

INTAKE AND OUTPUT (I&O)

- Intake and output (I&O) is the measurement of *the fluids* that enter the body (intake) and *the fluids* that leave the body (output). The two measurements should be equal. (What goes in... must come out!)
- The metric system is used for fluid measurement. The measurements should be recorded in *ml.* (milliliters).
- The average adult intake is ~2500-3000mL. per day.
- The average output is ~2500-3000mL. per day.
- Common metric conversions used for I&O:
 1 c.c. = 1 ml. 1 ounce = 30 ml. 1L. = 1000 ml.
- To convert from ounces to ml. -> multiply by 30 (Ex. 6 oz. x 30ml. = 180ml.)
- To convert from cc/ml to ounces -> divide by 30 (Ex. 240cc - 30cc = 8 oz.)
- Sizes of containers vary. Know your facility's container measurement system.
- Edema: excessive fluid retention in the body tissues
- Dehydration: lack of sufficient fluid in the body tissues
- Diuresis: excessive urine output
- Diaphoresis: excessive perspiration
- "Push fluids" or "Force fluids" (FF): used to increase intake

Types of INTAKE:

Oral fluids*
 IV fluids
 Hyperalimentation / TPN feedings
 Tube feedings (N/G tube, gastrostomy tube, etc.)
 Medications

Types of OUTPUT:

Urine*
 Vomit (emesis)*
 Bloody drainage
 Loose stool*
 N/G tube drainage
 Perspiration

**C.N.A. responsible for these measurements. All others to be measured and documented by a nurse.
 C.N.A. will add totals for each 8 hour shift and 24 hour total when complete. Report findings to the nurse.*

INTAKE & OUTPUT ASSIGNMENT

Document the findings on the I&O chart including the 8 hour totals and 24 hour total. Use these container measurements:

Foam cup= 8oz.	Soup bowl= 180ml.	Gelatin=120ml.
Water carafe=480ml.	Coffee mug= 6oz.	Juice=120ml.
Popsicle=90ml.	Sherbet=120ml.	Soda=8 oz.

7a: Polly had abdominal surgery yesterday and has started a clear liquid diet today. She ate 1 popsicle, ½ gelatin cup, and ½ of the strained juice. She also had 100ml. in her urine bag that you emptied.

8a: Polly wasn't feeling well and vomited 100ml. of emesis.

10a: Feeling better, she ate ½ of sherbet.

11a: The R.N. discontinued Polly's IV and he documented the 150ml that infused.

12p: For lunch Polly had ½ bowl of low-fat broth, ½ mug of coffee, and 100% serving of gelatin. The urine bag was drained of 300ml. of urine and then the R.N. removed the catheter.

1p: The R.N. emptied Polly's abdominal Hemovac drain of 90ml of bloody drainage.

2p: Polly was assisted to the bathroom where she voided 150ml. of clear, yellow urine.

5p: The diet has been increased to a full liquid diet. Polly is helped to the bathroom where she voids 200ml. and returns to sit in the chair. Polly has ½ can of ginger ale, 1 bowl of soup, and ¾ of her sherbet.

6p: The R.N. gives her 15ml. of liquid medicine and ½ cup of water.

7p: Polly has a small emesis of 50ml. after taking a walk and becoming dizzy.

9p: Polly voids 260ml of clear, yellow urine.

10p: At the end of the shift it is noted that 1/3 of the water carafe has been consumed by the patient. The R.N. empties the abdominal drain of 20ml. of bloody drainage.

2a: Polly turns on the call light and asks to use the bathroom. She voids 200ml. and returns to bed. She is thirsty and drinks 1/3 can of lemon-lime soda.

6a: Polly's drain has minimal drainage. She voids 100ml. She drinks ½ mug of tea while waiting for the breakfast tray to arrive.

Nutrition and Fluid Balance

Convert the following measurements.

- 1) 30ml = _____ oz.
- 2) 2 oz. = _____ ml.
- 3) 2 (8oz.) cups of coffee = _____ ml.
- 4) 1 (6 oz.) bowl of soup = _____ ml.
- 5) 3 (8 oz.) glasses of water = _____ ml.
- 6) 2 (4 oz.) glasses of ice chips = _____ ml.
- 7) 2 (4 oz.) cups of gelatin = _____ ml.
- 8) 100% (6 oz.) bowl of soup = _____ ml.
- 9) 75% (8 oz.) cup of coffee = _____ ml.
- 10) 50% (4 oz.) cup of gelatin = _____ ml.
- 11) 10% (6 oz.) bowl of soup = _____ ml.
- 12) $\frac{1}{4}$ (4 oz.) cup of gelatin = _____ ml.
- 13) $\frac{1}{2}$ (6 oz.) bowl of soup = _____ ml.
- 14) $\frac{3}{4}$ (8 oz.) cup of water = _____ ml.

Describe how a nursing assistant should react to the following situations:

- 1) Your patient is on I&O and you picked up the lunch tray.
- 2) You serve a meal tray to a blind person who is able to feed himself.
- 3) Your patient's chart has an order to force fluids.
- 4) The patient receiving an IV has 25 ml. of fluid left in the bag.
- 5) Your patient is on a strict kosher diet and the tray has a shrimp salad as an entrée.
- 6) Your patient is on I&O and you find a container of milk one-third full when you pick up the trays.
- 7) Your patient is on I&O and has perspired so much during the night that you had to change the sheets and pillowcase.