



NUTRITIONAL ASSESSMENT

NUTRITIONAL HISTORY: History of everything the patient has been eating, duration of inappetence/anorexia, weight changes, GI signs

EXAMINATION: Body weight (BW), body condition score (BCS) and muscle condition score (MCS)



ESTABLISHMENT OF NUTRITION PROTOCOL

1 CALCULATE DAILY ENERGY REQUIREMENTS DURING HOSPITALIZATION for adult cats/dogs = RER (Resting Energy Requirements) x 1.0 as a starting point

RER (in kcal/day) = 70 x (current BW in kg)^{0.75} for ideal/underweight patients or consider **RER (in kcal/day) = 70 x (ideal BW in kg)^{0.75}** for overweight/obese patients

2 ASSISTED FEEDING SHOULD BE IMPLEMENTED WHEN:

- Impaired ability/inability to eat (e.g., jaw fractures, neurologic cases with normal gag reflex)
- Hepatic lipidosis or diabetic ketoacidosis
- Anorexia ≥ 3 days and/or hyporexia (consumption ≤ 80% RER) ≥ 5 days
- Any of the following:
 - BCS < 4/9 and/or involuntary weight loss
 - Muscle condition score is decreased (i.e., mild to severe muscle loss)
 - Diarrhea and controlled vomiting

3 CHOICE OF TUBE IN CASE OF TUBE FEEDING (non-exhaustive list):

- **Nasoesophageal or Nasogastric tubes** if:
 - Short term (< 5 days) while patient is hospitalized
 - General anesthesia not ideal
- **Esophagostomy or Gastrostomy tubes** if:
 - Longer term (> 5 days) or if patient to be discharged with feeding tube
 - Patient is stable for general anesthesia
 - Need to use thicker feeding tube blend (e.g., canned diets)

4 CHOICE OF REFEEDING SCHEDULE BASED ON DAY (D) FEEDING WAS INITIATED

Anorexia duration	Recommendation	Application ¹
No anorexia	Assess tolerance 1st day	D1: ½ RER; D2: RER
Anorexia < 3 days	Reach RER over 3 days	D1: ⅓ RER; D2: ⅔ RER; D3: RER
Anorexia ≥ 3 days	Reach RER over 5 days	D1: ¼ RER; D2: ½ RER; D3: ¾ RER; D4: ¾ RER; D5: RER

5 CHOICE OF FOOD:

- **According to method** (liquid diets for small feeding tubes)
- **According to nutritional considerations** (e.g., restricted protein and phosphorus for kidney disease)

¹ To be adjusted according to the pet's tolerance

² Beware of variations linked to hydration status, bladder repletion and other causes of weight variation

IMPLEMENTATION OF NUTRITION PROTOCOL AND FOLLOW-UP (TUBE FEEDING)

- **Start after the pet is stabilized** (hemodynamically stable, electrolytes corrected)
- **Flush the tube before and after each meal** (5-10 mL of room temperature water)
- **Use food warmed up to room temperature** (carefully check for hot spots before feeding)
 - **Warming Details – Check to ensure the temperature is correct before feeding:**
 1. Liquid temperature should be room temperature
 2. Use a warm water bath or a bottle warmer,* AVOID microwave heating
 3. Homogenize (gently swirl) to avoid uneven heating

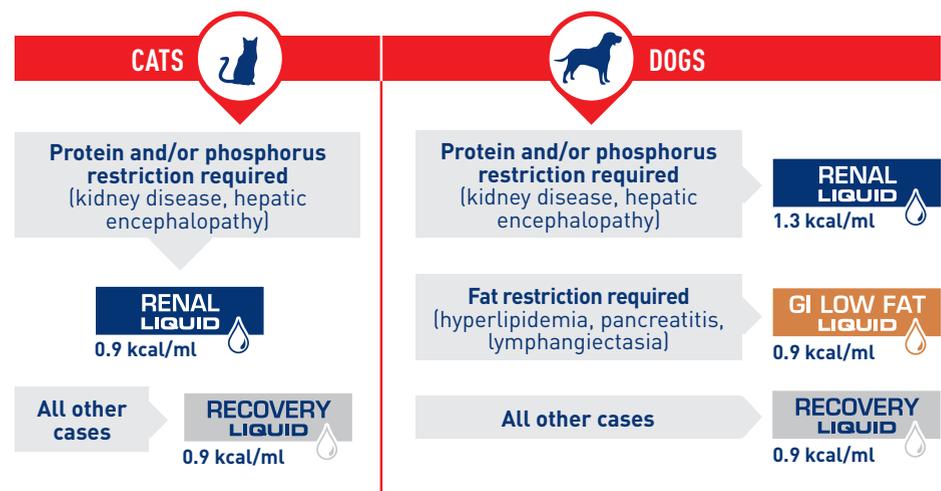
*If temperature can be controlled/regulated.
- **Guidelines for meals** (if small meals are not tolerated, consider constant rate infusion feeding)

Number of Feedings	Volume	Speed	Interval (between 2 meals)
≥ 4/day	≤ 10-20 mL/kgBW ¹	slow bolus: 15-20 min	≥ 3-4 hours

- **Check tolerance and efficacy:**
 - If signs of nausea are noted (lip smacking, salivation, etc.), reduce meal volume or switch to constant rate infusion feeding
 - Weight,² BCS, MCS, blood analysis, fecal scores/output, urine output
- **Tube feeding can be stopped when at least 75% of RER is consumed orally**

TIPS FOR SPONTANEOUS FOOD INTAKE BY THE PATIENT

- **Offer the pet's usual type of food** (i.e., dry or wet food)
- **Gently warm food to enhance aromas** (carefully check for hot spots before feeding)
- **Avoid medications in food or painful procedures during meals** (can trigger food aversion)
- **Weigh or measure food before and after meals to check calorie consumption** (goal = RER x 1.0 total if combined with tube feedings)
- **Reduce stress** (house cats separately from dogs, pheromone diffusers, etc.)



RECOVERY RS® is also available for oral intake by patients or for tubes ≥ 12 Fr





REFEEDING SCHEDULES ACCORDING TO DURATION OF ANOREXIA

The following chart includes guidelines meant to be a starting point for feeding volumes. Individual requirements may vary slightly, with each case evaluated on an individual basis.

BODY WEIGHT (kg)	RER (kcal/day)	ANOREXIA < 3 DAYS						ANOREXIA ≥ 3 DAYS									
		Day 1 1/3 RER		Day 2 2/3 RER		Day 3 100% RER		Day 1 1/4 RER		Day 2 1/2 RER		Day 3 2/3 RER		Day 4 3/4 RER		Day 5 100% RER	
		Total Daily Volume in mL/day divide into 4 or more meals		Total Daily Volume in mL/day divide into 4 or more meals		Total Daily Volume in mL/day divide into 4 or more meals		Total Daily Volume in mL/day divide into 4 or more meals		Total Daily Volume in mL/day divide into 4 or more meals		Total Daily Volume in mL/day divide into 4 or more meals		Total Daily Volume in mL/day divide into 4 or more meals		Total Daily Volume in mL/day divide into 4 or more meals	
		0.9 kcal/mL	1.3 kcal/mL														
2	118	44	30	87	60	131	91	33	23	65	45	87	60	98	68	131	91
2.5	139	52	36	103	71	155	107	39	27	77	54	103	71	116	80	155	107
3	160	59	41	118	82	177	123	44	31	89	61	118	82	133	92	177	123
3.5	179	66	46	133	92	199	138	50	34	100	69	133	92	149	103	199	138
4	198	73	51	147	102	220	152	55	38	110	76	147	102	165	114	220	152
4.5	216	80	55	160	111	240	166	60	42	120	83	160	111	180	125	240	166
5	234	87	60	173	120	260	180	65	45	130	90	173	120	195	135	260	180
5.5	251	93	64	186	129	279	193	70	48	140	97	186	129	210	145	279	193
6	268	99	69	199	138	298	206	75	52	149	103	199	138	224	155	298	206
6.5	285	106	73	211	146	317	219	79	55	158	110	211	146	237	164	317	219
7	301	112	77	223	154	335	232	84	58	167	116	223	154	251	174	335	232
7.5	317	117	81	235	163	352	244	88	61	176	122	235	163	264	183	352	244
8	333	123	85	247	171	370	256	92	64	185	128	247	171	277	192	370	256
9	364	135	93	269	187	404	280	101	70	202	140	269	187	303	210	404	280
10	394	146	101	292	202	437	303	109	76	219	151	292	202	328	227	437	303
11	423	157	108	313	217	470	325	117	81	235	163	313	217	352	244	470	325
12	451	167	116	334	231	501	347	125	87	251	174	334	231	376	260	501	347
13	479	177	123	355	246	532	369	133	92	266	184	355	246	399	276	532	369
14	507	188	130	375	260	563	390	141	97	281	195	375	260	422	292	563	390
15	534	198	137	395	274	593	410	148	103	296	205	395	274	445	308	593	410
16	560	207	144	415	287	622	431	156	108	311	215	415	287	467	323	622	431
17	586	217	150	434	301	651	451	163	113	326	225	434	301	488	338	651	451
18	612	227	157	453	314	680	471	170	118	340	235	453	314	510	353	680	471
19	637	236	163	472	327	708	490	177	123	354	245	472	327	531	368	708	490
20	662	245	170	490	339	736	509	184	127	368	255	490	339	552	382	736	509
25	783	290	201	580	401	870	602	217	151	435	301	580	401	652	452	870	602
30	897	332	230	665	460	997	690	249	173	499	345	665	460	748	518	997	690
35	1007	373	258	746	517	1119	775	280	194	560	387	746	517	839	581	1119	775
40	1113	412	285	825	571	1237	856	309	214	619	428	825	571	928	642	1237	856
45	1216	450	312	901	624	1351	936	338	234	676	468	901	624	1014	702	1351	936
50	1316	487	337	975	675	1462	1012	366	253	731	506	975	675	1097	759	1462	1012