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**HPPA 512**

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**Case Study: John Liou**



John Liou is a 75 year old retired construction worker with a history of hypertension, benign prostatic hypertrophy, COPD, GERD, and he was recently diagnosed with Parkinson's Disease. He has exhibited a slow decline in physical function over the past five years. He has lost some weight (about 10 pounds in 5 years), but would still be considered overweight. He is generally de-conditioned, and is having difficulty standing and walking for any length of time. He will lean against a wall if the need for standing is more than a few minutes. He is complaining of some hip and back pain and has been having trouble with tripping more often (a common early symptom of Parkinson's) which is making him more fearful of walking. He tends to sit when at home, and is in general quite sedentary. He is able to navigate stairs within the home with some difficulty and until very recently was able to manage some light gardening and home maintenance chores.

He lives with his wife of 54 years in a small, two-story house in Flushing. His wife is concerned about their future and how long John can manage at home. She would like to move to an apartment, so that John will no longer need to worry about raking the leaves, and managing all the home tasks he has always performed in the past, but John is resistant to this idea. You have discussed this idea with him in light of his recent diagnosis, but he says that he wants to stay in the home he and his wife have lived in for many years. He asks you if there isn't some way you can help him get stronger so they can continue to do so.

His past medical history is noted above. His immunization records indicate that he has not received any vaccines since his last tetanus (Td) vaccination 10 years ago. He was offered the flu vaccine last year, but declined it saying that he heard you could get the flu from it.

His family history is vague – he left China as a very young man and has not been in touch with his family since. He knows that his parents died in an earthquake after he left, but he knows little about their health concerns. He has one sister who lives in California, but he hasn't been in very close touch with her either. He thinks she had some "woman's trouble" at some point and had surgery, but he doesn't know the details. He has three children, all alive. His son has hypertension and one daughter had a congenital heart condition, but that was taken care of with surgery when she was young. His grandchildren are all alive and well.

John has been a smoker all his life. He has cut down some, but is still smoking one pack a day (total 80 pack-years) and is taking 15 different medications. He was recently prescribed a new medication for his GERD symptoms which brought on intense dizziness to the extent that he could not walk without leaning against the wall. He discontinued the medication and the symptoms faded over a 24 hour period.

His diet is a traditional Chinese one, prepared by his wife mostly. He eats a fair amount of vegetables and not too much meat. His diet is fairly high in salt, but he says that his wife has been resistant to changing her way of cooking "after all these years". He confesses that he does enjoy sweets and agrees that perhaps he eats them too often, "But it's one of my few pleasures these days".

Other information:

BP 120/70, seated      T 98.7      R 20      P 84, regular

Hgt 5 ft. 6 in.      Wgt 170 lbs.

Medications:

- Hydrochlorthiazide 25mg daily
- Enalapril 2.5 mg twice daily
- Nifedipine XR 30 mg daily
- Potassium Chloride 20 meq daily
- Tiotropium inhaler 2 puffs daily
- Albuterol inhaler 2 puffs daily
- Omeprazole 40 mg daily
- Cimetidine 400 mg at bedtime (now discontinued after dizziness)
- Carbidopa/Levodopa (25/100) 3 times daily
- Naproxen sodium 200 mg 3 times daily
- Tylenol 350 mg – two tablets twice a day as needed
- Ferrous sulfate 300 mg daily
- Docusate sodium 100 mg daily
- Hydrocortisone cream 1% to scalp prn flaking and itching
- Calcium carbonate 500 mg – two tablets twice daily
- Sennokot (an over the counter laxative) as needed for constipation

Gen: Alert, oriented, with a somewhat increased AP diameter of his chest. Breathing with soft, but audible grunting sounds at times when he exerts himself. His facial expression is flat, though he smiles broadly when he makes a joke.

- **IMMUNIZATIONS**

- Influenza - Inactivated/Recombinant Flu Vaccine (Since it is November)
- Tetanus - Td Booster (Received last one 10 years ago)
- Zoster – RZV (2 dose) or RZL (1 dose)
- Pneumococcal - PCV 13 (1 dose) and PPSV23 (1 dose)

- **SCREENING**

- Alcohol Misuse
- Depression
- Hypertension
- Obesity
- Tobacco Use and Cessation
- Colorectal Cancer
- Lung Cancer
- Abdominal Aortic Aneurysm

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- **INJURY PREVENTION**

- Risk of falling
- Traffic safety
- Water safety (If patient plans on using pool for exercise as prescribed)

- **DIET**

- Since Mr. Liou has a history of hypertension, I consider his traditional Chinese diet, one that is high in salt, to be detrimental to his health since salt raises blood pressure. I understand that food is a big part of culture and to achieve specific flavors specific ingredients must be used. I know that soy sauce is a staple in Chinese cooking and is known to be extremely high in sodium. In today's world, there are many modified foods to include/exclude certain ingredients. Perhaps Mrs. Liou could swap for a soy sauce that tastes exactly the same, but contains much less sodium per serving. This

way, the cooking flavors are retained and the sodium levels per meal are drastically reduced.

- I like that Mr. Liou eats a lot of vegetables and not vast amounts of meat. I recommend he continues to lots of vegetables as they are packed with nutrients and lots of fiber. I noticed he is taking Sennokot, which is taking for constipation. Consistent and adequate fiber intake can help with his constipation issues.
- Eating a diet rich in whole grains and fruits are known to help reduce hypertension and symptoms of GERD Mr. Liou has. I would rather John eat more poultry and fish rather than red meat even though he does not eat much meat. When he does eat meat, I would suggest staying away from red meat.
- Considering Mr. Liou is overweight, I would like him to reduce the amount of sweets he consumes. Sweets are known to pack a tremendous amount of calories in small food portions/size. By eating 1-2 sweets less per day, he can reduce his caloric intake by a minimum of 500+ calories depending on the actual sweet. Just like the recommendation with the soy sauce, there are specific ingredient that can help sweets taste like “sweets” but with much less sugar added, carbohydrates, fats, and calories. Overtime, he will lose weight if he continues to reduce the amount of calories. I am not saying Mr. Liou should never have a sweet again in his life, but he should find ways where he can enjoy the foods that he likes to eat and at the same time not have those foods have a detrimental impact on his health.

## • EXERCISE

- Unfortunately, Mr. Liou does not seem to be getting sufficient amounts of exercise as his physical condition has been worsening over the years. Having some physical disabilities/limitations should not prevent Mr. Liou from exercising, we will simply have to modify the types of exercises that he will be performing. I have experience working in a physical therapy/rehab center and I can definitely recommend a recumbent stepper machine. It is very easy on the joints and it can be adjusted to the persons height. Many patients really like that exercise. There are numerous levels to the machine and Mr. Liou can go at his own pace. Another great way to exercise would be assisted swimming/pool work with someone directly by Mr. Liou’s side. Mr. Liou could perform exercises that will help with his strength and coordination to prevent future falls from occurring more frequently than expected as his Parkinson’s disease continues to progress. In the beginning, Mr. Liou should perform these exercises 1-2x per week. Once he becomes accustomed to, and feels confident, I would suggest he increase the frequency of his exercise routine until they reach the recommended guidelines of 150 min/wk of moderate exercise. As long as Mr. Liou is moving and is consistent, I would be happy. 10 mins of exercise is better than nothing!

- **HARM REDUCTION**

- Mr. Liou has as an 80-pack history where he still continues to smoke a pack a day. I would suggest Mr. Liou try to smoke one less cigarette every week if possible. He is taking numerous amounts of medications and smoking can definitely hinder their ability to do what they are intended to do. Not to mention he has hypertension, smoking is known to raise one's blood pressure.
- Regarding his diet, as mentioned earlier, I would suggest that Mr. Liou not stop eating the foods that he likes, but to eat them in moderation and not as often as before. This will be improve his health and potentially reduce his weight. I would suggest Mr. Liou try to implement the diet changes that I have suggested.

## **BRIEF INTERVENTION**

Tobacco is the leading cause of preventable death in the United States and in Mr. Liou's case, I would certainly conduct a brief intervention trying to influence and motivate him to quit smoking.

- **Ask**

- Firstly, I would ask permission to discuss his cigarette smoking. Some patients may not want to talk about it at all because they know it is bad for them but they choose to continue smoking anyway.
  - *"Mr. Liou, is it okay if we discuss your cigarette smoking?"*
- I will then try to get Mr. Liou to think about his smoking.
  - *"Are you currently still smoking?", "How many cigarettes do you smoke per day?"*
- I would try to assess his readiness to change.
  - *"Mr. Liou, have you ever tried to cut back or quit smoking?", "On a scale of 1-10, how willing are you to quit?"*
  - Based on Mr. Liou's answer to the last question, I would ask him: *"What makes you say that?"* and *"What will help you move to a higher number on that scale?"*

- **Advise**

- I would seek permission to give Mr. Liou some advice on quitting smoking.
  - *"Mr. Liou, I would like to help you quit smoking. Can I tell you some of the things we know that can help you quit smoking?"*
- Assuming Mr. Liou agrees to allow me to inform him on how to quit smoking, I will inform him of all the health risks that smoking causes or may have caused him over all these years that he has smoked. Along with the risks, I would discuss the benefits of quitting smoking, both short and long term effects and how quitting smoking can improve his other conditions. There will be a discussion regarding the various tools and medications that could help him with the process of quitting smoking.

- **Assess**
  - Here is where I would assess Mr. Liou's health status. I will assess his addiction to nicotine by having him fill out a Heavy Smoking Index (HSI)
    - *"Mr. Liou, would you mind filling out this form for me? It will help me assess your smoking."*
  - Here I would also try to find any other motivating factors that may exist to help Mr. Liou quit, perhaps mention his children or grandchildren here as motivating factors.
- **Agree**
  - Here, Mr. Liou and I would discuss a quitting date for him to stop smoking.
    - *"Mr. Liou, at what point do you see yourself completely quitting from smoking?"*
  - Here we would also talk about specific medications that will help him in his process of quitting smoking. I would discuss the types of medications available and which ones I would believe will benefit him the most. Together, Mr. Liou and I will formalize a plan together. I would take into consideration all of Mr. Liou's concerns and requests and implement them in the plan so that he feels comfortable and more willing/motivated to quit smoking.
- **Arrange/Assist**
  - No matter the age/ethnicity/culture, individuals need to know that there are resources that can benefit them other than information that was provided directly by the clinician such as support groups/internet/check-in option.
    - *"Mr. Liou, I also have other resources that can be beneficial to you while you trying to quit smoking.. Would you like to know more about them?"*
  - Since this is something new, I would arrange a follow up visit to ensure Mr. Liou is still on track to quit smoking by the date we both established. The follow up visit will be 1 weeks from the original visit.
    - *"Mr. Liou, will set up a follow up visit 1 week from today to see how you are doing. If you have any questions or concerns in the meantime, please don't hesitate to contact me."*
  - Afterwards I would like to see Mr. Liou within a month to ensure he has not relapsed.

## References

- CDC Hypertension <https://www.cdc.gov/bloodpressure/index.htm>
- Diet for Hypertension <https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/in-depth/high-blood-pressure/art-20046974>
- Professor Shami's WK 5 Nutrition/Exercise PowerPoint
- Professor Shami's WK 9 Smoking Cessation PowerPoint