

WEIGHT DURING PREGNANCY WITH OBSERVATIONS AND STATISTICS

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BLOOD pressure readings and urinalysis are considered essential in prenatal care. The condition of the patient may be determined from the results obtained from this routine. The weight of the patient recorded systematically is also vital as an index to the patient's condition.

Zangemeister's investigation on the connection between pregnancy edema, pregnancy nephritis and eclampsia shows the value of recording the patient's weight during pregnancy. Zangemeister believed that edema in the brain which caused the convulsions of eclampsia was due to the abnormal permeability of the vessel walls. Wieloch claims that the edema in the brain can be detected early by systematic weighing of the patient, and thus prevent pregnancy nephritis and eclampsia by measures which have a tendency to edema. He accomplishes this by intramuscular injections of colloidal solutions, which, he claims, combats the abnormal permeability of the capillary walls. By this means, he reduced in weight 50 per cent of seventy-five women given injections of 5 c.c. of a solution of gelatin, and 80 per cent of fifty-one women injected with 10 c.c. of a 5 per cent acacia-Ringer's solution. In giving the injections, daily or at longer intervals, Wieloch was guided by the weight. The question is whether the edema is due to the abnormal permeability of the vessel walls, or to a change in the blood as a result of faulty metabolism.

Gassner found an average monthly increase for the last three months of from three and one-half to five and one-half pounds, being in proportion to the weight of the individual, and more in the multigravidae.

The loss of weight in the beginning of the puerperium is the result of the emptying of the uterus of its contents, and of the strain of delivery. Long and arduous labors will cause reduction of weight as in other physical contests. Postpartum patients on a liberal diet will not lose in weight as those on a restricted diet.

The gain in weight during pregnancy is the result of the weight of the fetus, the placenta, the amniotic fluid and the enlargement of the uterus and the mammary glands. This amounts to about fifteen pounds. For the average patient, the food and metabolism during the nonpregnant period is sufficient to answer all demands of the fetus and appendages during gestation. The amount of food taken above the demands of the body tissues and for fetal development is stored up in the body tissue as fat. Greater work is required of the heart to meet this unnecessary requirement.

The first trimester of pregnancy is characterized by lassitude, and probably a loss of weight attributable to nausea and inability to retain food, and lack of appetite. During this period, a high carbohydrate diet is efficacious in preventing vomiting of pregnancy. As nausea and vomiting disappear and the appetite increases, the carbohydrate diet should be limited, if an abnormal gain in weight is to be prevented during pregnancy. Two thousand to three thousand calories per day are sufficient to sustain the average pregnant patient.

The diet should consist of food sufficient in bulk to cause elimination, furnish vitamins required for sustenance, and reproduction. This diet includes lettuce, green vegetables, fruits, meat in moderation, and a limited amount of milk, which furnishes calcium in an excellent form.

An excessive diet of carbohydrates and fats, and low in vitamins causes intestinal stasis, provides a field for putrefaction and growth of intestinal flora, from which toxins are absorbed. These toxins cause extra work for the liver and kidneys and other vital organs. Intestinal stasis encourages lesions of the colon, and later on infection of the various organs of the body. In my opinion, this is the reason the pregnant woman frequently complains of pain in the intestinal tract, especially in the right lower quadrant, oftentimes confused with pathology of the appendix. If the patient is permitted to gain in weight and improper or poorly selected food is partaken of, lesions are formed in the tract through which parasites enter the blood stream and infect the various organs of the body.

To prevent many of the complications during pregnancy, the routine recording of the patient's weight is necessary. In my paper, "Weight During Pregnancy," read before the Section on Gynecology and Obstetrics, State Medical Association of Texas, Ft. Worth, Texas, May, 1923, I reported the incidence of weight in one hundred consecutive cases during pregnancy.

Records of weight during pregnancy made systematically each week together with blood pressure readings and frequent examinations of the urine convince me that weight is equally important with these other prophylactic measures.

I am reporting 236 cases showing weight during pregnancy with its effect upon the health of the patient. These do not include all of the cases that have been under my supervision, but will illustrate my point that the control of weight during pregnancy is of consequence. My conclusions are based upon my individual records over a period of several years.

The weight and blood pressure of these patients were recorded each week, with the exception of a few, and cover a period of six or seven months. Each case was considered individually. The relationship which existed between the standard weight of the patient and the

weight at the first visit determined the course to pursue as to the loss or gain of weight during pregnancy. The standard weight which was used as a basis is one recognized by a standard life insurance company.

The average gain in weight for each patient in this series is 13 pounds and 4 ounces. There were 117 multiparae, and 119 primiparae. The average gain for the multiparae was 12 lb. and 3 oz., while in the primiparae the average gain was 14 lb. and 3 oz. Of the 117 multiparae, 103 gained in weight, and the average gain was 13 lb. and 14 oz. Of the 119 primiparae, 108 gained in weight, and the average gain was 16 lb. and 4 oz. There were 14 multiparae in this series of 236 cases who lost in weight, with an average loss of 9 lb. and 11 oz., while 11 primiparae lost in weight, with an average loss of 7 lb. and 3 oz.

There were 45 multiparae who gained 15 lb., or more, an average gain of 22 lb. and $2\frac{1}{2}$ oz., in comparison with 57 primiparae who gained 15 lb., or more, with an average gain of 23 lb. and 8 oz.

There were 58 multiparae whose gain was less than 15 lb., with an average gain of 7 lb. and 8 oz.; while 51 primiparae whose gain was less than 15 lb. had an average gain of 8 lb. and 2 oz.

The greatest gain in any patient was 41 lb., a primipara, and the greatest gain in a multipara was 35 lb. The greatest loss was a multipara, who lost 25 lb., and the greatest loss in a primipara was 20 lb.

In this series of cases, the primipara has, by every law of averages, shown the greatest gain over the multipara. In my opinion, this is probably on account of the fact that most of the primiparae are young, not fully developed and may be under standard weight.

In this series of cases, there were 233 babies whose weight averaged 7 lb. and 13 oz. Of the 118 babies of the multiparae, the average weight was 7 lb. and $15\frac{3}{5}$ oz.; while of the 115 babies of the primiparae, the average weight was 7 lb. and $12\frac{1}{2}$ oz. There were 120 males whose average weight was 7 lb. and 15 oz. and 113 females whose average weight was 7 lb. and 6 oz. Of the number of males, 59 were of multiparae, with an average weight of 8 lb. and 1 oz., as compared with 61 males of the primiparae with an average weight of 7 lb. and $14\frac{1}{2}$ oz. There were 59 females of the multiparae, with an average weight of 7 lb. and 14 oz., and 54 females of the primiparae whose average weight was 7 lb. and $10\frac{1}{2}$ oz. Eighteen babies weighed over 9 lb., the largest being a male whose weight was 10 lb. and 12 oz. Thirteen of the 18 babies weighing over 9 lb. were males. The above baby which weighed 10 lb. and 12 oz. was postmature. The mother was a primipara, had symptoms of eclampsia, and refused induction of labor one month prior to delivery. Labor was normal.

A set of twins of a multipara are included in this series. A pre-

TABLE I

NUMBER OF CASES	PARA	AVERAGE GAIN OF WEIGHT
117	1 to 6	12 lb. - 3 oz. (5.52 Kg.)
119	Primipara	14 lb. - 3 oz. (6.43 Kg.)
236		13 lb. - 3 oz. (5.975 Kg.)

TABLE II

NUMBER OF CASES WHO GAINED	PARA	AVERAGE GAIN OF WEIGHT
103	1 to 6	13 lb. - 14 oz. (6.29 Kg.)
108	Primipara	16 lb. - 4 oz. (7.37 Kg.)

TABLE III

NUMBER OF CASES WHO LOST WEIGHT	PARA	AVERAGE LOSS OF WEIGHT
14	1 to 6	9 lb. - 11 oz. (4.39 Kg.)
11	Primipara	7 lb. - 3 oz. (3.26 Kg.)

TABLE IV

NUMBER OF CASES WHO GAINED 15 LB. OR MORE	PARA	AVERAGE GAIN OF WEIGHT
45	1 to 6	22 lb. - 2½ oz. (10.05 Kg.)
57	Primipara	23 lb. - 8 oz. (10.66 Kg.)

TABLE V

NUMBER OF CASES WHO GAINED LESS THAN 15 LB.	PARA	AVERAGE GAIN OF WEIGHT
58	1 to 6	7 lb. - 8 oz. (3.4 Kg.)
51	Primipara	8 lb. - 2 oz. (3.68 Kg.)

Greatest gain in any patient was 41 lb. (18.6 Kg.), a primipara; in a multipara 35 lb. (15.87 Kg.)

Greatest loss in any patient was 25 lb. (11.34 Kg.), a multipara; in a primipara 20 lb. (9.07 Kg.)

mature baby, hydrops universalis, and two anencephalic monsters were not included in the calculations.

In this number are: one set of twins, one premature not included in the calculation, and three, one of which was a hydropic fetus, and two anencephalic.

I have attempted to classify the records (Table VII) so as to show by comparison how some patients may gain in weight and others lose. The first weight given is a record of the weight of the first visit, and the next is the weight just previous to delivery. The blood pressure given is that recorded at the first and last visits. The weight and blood pressure of each patient has been recorded each week although not shown in this Table VII.

These records are practically the same as those included in the series of 236 reported, and are classified according to pathology which

had previously existed in the history of the patient and of condition which arose during pregnancy.

In considering weight during pregnancy in a patient who had previously had tuberculosis and who was underweight at the beginning of pregnancy, an effort was made to increase her weight a moderate amount. There is only one of these patients who had active tubercu-

TABLE VI
WEIGHTS OF BABIES

NUMBER OF BABIES 233	AVERAGE WEIGHT 7 lb. - 13 oz. (3443.75 grams.)
NUMBER OF BABIES OF MULTIPARA 118	AVERAGE WEIGHT 7 lb. - 15 $\frac{3}{8}$ oz. (3617.46 grams.)
NUMBER OF BABIES OF PRIMIPARA 115	AVERAGE WEIGHT 7 lb. - 12 $\frac{1}{2}$ oz. (3529.57 grams.)
TOTAL NUMBER OF MALES 120	AVERAGE WEIGHT 7 lb. - 15 oz. (3600.45 grams)
TOTAL NUMBER OF FEMALES 113	AVERAGE WEIGHT 7 lb. - 6 oz. (3345.3 grams)
NUMBER OF MALES OF MULTIPARA 59	AVERAGE WEIGHT 8 lb. - 1 oz. (3657.15 grams)
NUMBER OF FEMALES OF MULTIPARA 59	AVERAGE WEIGHT 7 lb. - 14 oz. (3572.1 grams)
NUMBER OF MALES OF PRIMIPARA 61	AVERAGE WEIGHT 7 lb. - 14 $\frac{1}{2}$ oz. (3586.27 grams)
NUMBER OF FEMALES OF PRIMIPARAE 54	AVERAGE WEIGHT 7 lb. - 10 $\frac{1}{2}$ oz. (3472.87 grams)

Eighteen babies, 13 of which were males, weighed over 9 lb., (4082.4 grams) largest 10 lb. - 12 oz., (4876.2 grams) male.

losis. She gained twenty pounds, was thirty pounds over standard weight, and is now in an arrested state.

The patient with exophthalmic goiter was operated during pregnancy, and later came under my supervision in the last trimester. No particular attempt was made to prevent an increase in weight, yet she gained but three and one-half pounds. Her blood pressure was usually high. She was very nervous. Both labor and the puerperium were normal.

All of the cases reported under "endocrine disturbance" were not typical. These patients on their first visit were over standard weight from four to seventy-nine pounds, and were cautioned that an excessive gain was hazardous. Many of these patients were given thyroid extract for a period of several months. Their appetite was lessened and a reduction of weight was the result. Under this treatment, six

TABLE VII

DISEASE	AGE	PARA	HEIGHT	WEIGHT	ST. WT.	GAIN	LOSS	B. P.	URINE	BABY SEX	WT.
<i>Tuberculosis</i>	19	0	5 - 9½	160 - 168	141	8	—	$\frac{118}{75} \frac{122}{80}$	Neg.	f.	7-2
	25	1	5 - 6½	107 - 135	137	28	—	$\frac{100}{75} \frac{120}{70}$	“	m.	8
	41	5	5 - 7	160 - 180	150	20	—	$\frac{110}{70} \frac{115}{75}$	“	f.	7-7
	32	2	5 - 7	147 - 158	143	11	—	$\frac{120}{75} \frac{122}{70}$	“	m.	8-1
	21	1	5 - 3½	102 - 123	124	21	—	$\frac{118}{70} \frac{125}{70}$	“	f.	7-2
<i>Exophthalmic Goiter</i>	27	4	5 - 6	151½ - 155	135	3½	—	$\frac{135}{85} \frac{160}{92}$	“	m.	8-5
<i>Endocrine Disturbance</i>	21	2	5 - 4½	153 - 153½	127	½	—	$\frac{130}{80} \frac{120}{70}$	“	f.	7-2
	20	0	5 - 6	154 - 164	132	10	—	$\frac{104}{65} \frac{145}{80}$	“	f.	8-4½
	22	0	5 - 4¾	146 - 162	127	16	—	$\frac{118}{68} \frac{130}{80}$	“	f.	7-14
	35	4	5 - 4	138 - 148	134	10	—	$\frac{120}{75} \frac{122}{70}$	“	f.	7-4
	25	2	5 - 7	195 - 198	139	3	—	$\frac{142}{95} \frac{110}{75}$	“	{ f. 5-8 } { f. 7- }	
<i>Mental Alienation</i>	34	0	5 - 4	135 - 159	130	24	—	$\frac{118}{75} \frac{130}{85}$	“	m.	7-7
	27	0	5 - 5	135 - 133	131	—	2	$\frac{130}{70} \frac{112}{65}$	“	m.	8-6
	42	4	5 - 3	150 - 153	135	3	—	$\frac{160}{90} \frac{135}{72}$	“	f.	9-4
	37	3	5 - 4	125 - 149	134	24	—	$\frac{114}{70} \frac{145}{88}$	“	f.	8-8
	19	0	5 - 5½	116 - 135	127	19	—	$\frac{115}{65} \frac{120}{75}$	“	m.	7-11
<i>Epilepsy</i>	28	0	5 - 4½	166 - 166	129	0	0	$\frac{126}{70} \frac{120}{80}$	“	f.	7
<i>Chorea</i>	23	0	5 - 4	180 - 160	125	—	20	$\frac{110}{78} \frac{160}{95}$	“	m.	7-9
	30	4	5 - 5	156 - 160	135	4	—	$\frac{120}{80} \frac{120}{85}$	“	m.	5-10
	31	2	5 - 5	150 - 165	135	15	—	$\frac{120}{70} \frac{145}{88}$	Alb.	f.	6-6
<i>Diseases of the Heart</i>	23	0	5 - 0	93 - 99	114	6	—	$\frac{95}{65} \frac{95}{68}$	Neg.	m.	6
	23	1	5 - 2½	105 - 136	120	31	—	$\frac{125}{55} \frac{145}{90}$	“	f.	7-2
	16	0	5 - 3	98 - 110	120	12	—	$\frac{160}{125}$	Alb. Casts Blood	m.	7-14
	28	0	5 - 7	135 - 145	139	10	—	$\frac{190}{70} \frac{192}{80}$	Neg.	f.	5-
	19	0	5 - 6	140 - 151	128	11	—	$\frac{140}{70} \frac{150}{90}$	Neg.	f.	7-12
	26	1	5 - 5	105 - 137	131	32	—	$\frac{118}{70} \frac{120}{75}$	Neg.	m.	6-8

TABLE VII—CONT'D

DISEASE	AGE	PARA	HEIGHT	WEIGHT	ST. WT.	GAIN	LOSS	B. P.	URINE	BABY SEX	WT
<i>Appendectomy previous to Gestation</i>	19	0	5-4 $\frac{1}{2}$	125 - 165	124	40	—	$\frac{130}{80}$ $\frac{134}{80}$	Neg.	m.	7-8
	21	0	5-1 $\frac{1}{4}$	119 - 134	117	15	—	$\frac{125}{75}$ $\frac{115}{80}$	"	m.	8-8
	26	0	5-7	141 - 147	139	6	—	$\frac{130}{80}$ $\frac{118}{75}$	"	f.	7-4
	31	2	5-2 $\frac{1}{2}$	119 - 129	125	10	—	$\frac{120}{70}$ $\frac{128}{75}$	"	m.	7-6
	22	0	5-5	120 - 140	128	20	—	$\frac{120}{85}$ $\frac{118}{80}$	"	n.	8-2
<i>Nephritis following eclampsia of previous deliveries</i>	28	1	5-5	124 - 126	131	2	—	$\frac{170}{100}$ $\frac{165}{95}$	Alb.	m.	4-1 $\frac{1}{2}$
	37	2	5-3	134 - 135	131	1	—	$\frac{135}{80}$ $\frac{165}{110}$	"	f.	6-8
	36	1	5-5	140 - 150	139	10	—	$\frac{195}{100}$ $\frac{210}{120}$	Alb.	f.	7-8
	31	1	5-5	152 - 140	135	—	12	$\frac{140}{70}$ $\frac{118}{70}$	Neg.	f.	5-7
<i>Pyelitis</i>	27	3	5-4	189 - 170	127	—	19	$\frac{130}{75}$ $\frac{114}{65}$	Pus Alb.	m.	8-5
	24	1	5-5	153 - 151	128	—	2	$\frac{112}{70}$ $\frac{115}{70}$	Pus Alb.	m.	8
	23	0	5-3	128 - 140	122	12	—	$\frac{130}{60}$ $\frac{130}{80}$	Pus Alb.	m.	7-14
<i>Cesarean section</i>	32	0	5-6	139 $\frac{1}{2}$ - 144	139	4 $\frac{1}{2}$	—	$\frac{102}{60}$ $\frac{130}{80}$	Neg.	m.	7-12
<i>Delivery after having previously had cesarean section</i>	34	1	5-6	140 - 150	139	10	—	$\frac{110}{75}$ $\frac{135}{80}$	"	f.	9
	24	1	5-5 $\frac{1}{2}$	143 - 148	130	5	—	$\frac{120}{80}$ $\frac{105}{70}$	"	m.	8-6 $\frac{1}{2}$
<i>Old Primipara</i>	42	0	5-9	149 - 170	159	21	—	$\frac{110}{75}$ $\frac{125}{80}$	"	f.	5-12 $\frac{1}{2}$
	35	0	5-6	172 - 167	143	—	5	$\frac{130}{90}$ $\frac{145}{100}$	"	f.	8-3
	37	0	5-6 $\frac{3}{4}$	164 - 160	146	—	4	$\frac{140}{80}$ $\frac{120}{85}$	"	m.	9
<i>Patients who had previously had large babies, of nine pounds, or more</i>	27	2	5-3 $\frac{1}{2}$	120 - 124	126	4	—	$\frac{110}{65}$ $\frac{112}{70}$	"	f.	7-12
	31	1	5-5	110 - 127	135	17	—	$\frac{110}{70}$ $\frac{120}{75}$	"	f.	7-14
	27	2	5-3 $\frac{3}{4}$	123 $\frac{1}{2}$ - 145	126	21 $\frac{1}{2}$	—	$\frac{125}{75}$ $\frac{115}{75}$	"	f.	8-2

patients reduced in weight, one as much as seventeen pounds. All of these patients felt better, were more active and mentally alert.

Some of the cases under "mental alienation" were patients who were under treatment of psychiatrists during pregnancy. These patients were usually difficult to control and did not cooperate because they failed to realize the necessity. Some of the other patients had previously had a breakdown. One patient developed insanity six

TABLE VII—CONT'D

DISEASE	AGE	PARA	HEIGHT	WEIGHT	ST. WT.	GAIN	LOSS	B. P.	URINE	BABY SEX	WT.
<i>Patients whose babies weighed nine pounds or more</i>	29	1	5 - 2½	135 - 148	122	13	—	120 128 80 75	Neg.	m.	9- 7
	19	0	5 - 4½	144½ - 162½	124	18	—	114 112 60 75	"	f.	9
	26	2	5 - 5½	150 - 162	133	12	—	110 110 60 60	"	m.	10-1
	23	1	5 - 4	159 - 165	125	6	—	115 120 70 70	"	m.	9-13
	30	1	5 - 5	117 - 141½	135	24½	—	100 135 70 80	"	f.	9- 5
	32	0	5 - 7¼	163½ - 158	146	—	5½	130 130 80 80	"	m.	9- 5½
	20	0	5 - 6	118 - 148	132	30	—	104 150 60 85	"	m.	10-12
	25	0	5 - 7½	153 - 180	142	27	—	125 108 65 75	"	m.	9
	23	0	5 - 3¼	121 - 130	122	9	—	110 100 60 70	"	m.	9
	24	0	5 - 3	137 - 160	120	23	—	130 130 80 80	"	m.	9- 4
<i>Normal cases No particular pathology as to personal history or that occurred during pregnancy or puerperium</i>	26	1	5 - 6½	132 - 136	135	4	—	115 116 65 60	"	m.	7- 4
	25	1	5 - 4	109 - 132	127	23	—	122 118 65 70	"	m.	8-14
	33	1	5 - 8	151 - 152	147	1	—	115 110 80 65	"	f.	7-10
	27	2	5 - 2	127 - 149	120	22	—	120 109 70 70	"	m.	7-14
	31	2	5 - 2½	143 - 153	125	10	—	130 130 75 80	"	m.	8-14
ABNORMAL FETUS											
<i>Hydrops-uni-versalis fetus</i>	28	2	5 - 2	150 - 162	120	12	—	115 145 85 85	"	m.	2260 gr. 38.5 cm.
<i>Deformed Genitals</i>	21	0	5 - 4½	118 - 135	127	17	—	145 150 90 100	"	m.	5- 4
<i>Anencephalic Monster (premature 7 months)</i>	28	0	5 - 1	115 - 117	118	2	—	110 110 80 80	"	f.	5
<i>Hydatidiform Mole</i>	19	0	5 - 3	120 - 130	120	10	—	100 125 60 75	"		

weeks after a normal delivery with no symptoms present during gestation.

The patient who had epilepsy was overweight at the first visit. She had but one or two attacks while under my supervision, and these were at a time when her weight increased two to five pounds because she failed to follow instructions relative to diet and elimination. Upon reduction of weight, she improved.

Three cases of chorea are recorded, two of these had chorea in early

childhood, the disease complicating their pregnancies. The other patient, when referred to me, was in a very critical condition and suffering intensely. The twitchings began in the left arm, extended to the left side and until the entire body was affected. These seizures were so severe that she shook the bed. Several teeth were extracted which were in poor condition. This caused immediate improvement, which lasted for about two weeks. Upon recurrence of the disease, I induced labor, which was uncomplicated. The patient immediately began to improve. Luminal was used throughout to control the seizures.

Patients with heart lesions should not gain more than fifteen pounds above that of standard weight. This makes labor easy and lessens the strain on the heart.

There were three patients in this series with eclampsia during previous pregnancies, and a high blood pressure. As they gained in weight, their blood pressure would rise. On reduction of weight, their blood pressure had a tendency to reduce. Patients of this type do better when the gain in weight is very moderate.

The diet should be very moderate for those patients whose pregnancy is complicated with pyelitis to prevent any particular gain in weight over standard.

There are two patients listed who had previously had cesarean section. They were given a test of labor, and each was delivered normally. An effort was made to prevent any particular gain in weight as they were both of standard weight at their first visit.

There should be no difficulty at the delivery of an old primipara if the gain in weight has not been above the reproductive gain.

The heart is capable of effectively meeting the demands of normal pregnancy, but may fail in its adaptiveness to an abnormal function of furnishing blood to unnecessary tissues acquired during pregnancy. The kidneys and liver should not be required during this physiologic process to carry an extra burden; neither should it be necessary for the digestive tract to dispose of food that the body does not need. An evidence of this embarrassment is shown by difficult breathing during pregnancy.

My observations relative to weight during pregnancy are as follows:

1. For those patients whose weight at the beginning of gestation is near standard, the gain for reproduction should not be more than fourteen pounds.

2. I find that gain in weight is greater in the primipara than in the multipara, although it has been thought that the opposite is the case.

3. Standard weight should be our guide. If the patient is below standard, the weight should be increased; if greatly above, reduction should be made moderately, or the prevention of any gain.

4. Patients whose weight is above standard and who continue to increase over the reproductive weight will manifest preeclamptic symptoms, as edema, high blood pressure and albuminuria.

5. Increased weight above the reproductive gain complicates cardiovascular-renal diseases, aggravates epilepsy and psychoses, and encourages stomach and intestinal disturbances.

6. Tuberculous patients under standard weight should be brought above the reproductive weight, but not greatly so.

7. Breast feeding is more successful in those patients whose gain is not above fifteen pounds.

8. The weight of the baby is apparently not so great in patients whose gain in weight is limited.

9. Certain endocrine disturbances during pregnancy increase the appetite, and, if not controlled, will result in excessive weight.

10. The duration of labor is shortened several hours where the gain in weight is not greater than fifteen pounds over standard weight.

11. An excessive gain in weight complicates labor, lowers resistance to infection, and is a factor in causing fetal injury.

12. An abnormal gain in weight is hazardous in a patient where cesarean section is indicated, or for one who has previously had a cesarean section.

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