Sat 7/15/2017 **3.5 miles**

I ran on slightly hilly roads.

1 mile in 9:12 and rested 1 minute.

2 x 1/8 mile with a 1/8 mile jog after each. Times 53 and 52 seconds.

To warm down I jogged a mile and walked a mile.

Sun 7/16/2017 **14.2 miles**

I ran the Presque Isle Half Marathon

I warmed up with a mile at various paces. My GPS recorded the race distance as 13.21 miles, my time as 1:47:58 and my average pace as 8:10/mile.

Splits: 8:08, 8:20, 8:19, 8:18, 8:13, 8:07, 8:09, 8:11, 8:10, 8:07,8:15, 8:07,7:59 and the last 0.21 miles in 1:35 which corresponds to a pace of 7:29/mi. The even pace running allowed me to have a good finish.

Mon 7/17/2017 **3.25 miles**

I jogged 1 mile to the Allegheny outdoor track. Then I ran 1 mile on the track in 9:35 and 1 mile home on slightly hilly roads in 9:32. I warmed down with ¼ mile walk. I am tired from yesterday's run but not stiff.

Tues 7/18/2017 no running

We drove 400 miles to California MD.

Wed 7/19/2017 **4.25 miles**

I ran 4 miles on slightly hilly roads. The average pace was 8:51/mile. Then I walked ¼ mile in about 4 minutes. The temperature was about 76 degrees and humid.

Thur 7/20/2017 **4.25 miles**

Soon after I started running my left hamstring tightened and I stopped to massage it. I ended up jogging 4 miles and walking ½ mile. I think yesterday's workout was too ambitious just having run the half marathon 3 days before. Today the hamstring felt sore throughout the workout.

Fri 7/21/2017 **no running**

I am resting my sore hamstring.

29.45miles in the last week

Sat 7/22/2017 **4.0 miles**

My left hamstring is still somewhat sore and tight. I didn't push hard.

I walked 1/4 mile.

I ran 3.5 miles on somewhat hilly roads and averaged 9:56/mile.

I walked ¼ mile.

Sun 7/23/2017 **no running**

I am resting my sore left hamstring.

Mon 7/24/2017 6 miles

Before running my hamstring felt okay and I thought it would be better than 2 days ago. But as soon as I started running it was actually worse than 2 days ago. I ran and walked 6 miles and averaged about 12:00/mile. The hamstring felt somewhat tight and sore the whole time. After my shower I applied a microwave heated rice bag to the hamstring. This has helped in the past.

Tues 7/25/2017 **4.25 miles**

Before running I massaged my left hamstring. I walked and ran 4 miles and averaged 11:54/mile. I walked ½ mile, ran ¼ mile and repeated until the end. So I walked a total of 2 miles and ran a total of 2 miles. My average walking pace was about 13:54/mi and my average running pace was about 9:54/mile. My hamstring felt a good deal better but it is still somewhat tight. Last Wednesday (7/19/2017) I should not have run as fast as I did. I have known for a long time I should take it easy for a while after a hard race like the half marathon I recently ran. If last Wednesday I had run a workout like the one I did today, I probably would not have hurt my hamstring. I walked a slow ¼ mile to warm down. After my shower I again applied a microwave heated rice bag to the hamstring.

Wed 7/26/2017 **5.25 miles**

Before running I massaged my left hamstring. I walked and ran 5 miles on hillier roads than yesterday and averaged 11:47/mile. I walked ¼ mile, ran ¼ mile and repeated until the end. So I walked a total of 2.5 miles and ran a total of 2.5 miles. My hamstring felt better than yesterday. Later in the day I again applied a microwave heated rice bag to the hamstring.

Thur 7/27/2017 **no running**

We drove from California MD to Ortley Beach NJ

Fri 7/28/2017 **8.25 miles**

I ran and walked mainly on the ocean board walk and averaged 11:53/mi. I walked for 3:00, ran for 3:00 and repeated until I covered 8.1 miles. After 6 miles my left hamstring tightened and I slowed up. I should not cover more than 5 miles per workout for a while. Later in the day I again applied a microwave heated rice bag to the hamstring.

27.75 miles in the past week

Sat 7/29/2017 **no running**

I am resting my leg.

Sun 7/30/2017 **3.1 miles**

Because my left hamstring is still bothering me, I rode a bike with wide tires and no gears 9.3 miles and averaged 5:30/mile. After the ride my thigh did not tighten so I think I will be riding for a while. I have ridden bikes a good deal over the years because of various problems. I always take 3 miles of riding as equivalent to 1 mile of running.

Mon 7/31/2017 **no running**

I am resting my leg.

Tues 8/1/2017 **3.6 miles**

I rode a bike with wide tires and no gears 11 miles and averaged 4:34/mile. My left thigh seems to be getting better and I felt better riding today than two days ago.

Wed 8/2/2017 **4.25 miles**

I alternated walking and running and ran a little further than I walked. My walking pace was about 14:00/mi and my running pace was about 9:40/mile. The overall pace was 11:36/mile. My left thigh felt the best it has since I originally hurt it 2 weeks ago. Resting and bike riding has helped a lot.

Thurs 8/3/2017 4 miles

I rode 12 miles on the same bike with wide tires and no gears. I take 12 miles of biking to be equivalent to 4 miles of running. The whole ride was on a 2 mile stretch of Bay Blvd in Ortley Beach and Lavallette NJ. The first 8 miles averaged 4:09/mile and the last 2 miles averaged 4:04/mile. This was a hard ride and it felt good. After that I warmed down with 2 miles that averaged 4:50/mile.

Fri 8/4/2017 **5.5 miles**

I rode easily 4.2 miles on the same bike that I have been using and rested a while. Then I ran 4 miles including 2.5 miles on the Lavalette boardwalk. The mile splits were 9:58, 9:23, 9:12 and 8:56. I walked 0.2 miles to warm down. My left thigh felt fine. I am taking the 4.2 miles of bike riding to be equivalent to 1.3 miles of running. Two weeks ago I thought I was going to be injured for a long time but I think I am okay. These are the things that helped:

- 1 massaging every day
- 2 applying a heated rice bag to the sore area about 6 times
- 3 resting more days than usual
- 4 riding a bike four times
- 5 quite a few walking and running workouts
- 6 going into the ocean waves 5 times for about 25 minutes each time.

20.5 miles in the past week

Sat 8/5/2017 **5.5 miles**

I walked and ran 0.75 miles to the Lavallette boardwalk in about 9 minutes,

The I ran 4 miles on the boardwalk in 35:55 or 8:59/mile.

Splits: 9:30, 9:22, 8:51 and 4:15 + 3:57 = 8:12

I warmed down with a 0.75 mile walk and run in about 9 minutes.

Sun 8/6/2017 no running

We drove from New Jersey back to Meadville.

Mon 8/7/2017 3 miles

I ran ½ mile to the Allegheny Wise Center and rested a few minutes.

Then I ran 2 miles on a treadmill in 9:30 and 8:57.

I have not been using weight machines for a while. Today I did 18 different exercises for a whole body workout using weight machines with unusually light weights. I will increase the amount of weight that I use as I use the machines more in the future. I warmed down with a ½ mile run home.

Tues 8/8/2017 10.25 miles

I ran ½ mile to the Allegheny Wise Center and rested a few minutes.

Then I ran 1.5 miles on a treadmill at various paces and averaged 9:30/mile with some parts as fast as 7:30/mile. Then I rested about 7 minutes.

I ran $10 \times \frac{1}{2}$ mile with a $\frac{1}{4}$ mile jog before each run and a $\frac{1}{4}$ mile jog after the last run. The $\frac{1}{4}$ mile jogs were all about 3 minutes.

The first 7 ½ miles were all in 4:00.

The 8^{th} , 9^{th} and $10^{th} \frac{1}{2}$ miles were in 3:57, 3:54 and 3:45.

My pulse before I started running each ½ mile increased from 115 up to about 128 bpm.

My pulse at the end of each ½ mile increased from 145 up to 164 bpm.

I warmed down with a ½ mile jog home.

Wed 8/9/2017 3 miles

I ran ½ mile to the Allegheny Wise Center and rested a few minutes.

Then I ran 2 miles on a treadmill in 10:02 and 8:58.

I did 20 different exercises for a whole body workout using weight machines with 40 pounds on most machines. I warmed down with a ½ mile run home.

Thur 8/10/2017 **4.25 miles**

I walked and ran 4 miles on hilly roads and averaged 11:53/mile. I walked ¼ mile, ran ¼ mile and repeated until I reached 4 miles. I warmed down with a ¼ mile walk

Fri 8/11/2017 **6.25 miles**

I ran ½ mile to the Allegheny Wise Center and rested a few minutes. Then I ran 1.5 miles averaging 9:00/mile on a treadmill at various paces some as fast as 7:30/mile. After resting about 7 minutes I jogged ¼ mile and ran 3 miles in 23:08. Final pulse=168 bpm. Splits for the 3 miles: 7:56, 7:44, 7:28. To warm down I ran and walked a mile.

32.25 miles in the past week

Sat 8/12/2017 **8.5 miles**

Jim Fitch and I ran and walked 8.5 miles on hilly roads and averaged about 12:30/mile.

The sum of all the elevation gains was about 1000 ft as measured by Google Earth. We ran the 2 long downhills (each about 2 miles) and alternated walking and running ½ miles on the 2 long uphills (each about 2 miles).

Sun 8/13/2017 **3.3 miles**

I ran 3 miles on hilly roads and grass and averaged 10:10/mile. Then I walked 1/4 mile.

Mon 8/14/2017 4 miles

I ran ½ mile to the Wise Center and rested a few minutes. Then I ran 2 miles on a treadmill in 18:30. After running I did one set on each of 3 weight machines for leg curls, leg extensions and leg presses. I jogged ½ mile home. Later in the day I walked 1 mile on a hilly loop with Mary Jane.

Tues 8/14/2017 18 miles - a training run for the marathon

I ran 3 times a 6 mile slightly hilly course with a 40 second stop at my house at the end of 6 miles and again at the end of 12 miles. The miles splits were:

 1^{st} 6 miles: 10:16, 9:38, 9:51, 9:46, 9:33, 9:15 Average = 9:43

 2^{nd} 6 miles: 10:11, 9:52, 9:27, 9:19, 9:07, 8:55 Average = 9:28

 3^{rd} 6 miles: 10:00, 9:50, 9:54, 10:07, 9:55, 9:27 Average = 9:52

The temperature at the end of the run was 80 degrees which was a good deal hotter than I thought it was going to be. As a result I did not drink as much as I should have. This made the last 4 miles somewhat difficult. Before running I weighed 127.5 pounds and after I weighed 124 pounds, losing 3.5 pounds. I know from experience that I can lose about 2 pounds during a long run without any problems. So today I should have had about an additional 1.5 pounds (24 ounces) of liquid to make up the deficit. I had 6 ounces of kefir and milk with my breakfast cereal, and 36 ounces of Gatorade and 24 ounces of water, totaling 66 ounces during the run. These 66 ounces plus the 24 ounces I should have drunk yields 90 ounces (or 5 ounces/mile) as the minimum required to efficiently run 18 miles on a hot day. If in a marathon the water stops are every 3 miles then on a hot day I should be drinking about 2 full sized cups of liquid at every stop. On a cool day I know that I only need about 3 ounces per mile. In this case I would need about 9 ounces (about one full sized cup) at every 3 mile water stop.

What about calories? A formula that works for me is calories=300(hours-1.3),

where "calories" is the number of calories I will need to consume before and during the run and "hours" is the amount of time I think I will be running. I found the number 300 in the formula from experience. I weigh roughly 130 pounds. For someone weighing 50% more than me I think the number might be 50% larger or 450. The 1.3 corresponds to 1 hour and 18 min. Notice the formula indicates I can run for 1 hour and 18 minutes and calories required will be zero. I have written the formula in this way because I know I can get up in the morning and not eat. As long as I drink enough water I can run for a little over an hour using just the energy stored in my body. This is about right for me but it might not be correct for everyone.

I ran for approximately 3 hours today. So calories = 300(3-1.3) = 510 calories. How many calories did I actually eat? Breakfast $\rightarrow 200$ calories, Gatorade $\rightarrow 200$ calories, 2 energy gels $\rightarrow 200$ calories for a total of 600 calories. So I was fine with the caloric intake because it exceeded the calculated 510 calories. It is interesting to note the number of calories goes up fairly quickly as the time for the run increases. If I run for 4 hours my formula yields 810 calories and for 10 hours it yields 2610 calories. I always calculate the number of calories required for me to run for long times and carefully plan how I will meet the requirement.

Wed 8/16/2017 3 miles

I ran ½ mile to the Wise Center and rested a few minutes. Then I ran 2 miles on a treadmill in 18:30. After running I did one set on each of 3 weight machines for leg curls, leg extensions and leg presses. I jogged ½ mile home.

Thurs 8/17/2017 4 miles

I ran ½ mile to the Wise Center and rested a few minutes. Then I ran 3 miles on a treadmill. Splits: 8:57, 8:33, 7:51 After running I did one set on each of 3 weight machines for leg curls, leg extensions and leg presses. I jogged ½ mile home.

Fri 8/18/2017 1 mile

I ran ½ mile to the Wise Center. Then I did about 24 exercises using weight machines. On most machines I did one set. On a few for my legs I did two sets. I ran ½ mile home.

41.8 miles in the last week

Sat 8/19/2017 **4.5 miles**

I ran on the high school track. First I ran 2 miles. Splits: 9:21, (4:16+3:56) = 8:10 Then I ran 4 x 300 meters with a 500 meter jog before each run. The jogs were in about 3:55 and the runs were 1:18, 1:17, 1:15 and 1:13. The time of 1:13 for 300 meters is about 6:31/mile pace. I warmed down with a $\frac{1}{2}$ mile in 5:37.

Sun 8/20/2017 3 miles

I ran 3 miles on hilly roads and grass and averaged 9:35/mile. It was 83 degrees.

Mon 8/21/2017 5 miles

It was 84 degrees and I had a nice 5 mile run on hilly roads and grass with Mark Ams.

Tues 8/22/2107 2.5 miles

I ran 2.5 miles on hilly roads and grass and averaged 9:14/mile. I am taking it easy because I will be running the alumni race on Saturday at Gettysburg College.