

Foot Reflexology and Diabetes

Therapist: John Guinta

Therapist's credentials: certified reflexologist; massage therapy student

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Research:

I chose to study the effects of foot reflexology on diabetes after researching a number of similar case studies done within the past 20 years in China, England and North America. Most of the studies I researched indicated beneficial results were achieved when adding foot reflexology to the existing treatment plan of the subject. My intention was to follow that model and record the results for this study.

Selection process:

In an effort to locate a subject for this study, I approached the office of the American Diabetes Association in Jacksonville, Florida. I spoke with one of the staff and left a flyer describing the study. I also placed a few fliers on bulletin boards in three public libraries and two hospitals. I also reached out to friends and family hoping they would know someone who could participate. Ultimately I selected an individual recommended by a friend.

Subject:

Subject is a semi-retired 64-year old male. Subject is employed as a security watchman for the condominium complex where he resides, working from 6pm to 11pm Monday-Friday (approx 25 hours/week). Subject also has occasional part-time employment, on an on-call basis, making deliveries for a catering business. Subject lives alone (no pets) and cares for his elderly mother in a separate condominium in the same complex where he resides. Subject was diagnosed in 2008 with Type II diabetes, and is currently taking Metformin 1000mg/ 1 X day. Subject was diagnosed with hypertension at the same time he was diagnosed with diabetes and is currently taking Lisinop/HCTZ 12.5tab -1 X day to treat the high blood pressure.

The treatment plan:

The plan was to give one-hour foot reflexology sessions each Friday morning at 9:30am, for seven consecutive weeks. I concentrated on the endocrine system reflexes, with emphasis on the pancreas. I also focused on the lymphatic system reflexes and digestive system reflexes.

10/24/11 Interview

I met with the prospective subject for my case study. We read over and discussed the requirements I spelled out in my introduction to the study (above). We also went over the Health History form, Diabetes Study forms, and Case Study Treatment Plan.

Besides diabetes and high blood pressure, the subject admits he is overweight (5'6"-230 lbs), and said he would like to lose at least 60 lbs. He expressed a sincere desire in taking

steps toward a healthier lifestyle. He felt that his participation in this study would be a good way for him to start focusing on his health. I agreed with his assessment.

After our meeting I was convinced that this individual would be a good fit for the study because of his positive attitude and his availability on Friday mornings. I called him later that evening to inform him that I had selected him for the study, and we scheduled the first session for Friday, October 28th, 2011 at 9:30am.

Note: Glucose measurements and energy levels were recorded by the subject within one hour before and one hour after the weekly foot reflexology sessions. Daily readings were recorded each morning on all other days. Those findings are listed on the last pages of the study.

10/28/11 Session 1

Met subject at his home and reviewed his health history. We also discussed exercise and he said he planned to start walking this week. Subject has a construction project going on inside his condominium in one of his bathrooms. I sensed a little stress in the subject as he explained the project to me. No workers were present today however.

The subject indicated he had a wound on his left foot. The wound was caused by the subject "shooting" himself with a pressure washer approximately two weeks prior. I examined the subject's feet and located the wound. It was on the left foot, distal to and inferior to the medial side malleolus. The wound was scabbed-over, however the fascia within an inch around the wound appeared "tender": slightly swollen with a bright pinkish hue. The scab was about 1/2 inch in diameter with no visible indications of infection; the wound appeared to be healing. Further examination of the subject's feet revealed no other obvious abnormalities or pathologies. After the examination I decided to proceed with the foot session, taking care to remain away from the tender area around the wound.

I completed my initial foot reflexology sessions on the subject paying extra attention to the endocrine, circulatory and digestive system reflexes. The subject appeared to relax during the session but asked quite a few questions throughout the session about reflexology in general.

11/04/11 Session 2

Met with the subject at 9:30 am. Before the reflexology session, we went over some information about diet. We spoke a few days prior and he asked if I knew what fruits would benefit him to help keep his glucose levels low. I downloaded some information from the American Diabetes Association (ADA) website which contained guidelines concerning fruit and diabetes (which fruits were best for controlling glucose levels, etc). The information also suggested that metabolism differs from individual to individual and the best way to determine which fruits were best for the subject would best be determined if he measured his glucose levels before and after eating the fruits he was interested in. Again we discussed his desire to employ some sort of exercise into his routine, specifically walking. He shared with me that he had walked around his neighborhood a couple of times this week and that

his feet were sore after he walked. Despite the discomfort the subject assured me he was interested in trying to incorporate more walking into his health regimen.

During the foot reflexology session the subject indicated a “sensitive” spot on the right foot, plantar side, slightly proximal to the diaphragm line in zone 3. Subject also reported a “tender” area just proximal to the diaphragm line on left foot, plantar side, in zone 1. I did not feel anything abnormal in the fascia of either area. I worked subtly over the area a couple of times.

The wound on the subject’s left foot was still pink around the scab and the fascia still appeared to be tight, with only slight improvement from last week. Nothing else to note during session.

11/11/11 Session 3

Met with my subject at 9:30am. Prior to the session we discussed his health. He reported he had started a walking routine this week and had walked three times using a route I had suggested. The route includes two bridges over the St Johns River in downtown Jacksonville and the complete distance is roughly five miles. The subject indicated his feet “hurt” after walking excessively, but overall he felt better. He said he sleeps better at night if he has walked during the day.

During the session the subject seemed to relax and was much less talkative than in previous sessions. The subject did indicate a “sensitive” area, in zone 1 on right foot, plantar side, just proximal to diaphragm line. I felt a small adhesion in the fascia and went over the area twice and it was no longer noticeable. No other abnormalities noted.

There was noticeable improvement on the wound on his left foot. The fascia did not appear to be as tight and had almost normal coloration, and the scab seemed to be a slightly smaller than last week.

11/18/11 Session 4

Met subject at 9:30am and he advised me that he had a “light burning” in his feet after he walks, but not the soreness he had felt in previous weeks. He has been continuing to walk the five-mile route, three times this week. He asked about weight lifting and other exercises. I advised him that I felt any exercise would be helpful and it is a good way to lose weight. He mentioned joining a gym and I told him he would most likely be able to consult a trainer about specific weight loss exercise he could incorporate.

His foot reflexology session today was routine, with no areas of concern or discomfort. No abnormalities noted. The wound on his left foot has improved since last week and it appears to be steadily healing. There was no abnormal coloration of the skin around the wound and the fascia in that area felt normal and relaxed. The scab is smaller this week than last.

Although subject stated he felt physically improved since last week, he was stressed out today due to the construction in his condominium. Workers were present in the house during the session and construction noises seemed to diminish the subject's ability to relax.

11/25/11 Session 5

Met at 9:30am and we talked about subject's Thanksgiving holiday yesterday. He admitted he probably "overdid it" a little with food intake. He said he did not walk as much this week as he has in previous weeks. We talked about the construction issues in his condominium and he is disappointed that the project is not complete and is still ongoing. Overall the subject said he feels physically better and has a better attitude about his walking routine since his feet are not bothering him as much as when he first started walking.

During the reflexology session no abnormalities or areas of concern were noted. Subject appeared to relax during session as some snoring was noted.

The wound on his left foot continues to improve and the scab has diminished in size since last week.

12/02/11 Session 6

Met at 9:30am and subject was very enthusiastic about receiving his session today. He said the continued project in his house was starting to really stress him out again and he looked forward to the relaxation he would get from the foot reflexology session.

During today's session the subject quickly went to sleep and stayed asleep during most of the session. I noted one small adhesion on the plantar side of the left foot, first zone just proximal to the diaphragm line. Subject appeared to be asleep and when I worked the area he did not respond. I worked over the area a couple of times until the adhesion was gone.

The wound on his left foot appeared to be healing and looked better than last week. The scab continues to shrink and is about half the size of our initial session.

12/09/12 Session 7

Met at 9:30am at the subject's condominium and we talked a little about his stress levels. His construction project, while still ongoing, seems to be coming to its end and subject seemed to accept the disruption to his life as a necessary to achieve the result he ultimately desired. We also talked about his overall impression of this study. He said he was very happy to have been able to participate and said he would miss my weekly visits. We talked a little about weight loss and he felt he could do a little better about that and was considering joining a support group for that purpose. I suggested to him that it might be helpful to have like-minded people in his life who were trying to take steps toward healthier living.

The foot reflexology session today was unremarkable. No adhesions or other abnormalities were noted. Subject did describe some "light burning" in his feet in the past 24 hours. He

has continued his walking exercise and went three times since our meeting last week. Subject seemed very relaxed during the session.

The wound on the subject's left foot looks improved over last week and appears to be healing well. No skin discoloration around wound. Wound scabbed over.

Glucose and energy levels recorded before & after sessions:

Session #	Glucose level before session	Glucose level after session	Energy level before session	Energy level after session
1 10/28/11	167	155	8	10
2 11/04/11	160	153	7	9
3 11/11/11	156	145	8	9
4 11/18/11	156	147	9	10
5 11/25/11	162	144	7	9
6 12/02/11	179	171	7	10
7 12/09/11	181	172	7	10

Glucose levels decreased an average of 10.5 mg/dl after the weekly reflexology sessions. The highest recorded drop was 18 mg/dl and the lowest was 7 mg/dl. Energy levels, also reported by the subject, were higher after each session. The results were recorded above.

Recorded glucose levels during study

Date	Morning glucose level	Evening glucose level	difference between high and low
10/28/2011	102	147	45
29-Oct	117	132	15
30-Oct	122	136	14
31-Oct	93	142	49
1-Nov	132	129	3
2-Nov	139	137	2
3-Nov	106	119	13
4-Nov	109	113	4
5-Nov	120	130	10
6-Nov	117	135	18
7-Nov	120	147	27
8-Nov	102	119	17
9-Nov	129	127	2
10-Nov	112	122	10
11-Nov	89	160	71
12-Nov	112	144	32
13-Nov	122	127	5
14-Nov	103	122	19

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15-Nov	119	125	6
16-Nov	111	159	48
17-Nov	117	136	19
18-Nov	103	160	57
19-Nov	109	119	10
20-Nov	111	155	44
21-Nov	112	139	27
22-Nov	115	125	10
23-Nov	104	164	60
24-Nov	117	147	30
25-Nov	113	160	47
26-Nov	117	118	1
27-Nov	104	157	53
28-Nov	127	149	22
29-Nov	121	132	11
30-Nov	109	147	38
1-Dec	112	140	28
2-Dec	117	142	25
3-Dec	123	149	26
4-Dec	132	163	31
5-Dec	114	127	13
6-Dec	111	152	41
7-Dec	106	139	33
8-Dec	109	163	54

Summary: From the findings it can be seen that subject reported increased energy levels and decreased glucose levels after each foot reflexology session. The subject also stated that he was very relaxed after each session. During the course of the study the subject had some added personal stressors in the form of a construction (bathroom re-modeling) project underway in his condominium. From the very first interview it was apparent to me that the subject was sincere about his desire to change his outlook on his health. As his therapist I engaged him in a number of health oriented discussions to assist him in making better choices in his efforts toward improving his health. As a result, over the course of the study the subject began to incorporate new and positive steps toward a healthier lifestyle with a walking routine. We had several discussions about general nutrition and weight loss, and the subject indicated he is attempting to change some of his dietary practices to see if that will help him lose the weight he desires to lose. I firmly believe these general health discussions were beneficial to the overall well being of the subject. I believe the relaxation from the foot reflexology sessions along with the new exercise routine incorporated by the subject have had a direct and positive impact on the subject's wellness. The subject inquired about future foot reflexology sessions and indicated he would consider foot reflexology in the future to help with his diabetes.