



Increased protein and energy delivery

# Volume Based Feeding Calculations

A collaboration of:



Critical Care Nutrition



Nestlé HealthScience

If the dietitian has not yet assessed the patient on day 2, when volume-based feedings are ordered by a physician, use a weight-based target volume until the dietitian assesses the patient:

Weight	Peptamen® Intense 24-hour target volume with a 1.0 cal/mL feeding	Peptamen® AF 24-hour target volume with a 1.2 cal/mL feeding	Peptamen® 1.5 24-hour target volume with a 1.5 cal/mL feeding
≤50 kg	1050 mL/24 hrs	875 mL/24 hrs	700 mL/24 hrs
50.1-65 kg	1350 mL/24 hrs	1125 mL/24 hrs	900 mL/24 hrs
65.1-80 kg	1650 mL/24 hrs	1375 mL/24 hrs	1100 mL/24 hrs
80.1-95 kg	1950 mL/24 hrs	1625 mL/24 hrs	1300 mL/24 hrs
≥95.1 kg	2400 mL/24 hrs	2000 mL/24 hrs	1600 mL/24 hrs

### How to use the table:

- Calculate the feeding goal for the volume based enteral feeding for the patient for a 24 hour period (i.e 7 am to 7 am each day)
- Read the chart below corresponding to the 24 hour feeding goal for the patient. For example, if the total volume over a 24 hour period was 1800 mL, the first column will give the hourly feeding rate for the patient (in this instance 75 ml/hr).
- If the patient was already fed 450 mL (over a 6 hr period at the rate of 75mL/hr) and the patient is on 'hold' for 5 hours, calculate the following:
  - New Feeding Goal = Volume still remaining to attain the feeding goal  
= Total Goal Volume - Already fed Volume  
= 1800-450=1350mL (Round the volume, if needed, to the closest 50 mL.)
  - Time remaining to attain goal  
= 24 - Time Fed - Hold Time  
= 24-6-5= 13hrs
- Now read the chart again with the New Feeding Goal and the corresponding time remaining as follows:  
For 1350 mL, go to column 13 (the number of hours remaining to attain goal) to get the new hourly feeding rate. In this instance, the new feeding rate is 104 mL/hr\*. The patient will receive 1352 mL in 13 hours.

Please contact your ICU dietitian if you have any questions.

### Important Nursing Assessment

Volume based feeding should be used with caution. Nurses should always assess for feeding intolerance. Examples of intolerance include: abdominal distention, abdominal cramping, nausea & vomiting, diarrhea defined as 5 stools or 750 mL per 24 hour period, and gastric residuals greater than 300 mL\*\*.

\*Hourly rate not to exceed 150 mL/hr  
\*\*Sites may customize the gastric residual volume threshold in keeping with their current practice and best available evidence which supports a gastric residual volume between 250-500 mL. Source: 2015 Canadian Clinical Practice Guidelines [www.criticalcarenutrition.com](http://www.criticalcarenutrition.com).

**Please note:** These are suggested guidelines for enteral feeding based on Enhanced Protein-Energy Provision via the Enteral Route in Critically Ill Patients (PEP uP) Protocol. They are not intended as a substitute for medical advice their current practice and best available evidence.

## Volume Based Feeding Schedule

Goal total mL formula per 24 hours	Hours remaining in the day to feed 24 hour volume																								
	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
2400	100	104	109	114	120	126	133	141	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	
2350	98	102	107	112	118	124	131	138	147	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
2300	96	100	105	110	115	121	128	135	144	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
2250	94	98	102	107	113	118	125	132	141	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
2200	92	96	100	105	110	116	122	129	138	147	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
2150	90	93	98	102	108	113	119	126	134	143	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
2100	88	91	95	100	105	111	117	124	131	140	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
2050	85	89	93	98	103	108	114	121	128	137	146	150	150	150	150	150	150	150	150	150	150	150	150	150	150
2000	83	87	91	95	100	105	111	118	125	133	143	150	150	150	150	150	150	150	150	150	150	150	150	150	150
1950	81	85	89	93	98	103	108	115	122	130	139	150	150	150	150	150	150	150	150	150	150	150	150	150	150
1900	79	83	86	90	95	100	106	112	119	127	136	146	150	150	150	150	150	150	150	150	150	150	150	150	150
1850	77	80	84	88	93	97	103	109	116	123	132	142	150	150	150	150	150	150	150	150	150	150	150	150	150
1800	75	78	82	86	90	95	100	106	113	120	129	138	150	150	150	150	150	150	150	150	150	150	150	150	150
1750	73	76	80	83	88	92	97	103	109	117	125	135	146	150	150	150	150	150	150	150	150	150	150	150	150
1700	71	74	77	81	85	89	94	100	106	113	121	131	142	150	150	150	150	150	150	150	150	150	150	150	150
1650	69	72	75	79	83	87	92	97	103	110	118	127	138	150	150	150	150	150	150	150	150	150	150	150	150
1600	67	70	73	76	80	84	89	94	100	107	114	123	133	145	150	150	150	150	150	150	150	150	150	150	150
1550	65	67	70	74	78	82	86	91	97	103	111	119	129	141	150	150	150	150	150	150	150	150	150	150	150
1500	63	65	68	71	75	79	83	88	94	100	107	115	125	136	150	150	150	150	150	150	150	150	150	150	150
1450	60	63	66	69	73	76	81	85	91	97	104	112	121	132	145	150	150	150	150	150	150	150	150	150	150
1400	58	61	64	67	70	74	78	82	88	93	100	108	117	127	140	150	150	150	150	150	150	150	150	150	150
1350	56	59	61	64	68	71	75	79	84	90	96	104	113	123	135	150	150	150	150	150	150	150	150	150	150
1300	54	57	59	62	65	68	72	76	81	87	93	100	108	118	130	144	150	150	150	150	150	150	150	150	150
1250	52	54	57	60	63	66	69	74	78	83	89	96	104	114	125	139	150	150	150	150	150	150	150	150	150
1200	50	52	55	57	60	63	67	71	75	80	86	92	100	109	120	133	150	150	150	150	150	150	150	150	150
1150	48	50	52	55	58	61	64	68	72	77	82	88	96	105	115	128	144	150	150	150	150	150	150	150	150
1100	46	48	50	52	55	58	61	65	69	73	79	85	92	100	110	122	138	150	150	150	150	150	150	150	150
1050	44	46	48	50	53	55	58	62	66	70	75	81	88	95	105	117	131	150	150	150	150	150	150	150	150
1000	42	43	45	48	50	53	56	59	63	67	71	77	83	91	100	111	125	143	150	150	150	150	150	150	150
950	40	41	43	45	48	50	53	56	59	63	68	73	79	86	95	106	119	136	150	150	150	150	150	150	150
900	38	39	41	43	45	47	50	53	56	60	64	69	75	82	90	100	113	129	150	150	150	150	150	150	150
850	35	37	39	40	43	45	47	50	53	57	61	65	71	77	85	94	106	121	142	150	150	150	150	150	150
800	33	35	36	38	40	42	44	47	50	53	57	62	67	73	80	89	100	114	133	150	150	150	150	150	150
750	31	33	34	36	38	39	42	44	47	50	54	58	63	68	75	83	94	107	125	150	150	150	150	150	150
700	29	30	32	33	35	37	39	41	44	47	50	54	58	64	70	78	88	100	117	140	150	150	150	150	150
650	27	28	30	31	33	34	36	38	41	43	46	50	54	59	65	72	81	93	108	130	150	150	150	150	150
600	25	26	27	29	30	32	33	35	38	40	43	46	50	55	60	67	75	86	100	120	150	150	150	150	150
550	23	24	25	26	28	29	31	32	34	37	39	42	46	50	55	61	69	79	92	110	138	150	150	150	150
500	21	22	23	24	25	26	28	29	31	33	36	38	42	45	50	56	63	71	83	100	125	150	150	150	150