

Table 4.5. (cont.)

BW (lb)	Daily kcal	BW (lb)	Daily kcal	BW (lb)	Daily kcal	BW (lb)	Daily kcal
44	2648	96	4754	148	6577	200	8244
45	2693	97	4791	149	6610	205	8398
46	2738	98	4828	150	6644	210	8551
47	2782	99	4865	151	6677	215	8703
48	2827	100	4902	152	6710	220	8854
49	2871	101	4938	153	6743	225	9005
50	2915	102	4975	154	6776	230	9155
51	2958	103	5012	155	6809	240	9451
52	3002	104	5048	156	6842	250	9745

BW, body weight.

^aDER = 4 × RER (resting energy requirement).

■ Growth

Growing puppies require more daily energy than do adult dogs to support bone, muscle, and tissue growth. Puppies who weigh up to about 50% of their adult body weight have the highest energy requirement, as a considerable amount of growth is occurring during this period. The daily energy requirement for puppies up to 50% of their adult body weight is calculated by the formula $DER = 3 \times RER$. As puppies get older, the rate of growth slows, and the daily energy requirement starts to decrease. The daily energy requirement for puppies that are 50%–80% of their adult body weight is calculated by the formula $DER = 2.5 \times RER$. Older puppies are still growing, but at a much slower rate. The daily energy requirement for puppies that are 80%–100% of their adult body weight is calculated by the formula $DER = 2 \times RER$. The daily energy requirements for puppies up to 50% of their adult body weight, for puppies 50%–80% of their adult body weight, and for puppies 80%–100% of their adult body weight can be found in Tables 4.6, 4.7, and 4.8, respectively.

For growing puppies, it is important to evaluate body condition on a weekly basis and to adjust dietary energy intake accordingly. Energy intake should be moderated, especially in puppies of large breeds. Maximal growth is not necessarily optimal growth. Rapid growth leads to abnormal skeletal development. A slower growth rate reduces

Table 4.6. Daily energy requirements (DER) for puppies up to 50% of their adult weight (about 5 months of age).^a

BW (lb)	Daily kcal	BW (lb)	Daily kcal	BW (lb)	Daily kcal	BW (lb)	Daily kcal
1	116	53	2284	105	3813	157	5156
2	196	54	2316	106	3840	158	5181
3	265	55	2348	107	3868	159	5205
4	329	56	2380	108	3895	160	5230
5	389	57	2412	109	3922	161	5254
6	446	58	2443	110	3949	162	5279
7	500	59	2475	111	3976	163	5303
8	553	60	2506	112	4002	164	5328
9	604	61	2537	113	4029	165	5352
10	654	62	2569	114	4056	166	5376
11	702	63	2600	115	4082	167	5401
12	750	64	2630	116	4109	168	5425
13	796	65	2661	117	4136	169	5449
14	841	66	2692	118	4162	170	5473
15	886	67	2722	119	4189	171	5497
16	930	68	2753	120	4215	172	5521
17	973	69	2783	121	4241	173	5545
18	1016	70	2813	122	4267	174	5569
19	1058	71	2843	123	4294	175	5593
20	1099	72	2873	124	4320	176	5617
21	1140	73	2903	125	4346	177	5641
22	1181	74	2933	126	4372	178	5665
23	1221	75	2963	127	4398	179	5689
24	1261	76	2992	128	4424	180	5713
25	1300	77	3022	129	4450	181	5737
26	1339	78	3051	130	4476	182	5760
27	1377	79	3081	131	4501	183	5784
28	1415	80	3110	132	4527	184	5808
29	1453	81	3139	133	4553	185	5832
30	1490	82	3168	134	4579	186	5855
31	1527	83	3197	135	4604	187	5879
32	1564	84	3226	136	4630	188	5902
33	1601	85	3254	137	4655	189	5926

Table 4.6. (cont.)

BW (lb)	Daily kcal	BW (lb)	Daily kcal	BW (lb)	Daily kcal	BW (lb)	Daily kcal
34	1637	86	3283	138	4681	190	5949
35	1673	87	3312	139	4706	191	5973
36	1709	88	3340	140	4731	192	5996
37	1744	89	3369	141	4757	193	6020
38	1779	90	3397	142	4782	194	6043
39	1814	91	3425	143	4807	195	6066
40	1849	92	3453	144	4833	196	6090
41	1884	93	3481	145	4858	197	6114
42	1918	94	3510	146	4883	198	6136
43	1952	95	3537	147	4908	199	6159
44	1986	96	3565	148	4933	200	6183
45	2020	97	3593	149	4958	205	6298
46	2053	98	3621	150	4983	210	6413
47	2087	99	3649	151	5008	215	6527
48	2120	100	3676	152	5033	220	6641
49	2153	101	3704	153	5057	225	6754
50	2186	102	3731	154	5082	230	6866
51	2219	103	3759	155	5107	240	7089
52	2251	104	3786	156	5132	250	7309

BW, body weight.

^aDER = 3 × RER (resting energy requirement).

Table 4.7. Daily energy requirement (DER) for puppies at 50%–80% of their adult weight.^a

BW (lb)	Daily kcal	BW (lb)	Daily kcal	BW (lb)	Daily kcal	BW (lb)	Daily kcal
1	97	53	1903	105	3178	157	4297
2	163	54	1930	106	3200	158	4317
3	221	55	1957	107	3223	159	4338
4	274	56	1983	108	3246	160	4358
5	324	57	2010	109	3268	161	4379
6	371	58	2036	110	3291	162	4399
7	417	59	2062	111	3313	163	4419
8	461	60	2088	112	3335	164	4440

Table 4.7. (cont.)

BW (lb)	Daily kcal	BW (lb)	Daily kcal	BW (lb)	Daily kcal	BW (lb)	Daily kcal
9	503	61	2115	113	3358	165	4460
10	545	62	2140	114	3380	166	4480
11	585	63	2166	115	3402	167	4500
12	625	64	2192	116	3424	168	4521
13	663	65	2218	117	3446	169	4541
14	701	66	2243	118	3468	170	4561
15	738	67	2269	119	3490	171	4581
16	775	68	2294	120	3512	172	4601
17	811	69	2319	121	3534	173	4621
18	847	70	2344	122	3556	174	4641
19	882	71	2370	123	3578	175	4661
20	916	72	2395	124	3600	176	4681
21	950	73	2419	125	3622	177	4701
22	984	74	2444	126	3643	178	4721
23	1017	75	2469	127	3665	179	4741
24	1050	76	2494	128	3687	180	4761
25	1083	77	2518	129	3708	181	4781
26	1115	78	2543	130	3730	182	4800
27	1147	79	2567	131	3751	183	4820
28	1179	80	2591	132	3773	184	4840
29	1211	81	2616	133	3794	185	4860
30	1242	82	2640	134	3815	186	4879
31	1273	83	2664	135	3837	187	4899
32	1303	84	2688	136	3858	188	4919
33	1334	85	2712	137	3879	189	4938
34	1364	86	2736	138	3901	190	4958
35	1394	87	2760	139	3922	191	4977
36	1424	88	2783	140	3943	192	4997
37	1453	89	2807	141	3964	193	5016
38	1483	90	2831	142	3985	194	5036
39	1512	91	2854	143	4006	195	5055
40	1541	92	2878	144	4027	196	5075
41	1570	93	2901	145	4048	197	5094
42	1598	94	2925	146	4069	198	5114

Table 4.7. (cont.)

BW (lb)	Daily kcal	BW (lb)	Daily kcal	BW (lb)	Daily kcal	BW (lb)	Daily kcal
43	1627	95	2948	147	4090	199	5133
44	1655	96	2971	148	4111	200	5152
45	1683	97	2994	149	4132	205	5249
46	1711	98	3017	150	4152	210	5344
47	1739	99	3041	151	4173	215	5439
48	1767	100	3064	152	4194	220	5534
49	1794	101	3086	153	4214	225	5628
50	1822	102	3109	154	4235	230	5722
51	1849	103	3132	155	4256	240	5907
52	1876	104	3155	156	4276	250	6091

BW, body weight.

^aDER = 2.5 × RER (resting energy requirement).

Table 4.8. Daily energy requirements (DER) for puppies 80%–100% of their adult weight.^a

BW (lb)	Daily kcal	BW (lb)	Daily kcal	BW (lb)	Daily kcal	BW (lb)	Daily kcal
1	78	53	1522	105	2542	157	3437
2	130	54	1544	106	2560	158	3454
3	177	55	1565	107	2578	159	3470
4	219	56	1587	108	2596	160	3487
5	259	57	1608	109	2614	161	3503
6	297	58	1629	110	2632	162	3519
7	334	59	1650	111	2650	163	3536
8	369	60	1671	112	2668	164	3552
9	403	61	1692	113	2686	165	3568
10	436	62	1712	114	2704	166	3584
11	468	63	1733	115	2722	167	3600
12	500	64	1754	116	2739	168	3617
13	531	65	1774	117	2757	169	3633
14	561	66	1795	118	2775	170	3649
15	591	67	1815	119	2792	171	3665
16	620	68	1835	120	2810	172	3681
17	649	69	1855	121	2827	173	3697
18	677	70	1876	122	2845	174	3713
19	705	71	1896	123	2862	175	3729

Table 4.8. (cont.)

BW (lb)	Daily kcal	BW (lb)	Daily kcal	BW (lb)	Daily kcal	BW (lb)	Daily kcal
20	733	72	1916	124	2880	176	3745
21	760	73	1936	125	2897	177	3761
22	787	74	1955	126	2915	178	3777
23	814	75	1975	127	2932	179	3793
24	840	76	1995	128	2949	180	3809
25	866	77	2015	129	2967	181	3824
26	892	78	2034	130	2984	182	3840
27	918	79	2054	131	3001	183	3856
28	943	80	2073	132	3018	184	3872
29	969	81	2093	133	3035	185	3888
30	993	82	2112	134	3052	186	3903
31	1018	83	2131	135	3069	187	3919
32	1043	84	2150	136	3086	188	3935
33	1067	85	2170	137	3103	189	3951
34	1091	86	2189	138	3120	190	3966
35	1115	87	2208	139	3137	191	3982
36	1139	88	2227	140	3154	192	3997
37	1163	89	2246	141	3171	193	4013
38	1186	90	2265	142	3188	194	4029
39	1210	91	2283	143	3205	195	4044
40	1233	92	2302	144	3222	196	4060
41	1256	93	2321	145	3238	197	4075
42	1279	94	2340	146	3255	198	4091
43	1301	95	2358	147	3272	199	4106
44	1324	96	2377	148	3289	200	4122
45	1347	97	2395	149	3305	205	4199
46	1369	98	2414	150	3322	210	4275
47	1391	99	2432	151	3338	215	4352
48	1413	100	2451	152	3355	220	4427
49	1435	101	2469	153	3372	225	4502
50	1457	102	2487	154	3388	230	4577
51	1479	103	2506	155	3405	240	4726
52	1501	104	2524	156	3421	250	4873

BW, body weight.

^aDER = 2 × RER (resting energy requirement).

the incidence of abnormalities and does not affect the ability of the puppy to attain its normal adult size. The goal of feeding is to provide all the essential nutrients while keeping the growing puppy “lean.” Puppies should look trim, with only a slight layer of fat over the ribs. The puppy is too fat if the ribs cannot be felt with gentle pressure on the rib cage. The puppy is too thin if the ribs can be seen easily when the puppy moves.

■ Senior Dogs

It can be difficult to determine the energy needs of the senior pet. Dogs are considered to be senior when they have reached half their life expectancy; thus, most are considered to be senior at about 7 years of age. The daily energy requirement of a senior dog is very dependent on body condition, activity level, reproductive status, and the presence of underlying medical conditions. Many senior dogs are still very active in performance events, and some females may still be reproducing; thus, these seniors will have increased energy requirements. However, senior dogs are more prone to obesity and thus would require a lower daily energy requirement. As dogs get very old, the daily energy requirement may be higher because of decreased digestion of nutrients and underlying medical conditions.

For the healthy adult senior dog over 7 years of age with reduced activity level, the daily energy requirement should be decreased to avoid the occurrence of obesity. The daily energy requirement in this case is calculated by the formula $DER = 1.1 \times RER$ and can be found in Table 4.9. For older dogs that do not digest nutrients well or that have underlying medical conditions, the daily energy requirement could be similar to that for an intact adult dog (Table 4.1). Senior dogs must be monitored closely for body weight and body condition, with adjustment of daily energy intake as needed.

■ Gestation

Daily energy needs increase during gestation, and those needs are dependent on the prior nutritional status of the bitch, size of the bitch, and the number of fetuses carried by the bitch. During the first 5 to 6 weeks, most dogs do not require additional energy, although in about the sixth week of gestation the amount of energy fed could be increased. The daily energy requirement increases during the last few weeks of gestation, while the fetuses are rapidly growing. The daily energy requirement for the early weeks of gestation is calculated by the