was very much more like what you would see at, say, the 3- or 4-day period, rather than what we had seen with the increase at the 8-day period.