

## Hypertension Case Study MSN

C.S. is a 40-year-old male who attends a community health screening. He states that he has not seen a health care provider in a “really long time.” He is a truck driver who eats mainly fast food while on the road. He smokes a pack of cigarettes a day “just for something to do during the long hours of driving and to keep me calm.” C.S. is 5 ft., 9 in tall and weighs 230 lb. His BP is 182/104, heart rate 90, respirations 24, and temperature 97.0°F.

### 1. What risks factors for hypertension does C.S. have?

- BP 182/104
  - Stage 2 hypertension
- Sedentary job-lack of activity
  - Works long hours, limited time to exercise
- Smokes a pack of cigarettes a day
  - Tobacco increases vascular resistance, increases blood pressure
- Mentions using tobacco to “keep calm”
  - Chronically stressed
- Eats mainly fast food
  - High in fat and sodium, fried/greasy
- Weight 230 lbs, height 5’9”
  - BMI 34.0-Obese
- 40 YO Male
  - Men have an increased risk when compared to women in this age group.

### 2. What clinical manifestations of hypertension would you assess for in C.S.?

- Fatigue-decreased energy/attention span
- Dizziness- especially with sudden postural changes/activity
- Shortness of breath on exertion
- Palpitations/chest pain
- **Initial HTN may not have symptoms, “silent killer”.** Due to this, I would be assessing for clinical manifestations but still following up with lab values and diagnostic testing due to his increased risk factors.

### 3. What complications will you assess C.S. for?

- Coronary Artery Disease (CAD)
  - Plaque in arteries, narrowing and decrease of blood flow to heart, can cause MI
- Left ventricular hypertrophy
  - Thickening of the hearts walls, increasing pressure, poor ejection fracture
- Heart failure
  - CHF, heart is unable to pump enough blood volume to fully support body, can lead to fluid buildup/overload, pulmonary dysfunction
- Cerebrovascular disease
  - 4X more likely to experience stroke
- Peripheral Vascular Disease

- Narrowing or blockage of vessels outside of heart (arteries, veins, etc)
- DVT, swelling
- Nephrosclerosis
  - Hardening of artery and arteriole walls of kidney
- Retinal Damage
  - Loss of vision, changes in vision

**C.S. is referred to his health care provider to follow up on his high blood pressure screening.**

**4. What diagnostic studies might you expect the health care provider to order for C.S.?**

- Baseline BP and vitals
- BUN and creatinine (renal function)
- Vision screening (retinal function)
- Electrolyte and glucose labs
- Lipid profile
- Echo
  - Get a visual on his anatomy, check for any signs of LVH
- Troponin levels if showing s/s of MI
- ECG- baseline heart rhythm

**C.S.'s BP is monitored for several visits and remains elevated. His serum cholesterol, BUN, and creatinine levels are elevated. His creatinine clearance (glomerular filtration rate) is below normal, demonstrating renal insufficiency.**

**5. What type of lifestyle modifications would you recommend for C.S. to control his BP?**

- I would not expect CS to quit his job, but I would try to work with him on changing his lifestyle on the road to improve his health, hypertension, and renal insufficiency.
- Diet: I would recommend healthier food options/restaurants that he could find on the road. EX: grilled chicken sandwich and a side salad from Wendys instead of his usual burger and fries.
- Exercise: Utilizing rest stop walking trails while on the road, stretch your legs throughout the day. Subscribe to trucker workout videos on YouTube, "The Healthy Trucker" for ideas on how to exercise while on the road with limited/no equipment.  
<https://www.youtube.com/watch?v=mKMC63ysO9w>
- Smoking/Stress: While it can be incredibly difficult, I would encourage CS to stop smoking, offering alternatives such as Nicorette gum or patches to slowly wean off/slow down his habit. Since he is smoking to cope with stress, he should try and develop new coping techniques to deal with his daily stressors. It can be difficult to manage in person sessions since he is on the road so much, online appointments like BetterHelp might be a good option. There are numerous virtual counseling options, and a lot of companies let you set up appointments based on your availability, so he can work around his demanding schedule.