

# Adult/Geriatric Critical Thinking Worksheet

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**Unit:** HC5

**Pt. Initials:** RM

**Date:** 3/2/21

## 1. Disease Process & Brief Pathophysiology

Hepatic Encephalopathy. This syndrome is commonly present in patients diagnosed with liver cirrhosis. It presents with a spectrum of neuropsychiatric abnormalities. Hepatic portal rich blood is circulated without adequate detoxification. This allows dangerous levels of waste products to remain in the circulatory system. The main waste product is ammonia (NH<sub>3</sub>), when these levels rapidly climb in the blood stream it ultimately crosses the blood brain barrier. NH<sub>3</sub> is then converted into glutamine (polar amino acid). This conversion and accumulation results in altered mental status.

## 4. Diagnostic Tests pertinent or confirming of diagnosis

Diagnosis of hepatic encephalopathy is primarily based on exclusion of other causes of altered mental status.

Liver ultrasound (P. negative for ascites)

Neurological exam (P)

Alcohol/toxin screening

Brain imaging (P)

Chest xray

CMP/CBC (P)

UA (P)

## 2. Factors for the Development of the Disease/Acute Illness

### Non modifiable:

Liver cirrhosis (P)

Hepatoceullar carcinoma (P)

Renal failure (P)

Infection

GI bleeding

### Modifiable:

Drug/alcohol intoxication

Medical noncompliance

## 5. Lab Values that may be affected

### Elevated Ammonia (P)

Elevated Lactate (P)

Elevated LFT

Elevated BUN (P)

Elevated Creatinine (P)

Electrolyte imbalances (P)

## 3. Signs and Symptoms

Altered mental state (P)

Acute confusion (P)

Ascites

Electrolyte abnormalities (P)

Renal Failure (P. AKI)

Hepatic coma

Tremor

Sweet breath odor

Sleepiness/fatigue (P)

## 6. Current Treatment

Consider for referral for renal transplant

Start lactulose administration (P)

Start Rifaximin (P)

Provide optimal nutrition (P)

Focus on treatment of precipitate if not r/t liver

Start probiotics

Maintain hydration and circulatory volume with continuous infusion (P)

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**7. Focused Nursing Diagnosis:**

Ineffective fluid exchange

**8. Related to (r/t):**

Hepatic failure

Renal failure

Metabolic Acidosis

**9. As evidenced by (aeb):**

Urine in foley bag appears dark orange/  
amber in color.

Patient need for continuous maintenance fluids  
via IV.

Patient is easily fatigued with activity.

**10. Desired patient outcome:**

Patient will drink 1 gallon of water per day  
until discharge. 1600. 3/2/21.

**11. Nursing Interventions related to the  
Nursing Diagnosis in #7:**

1. Weigh patient daily

**Evidenced Based Practice:**

Daily weight fluctuations will demonstrate  
fluid retention or fluid loss.

(one liter fluid retention equals 2.2 lbs)

2. Turn and help patient reposition at least  
every 2 hours.

**Evidenced Based Practice:**

Reducing pressure and shear will prevent  
breakdown and protect integrity of the skin.

3. Bring patient refreshed water jug during  
hourly rounding.

**Evidenced Based Practice:**

Ensuring fresh and consistently supplied  
water will allow the patient to continue  
drinking.

**12. Patient Teaching:**

1. Encourage patient to drink water every  
commercial break while watching tv.

2. Teach patient to decrease intake of  
caffeinated and sugary beverages.

3. Teach patient to decrease dietary sodium  
intake.

**13. Discharge Planning/Community  
Resources:**

1. Refer patient to home health for assistance  
with ADLs such as self care.

2. Refer patient to a dietician to assist with  
low sodium meal planning and dietary options.

3. Refer patient to PT to gradually increase  
activity tolerance and gait stability.

## Resources

- Elwir, S., & Rahimi, R. S. (2017, June 28). *Hepatic Encephalopathy: An Update on the Pathophysiology and Therapeutic Options*. *Journal of clinical and translational hepatology*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5472935/>.
- Martin, P., By, -, Martin, P., & Paul Martin is a registered nurse with a bachelor of science in nursing since 2007. Having worked as a medical-surgical nurse for five years. (2020, December 5). *10 Fluid And Electrolyte Imbalances Nursing Care Plans*. Nurseslabs. <https://nurseslabs.com/fluid-electrolyte-imbbalances-nursing-care-plans/>.
- What Is the Most Serious Sign of Hepatic Encephalopathy?* MedicineNet. [https://www.medicinenet.com/the\\_most\\_serious\\_sign\\_of\\_hepatic\\_encephalopathy/article.htm](https://www.medicinenet.com/the_most_serious_sign_of_hepatic_encephalopathy/article.htm).