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DRY WEIGHT ASSESSMENTS AT NKC

Education Services

NORTHWEST Kidney Centers

What Is DRY Weight?

- Ordered by the MD

- The weight at which the patient is neither volume depleted or volume overloaded = perfect amount of fluid in the body

- Other terms: "IDEAL Weight" or "GOAL Weight"

Is The Dry Weight Accurate?

- Determining accuracy is evaluated by assessing patient's signs and symptoms of fluid overload or dehydration
- Assessment is made both Pre and Post dialysis
- The patient's blood pressure is a key factor in the assessment of dry weight accuracy
- Other considerations include patient's history, CV status, medications, and physical findings

How Often Should Dry Weight Be Assessed?

- ❑ Standing orders allow for an initial DW assessment on new patients
- ❑ Whenever a patient exhibits signs/symptoms that his/her current dry weight is no longer accurate
- ❑ MD order is not needed to perform a dry weight assessment
- ❑ MD order is needed to change pt's dry weight

When Does Dry Weight Need A Decrease?

A patient's dry weight might need to be **decreased** if the patient experiences:

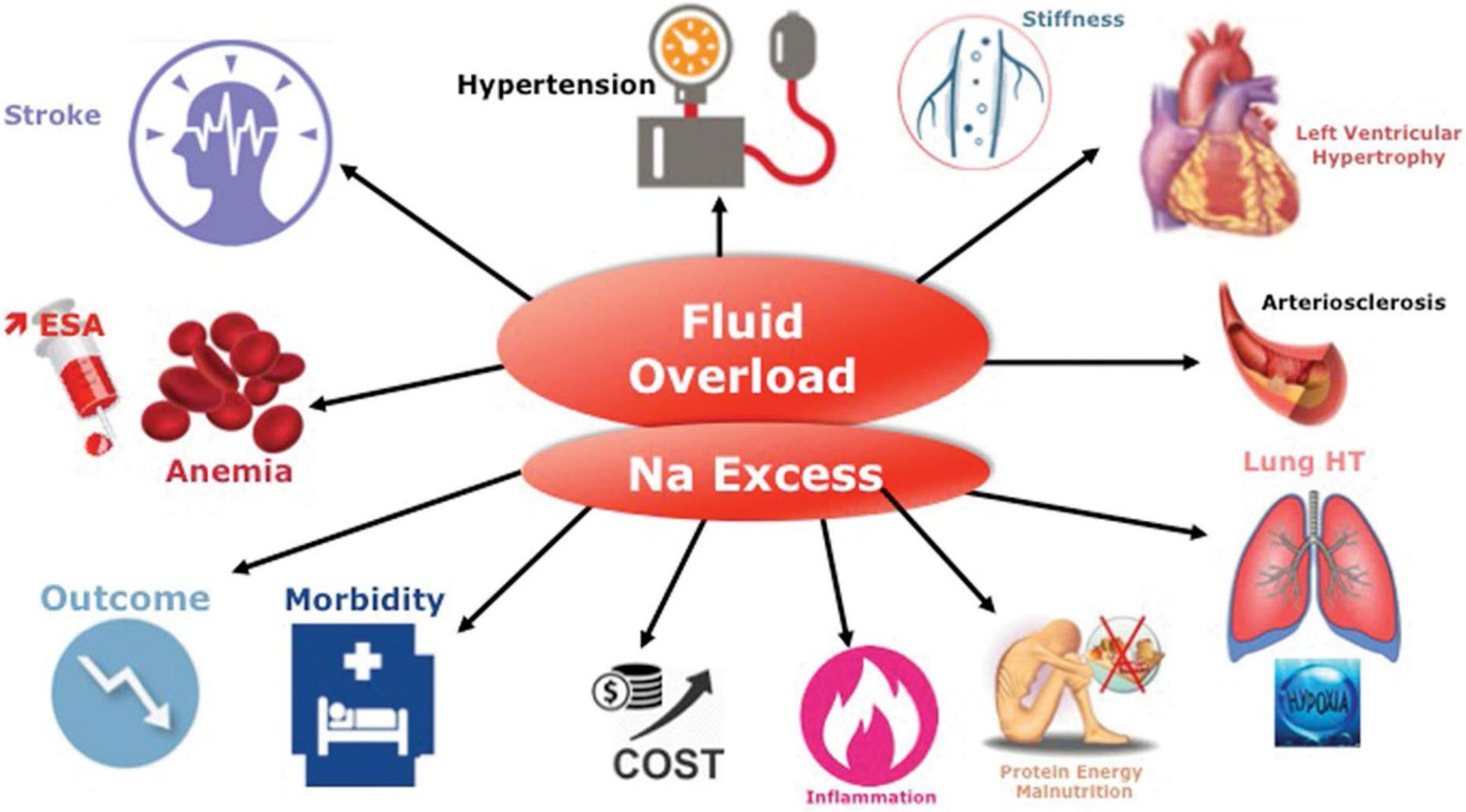
- ✓ high blood pressures
- ✓ wet lung sounds
- ✓ shortness of breath
- ✓ edema

What's Happening in the CV System?

In Volume **Overload**:

- When the vascular space can no longer hold excess fluid, it seeps into the tissues/lungs, causing edema, wet lung sounds, and shortness of breath
- The extra fluid increases the workload on the heart, leading to LVH and CHF
- Lowering dry weight can help prevent fluid overload

Complications of Fluid Overload



When Does Dry Weight Need An Increase?

A patient's dry weight might need to be **increased** if the patient experiences:

- ✓ cramping during, after, or between treatments
- ✓ low blood pressures
- ✓ inability to get down to ordered DW
- ✓ weakness

What's Happening in the CV System?

In Volume **Depletion**:

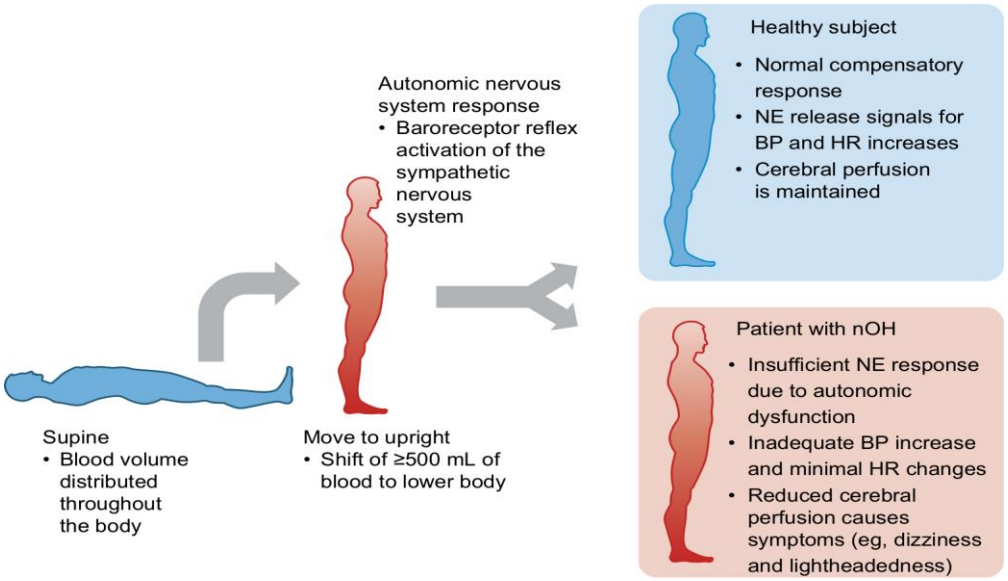
- Not enough fluid = decreased blood flow to tissues and organs
- Less blood flow to vascular access = possible clotting
- Patient may experience low BP, cramping
- Increasing dry weight can help prevent dehydration

What Are The Steps Of A DW Assessment?

Done **PRE** and **POST** Dialysis:

1. Ensure accurate weights are obtained
2. Take Postural BP's and Apical Pulses in 3 positions: (as able)

Lying > Sitting > Standing



Interpreting Postural BP Results

- **ORTHOSTATIC HYPOTENSION** = a decrease of at least 20mmHg in systolic, or at least 10mmHg decrease in diastolic readings when a patient rises from lying to sitting or sitting to standing

- A decrease in systolic/diastolic BP by at least 10mmHg = **FLUID DEPLETION**

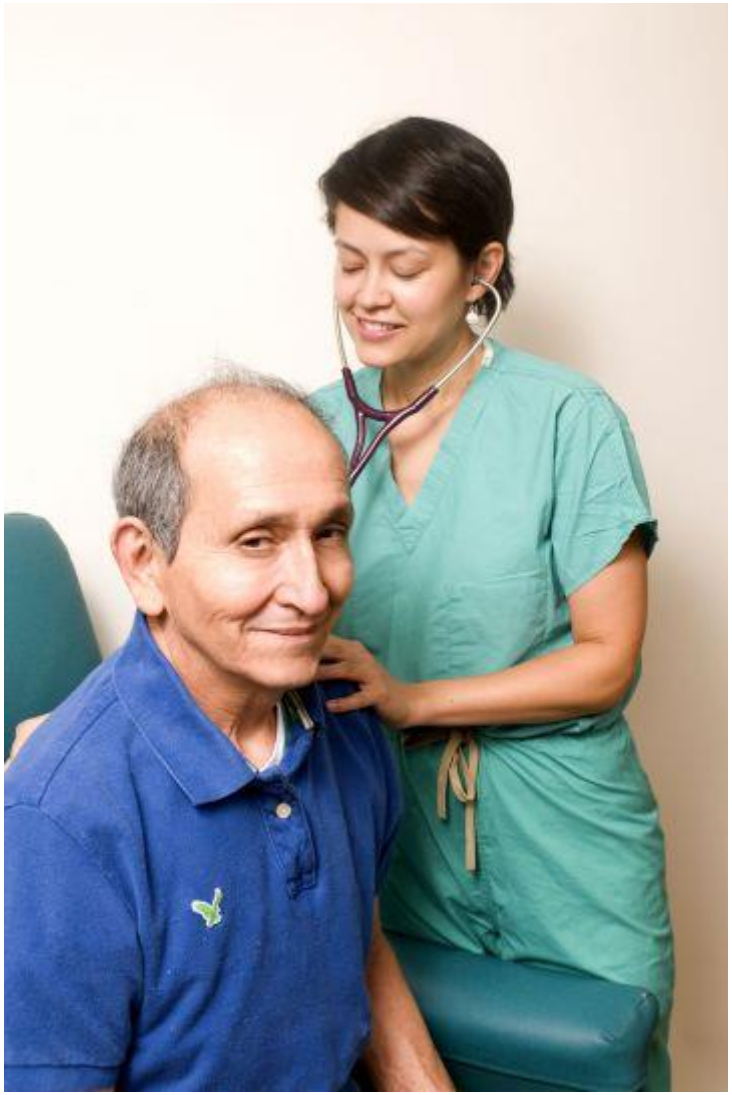
- An increase in BP usually indicates **FLUID OVERLOAD**, especially if pulse is loud and bounding

Continuing Steps For A Dry Weight Assessment

(Pre and post dialysis)

3. Listen to lung sounds; observe/ask patient if any shortness of breath

- Fluid depleted or euvolemic patient should not have wet-sounding lungs or SOB
- Patient in fluid overload is likely to have wet-sounding lungs and/or SOB



Continuing Steps For A Dry Weight Assessment

(Pre and post dialysis)

3. Check for edema = a sign of fluid overload

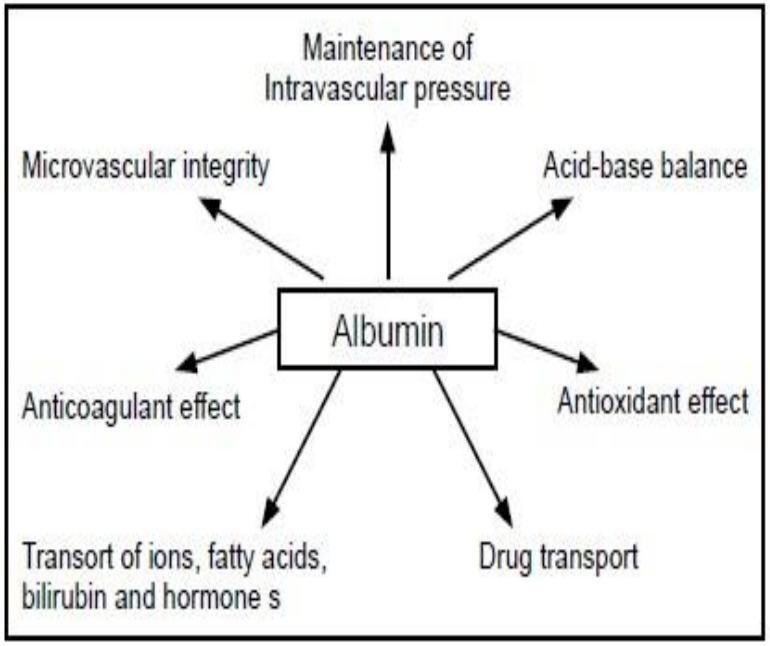
- Common areas: feet, ankles, legs, hands, under the eyes
- Note presence and severity of pitting edema
- Fluid depletion = no edema, poor skin turgor

Continuing Steps For A Dry Weight Assessment

(Pre-dialysis only)

5. Check Albumin (protein) level

- Low albumin levels = fluid moves from blood vessels into tissues
- Results: edema, decreased BP
- Note: Patients with higher albumin levels lose fluid more easily since albumin creates oncotic pressure (pulls fluid from tissues into blood vessels)



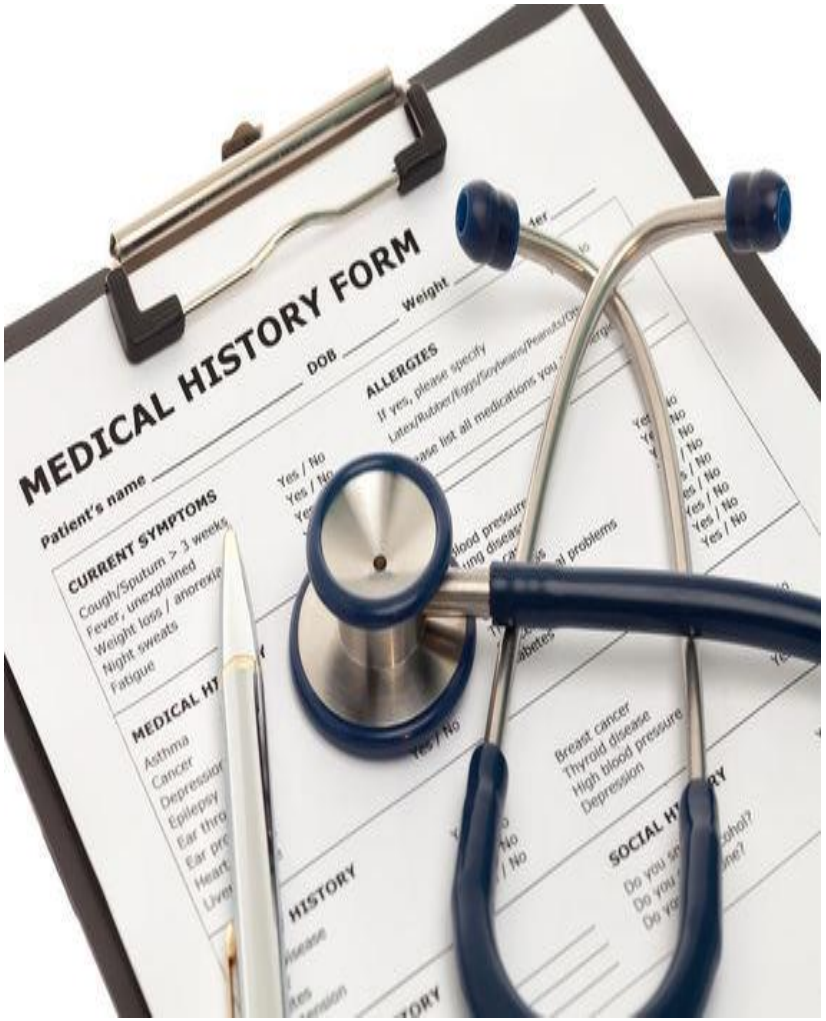
1. Figure 1 – Physiological effects of exogenous albumin.

Continuing Steps For A Dry Weight Assessment

(Pre-dialysis only)

6. Patient History

- Neurological – Headache, dizziness, changes in level of consciousness?
- Respiratory – SOB, productive cough, difficulty breathing when supine?
- Cardiovascular – Chest pain, edema, irregular heartbeat, fatigue?
- GI – nausea, vomiting, diarrhea?
- GU – recent increase or decrease in urinary output?
- Dietary – Na intake, protein intake, fluid intake, appetite?



Estimate New Dry Weight

- Determine if the dry weight needs to be increased or decreased
- Adjust the target fluid loss accordingly for that treatment
- Do not attempt to change the dry weight by more than 0.5 kg at a time for patient safety
- Might take more than one dialysis treatment (of adjusting fluid loss by 0.5 kgs each time) to determine new, accurate dry weight
- Always monitor/evaluate closely to determine patient's response to the adjusted dry weight

Next Steps

- ✓ Document all dry weight evaluation assessment data in the EMR
- ✓ Provide MD with all dry weight evaluation information, including new desired dry weight
- ✓ Obtain order from MD for new dry weight
- ✓ Document new dry weight order in EMR as needed

Dry Wt Eval Case Study #1

Patient Peter Piper's pre-weight is 75.5 kgs today. His dry weight is 74 kgs and he dialyzes for 4 hours. Patient Peter Piper appears to be puffing as he walks to his dialysis chair. You also notice patient Peter Piper's pitting edema in his hands and ankles. Patient Peter Piper's pressures/pulses are:

Lying – BP 182/98, AP 84

Sitting – BP 180/92, AP 88

Standing – BP 178/94, AP 84

and his respiratory rate is 24

Patient Peter Piper's protein is poor with an albumin level of 2.8. The only significant finding while reviewing his dietary history is that patient Peter Piper ate a peck of pickled peppers.

Dry Wt Eval Case Study-Questions

Questions To Discuss:

1. Is patient Peter Piper's dry weight accurate? If not, is it too high or too low?

2. What might be the cause(s) of patient Peter Piper's pitting edema?

3. What would you set for a target fluid loss for patient Peter Piper? (He dialyzes 4 hours and has 2 cups of ice.)

Dry Wt Eval Case Study-Answers

Question #1:

Is patient Peter Piper's dry weight accurate? If not, is it too high or too low?

Answer:

Patient Peter Piper's dry weight needs to be lowered as he is showing signs and symptoms of fluid overload.

Question #2:

What might be the cause(s) of patient Peter Piper's pitting edema?

Answer:

The extra fluid in his tissues is a result of his vascular system no longer being able to contain all his extra fluid. His condition is exacerbated by his high sodium diet (eating pickled peppers) and his low albumin levels, which makes it more difficult for him to move fluid from his tissues to his bloodstream during dialysis.

Question #3:

What would you set for a target fluid loss for patient Peter Piper?

Answer:

75.5 kgs - 74 kgs (dry wt) = 1.5 kgs + .5 kg (NS prime/rinseback) + .2 (ice) + an additional .5 for extra fluid removal = 2.7 kgs or 2700mls = safe target loss

Dry Wt Eval Case Study – Next Steps

Patient Peter Piper's post-weight is 73.5 kgs. Patient Peter Piper's post-dialysis assessment includes the following information:

BP's & Pulses:

Lying: 168/80, AP 76

Sitting: 160/78, AP 77

Standing: 162/82, AP 80 Respirations: 18

Patient Peter Piper is no longer experiencing shortness of breath and his lung sounds are now clear. However, his edema remains unchanged.

Question: What is the plan for patient Peter Piper's next treatment?

Dry Wt Eval Case Study - Answer

Continue to challenge patient Peter Piper's fluid removal by 0.5 kgs each treatment, until:

- BP is normotensive
- Signs of fluid overload (edema, etc.) are improved or absent
- Perform an additional dry weight evaluation (as needed) to ensure accuracy of new estimated dry weight
- Notify MD for new dry weight order
- Monitor patient Peter Piper closely for low BP/cramping as new dry weight is initiated

Other thoughts/ideas??

Dry Wt Eval Case Study #2

Patient Ronnie McDonald has been on dialysis for 2 months. His pre-weight is 82 kgs. His dry weight is 75 kgs. Ronnie's pre-dialysis vital signs are:

BP sitting: 142/76, pulse 72

BP standing: 148/74, pulse 74

Respiratory rate: 16

Ronnie's lung sounds are clear and he has no edema. He says he is feeling well, eating well, and has started working out at the gym.

Ronnie's last 3 post weights have been 79.8 kgs, 80.2 kgs, and 79.6 kgs with post-dialysis blood pressures ranging from 108/62-114/68. He has also been given saline towards the end of his last 3 treatments for dizziness and cramping.

Dry Wt Eval Case Study-Questions

Question #1:
What do you think is happening with Ronnie McD's weight & why?

Question #2:
How would you proceed with Ronnie's treatment?

Dry Wt Eval Case Study-Answers

Question #1:

What do you think is happening with Ronnie McD's weight & why?

Answer:

The evidence points to Ronnie gaining body weight. He has no signs of fluid overload and he is unable to get to his dry weight. Ronnie's post-dialysis BP's are low and end of treatment cramping occurs, requiring the administration of saline. Also, Ronnie is new to dialysis. He is most likely gaining his appetite back as he is feeling better with regular dialysis treatments cleaning his blood. He states he is working out at the gym, which could also be contributing to an increase in body weight with an increase in muscle mass.

Dry Wt Eval Case Study-Answers

Question #2:

How would you proceed with Ronnie's treatment?

Answer:

After reviewing Ronnie McDonald's past treatment data, including post weights and blood pressures, perform a dry weight evaluation with an estimated (increased) dry weight. Determining Ronnie's new, accurate dry weight might take more than one treatment and Ronnie should be monitored closely for any signs or symptoms of fluid overload. When an accurate dry weight is obtained, notify MD for an order to change Ronnie's dry weight, giving the MD all the necessary information to support your request.

Questions Or Comments?