TOLERATION OF THE CORSET: PRESCRIBING WHERE ONE CANNOT PROSCRIBE.*

BY

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(With illustrations.)

TOWARD the question of waist constriction one of three attitudes may be taken. First, hostility, intolerance. Second, helplessness, surrender to inevitable fashion, cynical indifference. Third, an opportunism that does the best it can, insistently remonstrant in harmful cases, wasting no time on neutral cases, and taking one's small part in the slow campaign of education looking toward developed habits of exercise, appreciation of normal body forms, and true taste in dress.

In actual practice the matter goes largely by default. We give vague warnings or prohibitions that are temporary and futile. Merely to order a corset "loosened" when it may be of vicious design, is like telling a chronic colitic no more than to be careful of his diet. As the woman with a toppling uterus cannot go wrapper-clad the gynecologist has to see that she is provided with some definite dress adjustment. Whether this turns out to be help or only lessened hurt, it is manifestly our duty to select, direct, or control these means. Surgery is often the easiest portion of our service. A study of details and individual adaptation in these matters wherein our efforts are met with smile or sneer or subterfuge we naturally shirk.

The fillip to our sagging or cynical spirits was given by what might be called the one recent piece of dispassionate and scientific writing on the subject, a combined study by gynecologist and orthopedist, by Reynolds and Lovett of Boston. Confining themselves to backache and posture problems, each put his

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failures to cure squarely up to the other, and, working together, they recorded many successes. I have been stimulated to resume old studies, and to publish the following observations (which are partly, also, the result of association with an orthopedist) even though conclusions based on a small amount of material must be necessarily incomplete and tentative.

SUMMARY.

Corsets may be classed as corrective, neutral and harmful.

The average corset still shows constriction at the waist line of the form if not of the degree of the hour-glass design.

My observation contradicts the claim that low abdominal girdling and "lifting" have taken the place of waist-line pressure. Tests show that in two-thirds of the cases there was greater pressure at the waist than lower on the abdomen, one-third being equal. In thin women neutral conditions were general. Pressures on the lower ribs still ran high. In one-half the cases all pressures ran high. The spring or gap of the corset when unhooked gives an excellent practical measure of the amount of pressure exerted, two and a half inches being the most that should be tolerated. Comparison of the girth over the corset with that measured around the undershirt is worthless as an index of constriction. Interior tests showed little effect on increase in vaginal pressures in corseted women whose abdominal walls and pelvic floor were firm, but they indicate a marked rise in intrapelvic pressure from exertion in corseted women whose muscles are flabby and interior supports relaxed. The tight corset harms vigorous women little, weaker women greatly.

Among postures one-half were found defective, one-third good. Alteration in or change of the corset often brought about marked improvement in attitude. A simple test consists in standing a patient with heels against a mark on the floor, and her side to the wall and noting the location of the scapula and buttock with and without the corset and any change for the better or worse in the center of gravity and in uprightness. Certain types of body form are particularly susceptible to defective corseting, such as the individual with the long and slender trunk.

Types Affected by Corsets.—The muscular and active woman, with abdominal walls of good tone, and pelvic floor firm and uninjured, with internal organs normally anchored and no great fat padding—this type is little harmed by corsets.

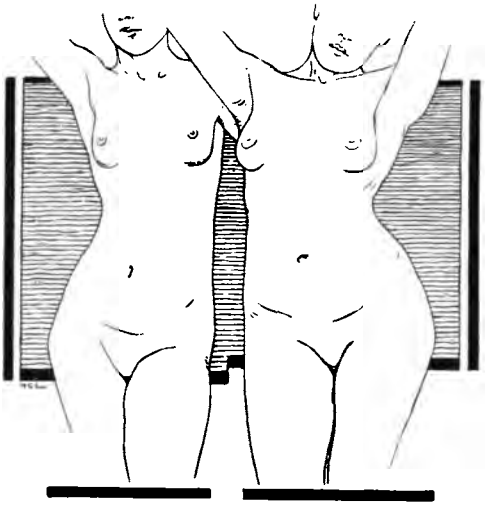
The relaxed woman, long bodied, her lower chest easily com-

pressed, her internal organs lacking fat cushions that are adequate and supports that are resilient (whether from defect in development or overstretch of pregnancy) this type is commonly harmed by corsets.

These types are contrasted in several figures here shown.

Let us discriminate. It is of use to make groups as follows:

1. A small class of women who suffer no apparent permanent injury even by excesses in pressure and constriction.



FIGS. 1, 2.—Body forms that are factors in questions of corset postures and pressures.

A thin build shows a long trunk seriously affected by constriction during adolescence.

A square build and broad trunk may be squeezed to develop fat pad deformities, but rarely into displacements or serious defects.

2. A large class where moderate degrees of constriction are tolerated with hardly appreciable harm.

3. A large class of women somewhat below par in whom abdominal constrictions slowly induce considerable alterations, sometimes permanent.

4. A small class wherein even slight departures from normal conditions cause serious disturbances.

APPARATUS AND PRESSURE OBSERVATIONS.

In studying corset pressures I have used a mercury manometer. The methods heretofore in use by Schatz, Hormann, Moritz,

and others as well as those employed in my experiments of 1885–1887, in measuring intraabdominal pressures, are not conveniently adapted to our work. While the water column connected to a water manometer gives to the eye finer vacillations than the

FIG. 2.

FIG. 3.

FIGS. 2, 3.—The long trunk type lays open to pressure a far longer area than the square trunk.

slow moving mercury can, it calls for a care in adjusting the level of the spot where the measure is taken to the level of the top of the fluid in the manometer that disbars it for readily multiplying records.

The mercury manometer, or the aneroid, influenced by an air column acting through a tube running to an air-filled bag, is subject to some minor inaccuracies, as from compressibility of the air. These may be disregarded, I imagine, as at 75 cm the

FIG. 4.

FIG. 5.

FIG. 4.—The crushed ribs of the long-bodied type after corseting.
FIG. 5.—The congenitally defective type that tolerates pressure badly.

air is compressed 1/20, at 150 cm., 1/10,—and most of our quiescent readings are below 75 cm. A record that can be made in a few minutes in an office will permit of comparison of essential differences and is clinically convenient. The woman who

avers that her corset is not tight is confronted by the flight of the needle of an aneroid. The pressures that cause prolapse or affect the post-partum uterus can be demonstrated either on the skin surface or in the vagina or rectum.

Description.—On the wall, at any convenient height for reading its face, hangs a mercury manometer like any of the sphygmomanometers. The most convenient is the aneroid of Short-

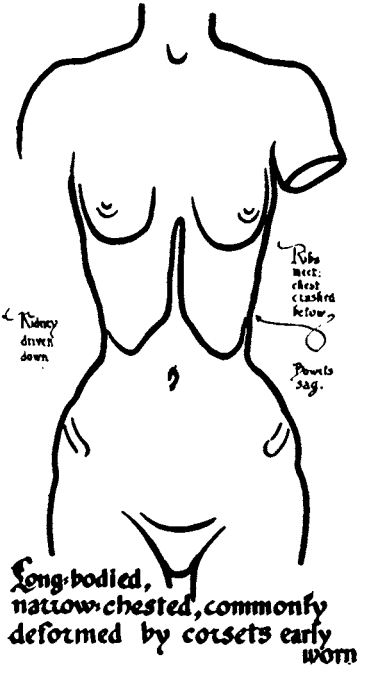


FIG. 6.

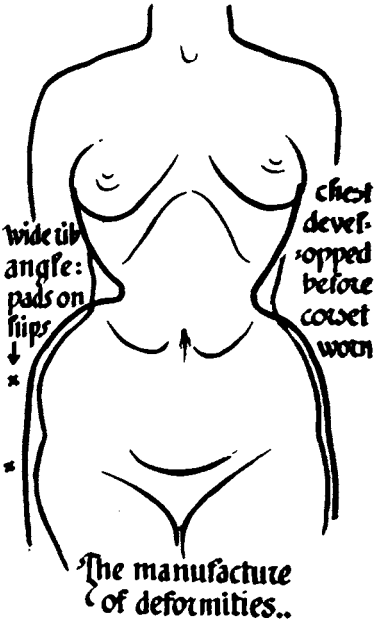


FIG. 7.

FIGS. 6, 7.—Tracings of the actual results in the two types: in the long trunk where corsets are early worn, this costal angle is permanently gone; in the other developed well. Severe though the pressure be, and ugly though the fat pads may bunch, the wide rib angle remains and the bowels hold their places.

Mason, the "Tyco" sold by Meyrowitz of Twenty-third Street, New York, which is about the size of a watch. A short piece of tubing connects below, with a T, one arm of which leads to a bulb, the other by tubing to a bag, The bag, which goes under the corset measures 5x5 cm. The 1 1/2 meter tubing must be of rubber that is inelastic or approximately so. All the joints

must be wired or else back-leak occurs. The bulb is compressed to fill the bag, then the air allowed to leak out till the bag is about 1 cm. thick, and the manometer face is rotated till the needle stands at 0.

The amount of tension in the bag or the size of the bag are indifferent matters, not affecting the record. The bag is placed under the corset at various places and the readings taken, first

FIG. 8.—Over feminine figure.

at the end of quiet expiration, then at the end of full inspiration (Fig. 31).

For observations in the vagina the thin smallest size elastic rubber ice bag is made to ride upon and above a two-inch spiral spring, soft rubber, circle pessary to which it is cemented in such a way that its lower end makes a resisting diaphragm across the opening of the ring. With patients having widely torn and gaping pelvic floors, as in old prolapses, this bag is cemented above an air-filled cushion pessary. The bag is gently distended when in place and the dial rotated to bring the needle to zero,

and then readings are recorded. For rectal use the bag is fastened to a rectal tube. For convenience I begin with the vaginal pressures of the recumbent woman in her corset; then let her sit on the edge of a chair, bending her body forward as in writing;

FIG. 9.

FIG. 9a.

FIG. 9.—The male type with vigorous muscles that gets little harm from high pressures. Esquiline Aphrodite "diudumena."

FIG. 9a.—Outline of actress; to be compared with outline of Fig. 9. Women need to have this contrast urgently and frequently presented.

next, I take standing records, and lastly, the pressures under the corset. The respiratory vacillations are to be observed before

records are made as a sign that the bag and tubing are freely communicating.

Intrapelvic Pressures.—It has been established that the average pressure at any spot in the pelvis (or abdomen) is represented by a column of water standing on the level of such spot,

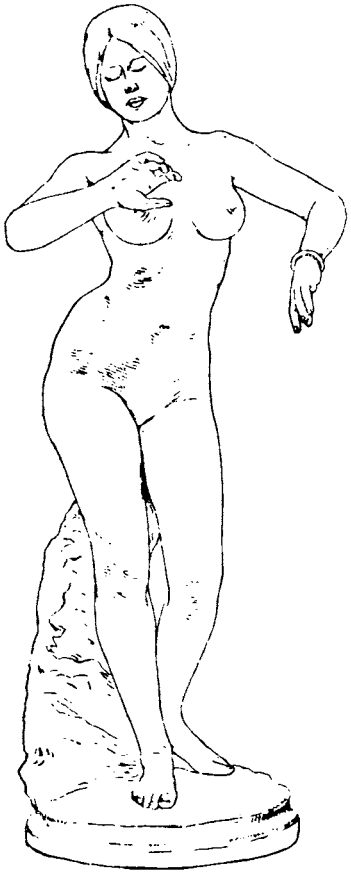


FIG. 10.

FIG. 10*a*.

FIGS. 10.—Corset deformities A. Trunk atrophy. Falguièrés statue made from Claude de Merode compared with the Venus of the Vatican, FIG. 10*a*.

whose height is the distance to the top of the abdominal cavity. For instance, in the rectum the pressure is 40 cm. of water in the standing position. This is the distance to the vault of the diaphragm. Lying down the pressure is 10 cm. of water or the distance to the anterior abdominal wall. The difference in

specific gravity between mercury and water is 13.6. Thus, lying down with clothing loose, the equivalent in the rectum with the mercury manometer would be about 8 millimeters, when our subtraction for bag tension has been made, and in the standing posture 30 mm. Hg., corrected. Lying down, the vaginal pressures run higher than this in muscular women.

FIG. 11.

FIG. 12.

FIGS. 11, 12.—Corset deformities A. Trunk atrophy of the model transferred literally and constantly to art, as in Lejeune's *Eve*.

These studies, extending over several years, were made in office practice among women for the most part in comfortable circumstances. They covered somewhat less than a hundred individuals., traced in outline, tested for pressures, measured

and fully noted, but less complete records were made of a very much larger number, and these also have been collated. Among shop girls the findings would be less favorable. These figures of mine refute the contention of O'Followell that the modern corset is an "abdominal" corset, lifting the lower abdomen rather than driving it downward, as in the old hour-glass shape. I expected to confirm his view in making these records. But we found that in over two-thirds the pressure was greater in the umbilical region than below it; which means that definite downward pressure was exerted. In this regard one-sixth were

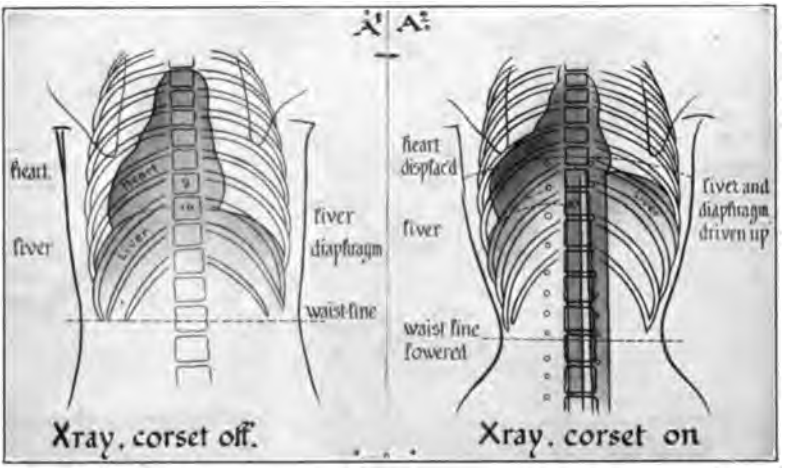


FIG. 13. FIG. 14.

FIGS. 13, 14.—Corset deformities B. Lower chest crushing. (Kraus.) See also Figs. 4 and 6.

neutral, showing equal pressure at the level of the navel and above the pubes. Only one-fifteenth, and these for the most part costly, made-to-order corsets, showed conditions other than waist constriction, or with the lower zones showing the higher pressures. One-third of the patients showed a relatively low pressure throughout—nearly all of these being thin women. The spring of the corset in loosening the steels was three inches and over in about one-third of the cases.

The frequency of occurrence of high rib pressures was somewhat unexpected, as the modern corset claims to give fair play to costal respiration. The high umbilical pressures show that the tendency of the old hour-glass corset to force the suprapubic

region outward and forward has not been done away with in the average present day corsets as they run; though there is encouragement in a few cases with lifting possibilities and the vicious shapes are less common than formerly. But it will be seen that in my lists there are more harmful than tolerable stays, more defective than neutral forms.

The average pressures are:

Quiescent:		*Deep Inspiration:*	
Ribs,	42	Ribs,	89
Epigastrium,	25	Epigastrium,	50
Umbilicus,	44	Umbilicus,	71
Hypogastrium,	31	Hypogastrium,	47
Ilium,	47	Ilium,	61

AVERAGE PRESSURES.

Quiescent.		Deep Inspiration.	
Ribs	42	Ribs	89
Highest	80	Highest	200
Lowest	10	Lowest	40
Epigastrium	25	Epigastrium	50
Highest	75	Highest	120
Lowest	10	Lowest	12
Umbilicus	44	Umbilicus	71
Highest	90	Highest	120
Lowest	10	Lowest	30
Hypogastrium	31	Hypogastrium	47
Highest	70	Highest	100
Lowest	7	Lowest	12
Ilium	47	Ilium	61
Highest	150	Highest	210
Lowest	10	Lowest	12

Comparison of waist measure with and without the corset gives no clue to the amount of pressure exerted, and is no criterion of tightness or looseness. The gap between the steels on loosening the corsets gives a simple and practical measure of the amount of pressure exerted. If the patient cannot unhook without unlacing the tension is excessive. If, after unhooking and taking two or three deep breaths, and then drawing the corset into appo-

sition with the waist line with no trick of breath-holding, the gap is 10 cm. (4 inches) the pressure has been very high, 65 mm. and over. Five to 7 cm. (2 1/2 to 3 inches) is the most that should be tolerated and this means up to 50 mm. Hg. of pressure. It is only in an occasional flabby abdomen that pressure has been low with a wide gaping opening, but in such instances the mobile abdominal contents have been subjected to a considerable range of displacement upward or downward, so that the rule is not vitiated that reads "the wider the gap the greater the tension."

Coughing and straining efforts with and without a corset show

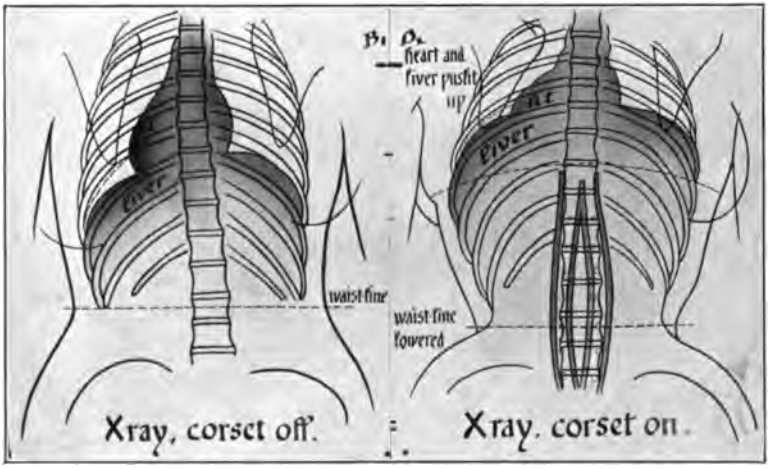


FIG. 15. FIG. 16.

FIGS. 15, 16.—Corset deformities C. Displacement of organs. Heart lifted and rotated, liver raised (Kraus).

no very different maxima in strong-walled abdomens. Strain is strain on pelvic structure when there is counter-pressure, whether that counter-pressure be muscle or corset bone. But in flabby-walled abdomens the pressure in the pelvis (vagina) of the corseted woman is considerably increased under strains (as compared with the uncorseted individual) because the corset gives a point of counter-pressure. Curiously, too, when abdominal walls are firm, either by reason of strong muscle or dense adipose, the intra-pelvic pressures seem increased nearly equally as between a fairly loose and very tight corset. In other words, in normal individuals the pressure from above meets opposition and accommodation

and a balance is established. The corset can harm strong women little, weak women much.

Whether intra-pelvic pressure can be lowered by any so-called lifting action applied to the lower abdomen seems to me doubtful, and no such condition has been found in these tests. A better corset substituted for a vicious one, with bettered posture, lessens intra-pelvic pressure.

The chart shows manometer readings of corset pressures of twenty consecutive cases taken at random. If the red line

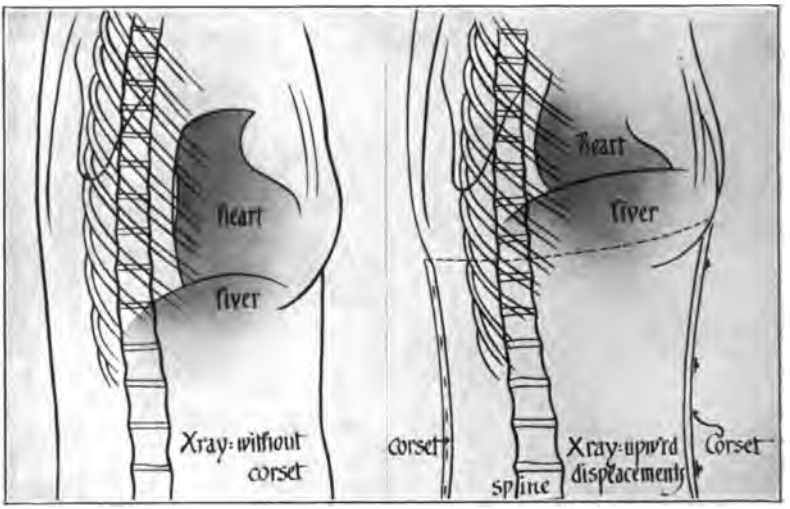


FIG. 17. FIG. 18.

FIGS. 17, 18.—Side view of upward displacement of heart and liver. (Kraus.)

represents a correct grading of pressure, that is, low in the costal region and epigastric, the umbilical less than the suprapubic, and only of really high degree between ilium and trochanter, it is obvious how far the black lines vary from this standard of a permissible corset. In more than half the cases the ribs are squeezed in and held fast. The epigastric group of observations represents a satisfactory low plane of pressure, with one vicious exception. As an example of what these figures mean let me say that men of moderate girth wearing suspenders sustain, between meals, an average pressure, on the trouser band, of 20 mm. A summer belt runs from 25 to 30 mm. With a belt at 40, strong

straining to deliver a constipated stool, brings belt pressure to 260 or 280 for a moment. See Fig. 34.

Posture.—In the normal profile a perpendicular against which the buttocks touch is about an inch to the rear of the shoulder blades, and the furthest sweep of the incurve of the back is about ooo inches distant from that upright. The outlines showed wide variations in attitude. Most women stood well, and carried their shoulders high. Very many exaggerations of the forward

FIG. 19.

FIG. 20.

FIGS. 19, 20.—Corset deformities D. Epigastric distention. The triple breasted woman.

positions of the shoulders were found, two and a half to three inches being not infrequent in patients dressed in their undershirts. The opposite extreme was occasionally seen where the scapulæ hung posterior to the perpendicular. Dorsal curves ran very fairly even, and the flat backs were mostly due to fat padding. The observations varied a little whether the tracing was taken at once on removing the corset or some ten or fifteen minutes later, but the difference is not such as to call for watching in any but the

weak backed or over-feminine figures. Dr Reynolds has laid emphasis on the two common deformities for which we must watch, namely, the round-shouldered posture, and this over-feminine figure, with large hips, hollow back, small waist, prominent bust and overextended knees (Fig. 8). To this we add the

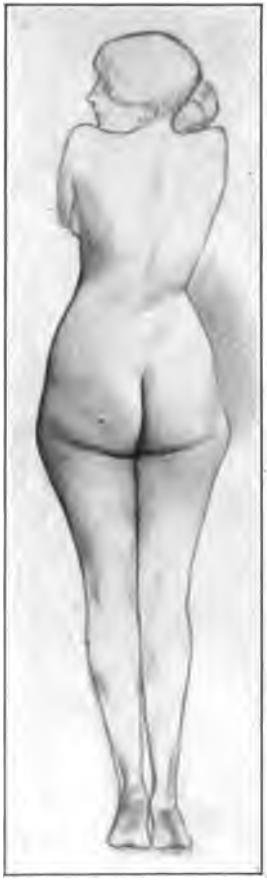


FIG. 21.

FIG. 22.

lopsided posture on which Dr. Eliza Mosher has laid emphasis, where lateral curvature is caused by the foot being held, in the relaxed standing posture, sidewise from the body instead of forward.

Like Dr. Reynolds, I have had the advantage of intimate association with an orthopedist. Without Dr. Truslow's study of spinal and muscular conditions, and his exercise cures, I

should have missed many a diagnosis and failed to strengthen many a defective body. In simpler cases I specify the exercises and give out slips of printed directions or typewritten sheets suitably checked. In order to be sure that the training is carried

FIG. 23.

FIGS. 21, 22, 23.—Corset deformities E. The fat pads that environ the genitals and emphasize them: over trochanters, over iliac crests, on buttocks. These two women would look at first glance not ill made were there no goddess for comparison. Note the trunk atrophy as compared with the Venus de Medici.

out the patient is directed to get a small diary and bring it at each visit to exhibit the entries, just as some sluggish gravid woman of the late months must show her pedometer at specified intervals.

Because exercises grow deadly dull, I have had a certain success with the medicine ball to develop trunk muscles. Resolution lasts longer when brother or husband takes an interest. When $3.50 is deemed too much outlay, a good substitute is found in a bag in which four pounds of oats is sewed.

FIG. 24.

FIG. 25.

FIG. 25.—Fat pad deformities; below the navel and on buttock; only by comparison with the Venus de Milo are the defects of the model to be clearly noted.

It has been interesting to note how stable attitudes are, as shown in observations taken at varying intervals, whether such attitudes are good or the reverse (Fig. 42). One occasionally finds a "weak back" that sways and that cannot be steadied until a course of muscular exercise has been taken (Fig. 41.).

It would appear that while the normal posture may call for a line from the back of the buttocks to the back of the shoulders with the shoulders not more than an inch in front of the perpendicular, yet a few women are found whose scapular line is three inches anterior to the curve of the nates and who show neither ache, nor rigidity of back muscles nor of gastrocnemius. Add to this attitude, however, the "weak back" or the "feminine type" of Reynolds, which is big-hipped and thin-bodied, and backache is general. These forward swings, it seems to me, do not impera-

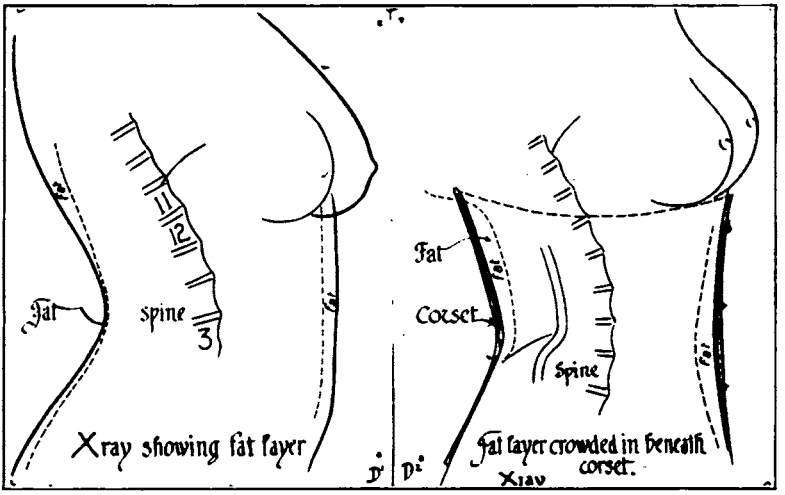


FIG. 26. FIG. 27.

FIGS. 26, 27.—Compression of fat by corsets (Kraus).

tively demand adjustment toward the perpendicular provided the shoulders and chin are well held up, and no pain or spasm is present. Here one treads warily, however, since it is outside of one's province.

Unlike Dr. Reynolds, I call no corset good. For the purpose of altering an attitude a well devised appliance may be "good," but no body prison for healthy persons can be called beneficent, any more than that other restriction of our civilization, city life, can be called wholesome. Corrective, yes. Neutral, relatively harmless, well tolerated, yes. But not "good." I would class corsets as corrective—such as the therapeutic corset of Reynolds—as neutral, and as harmful, and vicious. I would forbid them to a few,

limit the hours of full dress corsets to most, and loosen the laces of every one.

It was determined by this study that a large number of corsets conformed to the structural lines favored by Reynolds. Some we saw built on bad lines, but worn loosely, or perhaps, if tight, only on the briefer dress parades. Here it was usually found to be unwise to interfere, for experience showed that change

FIG. 28.—Corset deformity F. The waist-line crease, often resulting from occupation, sitting, stooping, and may as well result from waistbands alone, as in Fig. 27,—or from flimsy stays with broken bones.

brought discomfort without betterment. Only where displacement was aggravated or perhaps caused by such a corset, or posture was influenced unfavorably was stress laid on a new outfit.

SUMMARY OF ORDINARY OFFICE TESTS, AND DIRECTIONS TO PATIENTS.

Posture.—The patient stands on a mark on the floor, sideways to a paper on the wall, and shoulder-blade and buttock are indicated on the paper. The difference in these two points, with the corset and without, shows in a moment whether the corset affects the posture favorably or unfavorably and correction is required.

Pressure.—The hand passed within the corset, together with a note of the distance between the steels as they spring open, give the location of pressure—whether down-thrusting or lifting—and its degree.

An eye estimate of posture, of conformation or deformity, and palpation of muscle atrophies and spasm, come next.

Prescription.—Finally, directions are given, if requisite, such as alteration of the present corset; the need of a new one, ready-

FIG. 29.

made or to order; and for muscular training. The altered or new corset is to be submitted for approval before wearing.

The Steps.—In their order, will be:

1. With corset, observations on posture, visual and by marks; palpation of pressure under corset.

2. With corset loosened, note of separation of steels.

3. With corset off, observations on posture, visual and by marks, and note of deformities and muscular spasm.

One's observation once well trained, records on paper are not needed.

The Questions are:

1. Does this corset throw the shoulders forward and the hips backward?

2. Does it produce excessive pressures, and is the waist-line pressure greater than that lower on the abdomen?

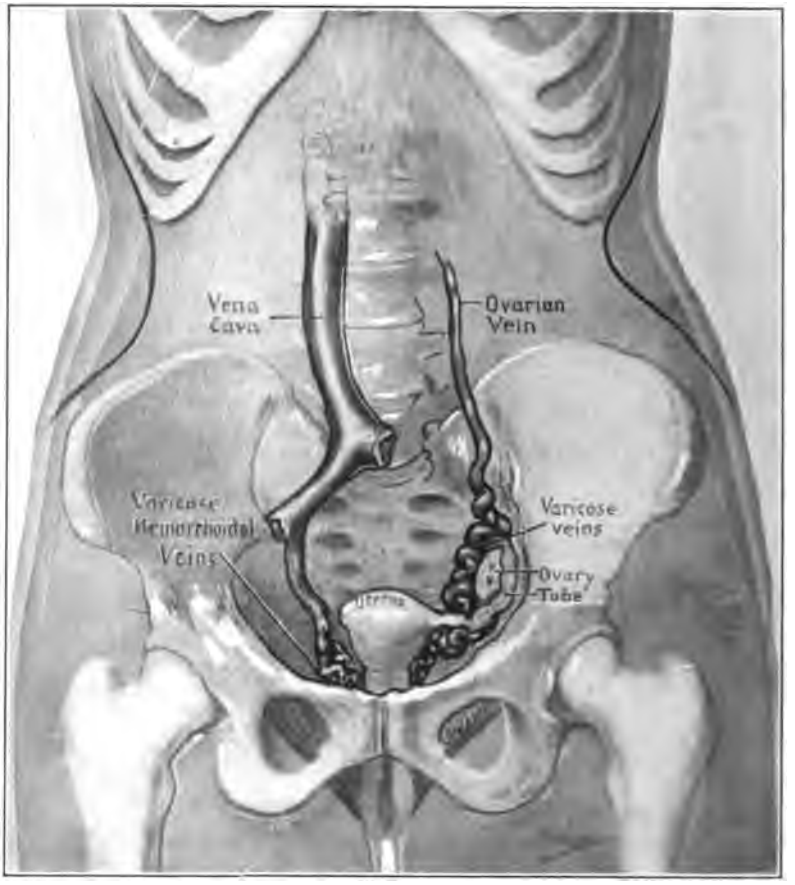


FIG. 30.—The veins about ovary and anus are at the lower ends of blood columns without valves, subjected to constriction at the upper or delivery ends by corsets; hence, hemorrhoids and aching broad ligaments.

3. Are the conditions such that altered corset conditions will help to relieve the disability?

4. Is there present a type of body, of abdominal support, of vic displacement, to be much affected by pressure or

In the ordinary routine observation of the corset of a patient suffering from pelvic or abdominal disorder, the time required is five minutes, and the outlay a few cents. Two clips to hold a

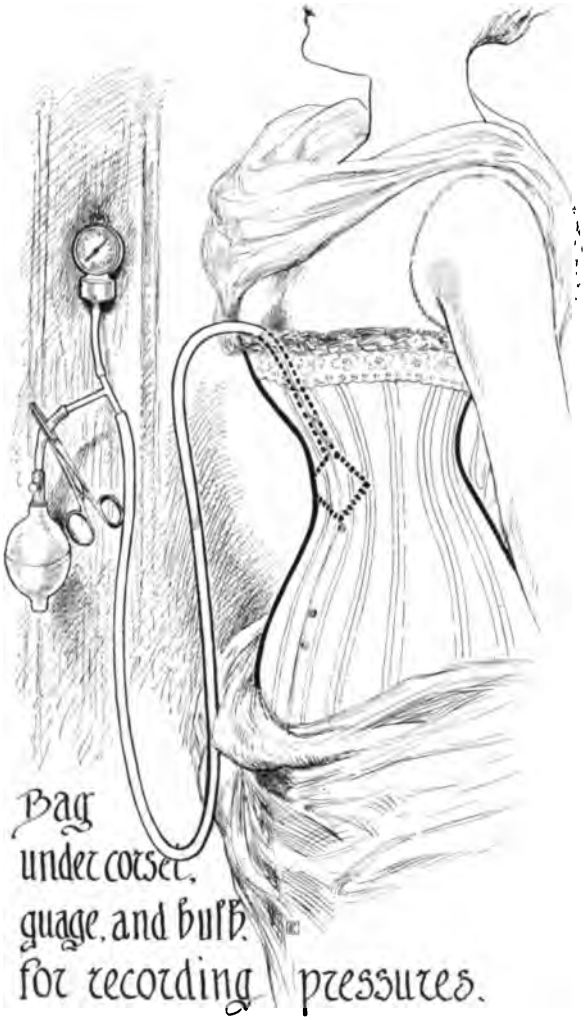


FIG. 31.—Pressure measurements. An aneroid (sphygmomanometer) hanging on the wall, is connected by tubing with a bag that is slipped under the corset.

sheet of wrapping paper against a wall, and a mark on the floor, suffice. Manila paper in rolls runs 2 feet wide. To a moderately smooth blank surface of wall, fairly lighted, at about 5 feet 4 inches from the floor, the clips are fastened. Any small clip

will do that has a firm grip and a hole in the handle to hang it, such as the Tiger. Their outside edges may be 2 feet apart, so that, if observations on the same patient are made, at intervals, the rehung sheet will register. The floor mark to locate the heels is a line projecting at right angles to an imaginary perpendicular dropped down the paper about 8 inches from its best lighted edge, to which the patient's back is turned. Against this mark, the doctor places his foot, or a book, or pivots a cleat 15 inches long. As a square to register the outline, one may

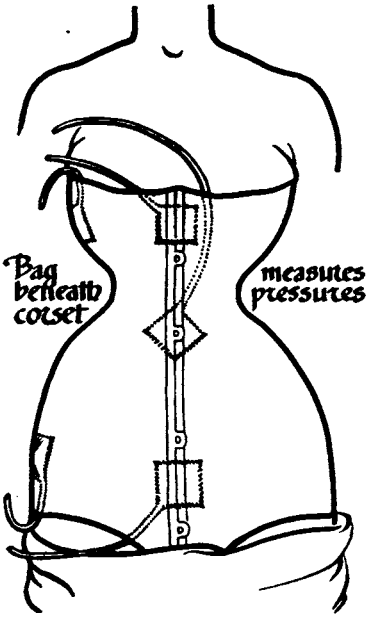


FIG. 32.

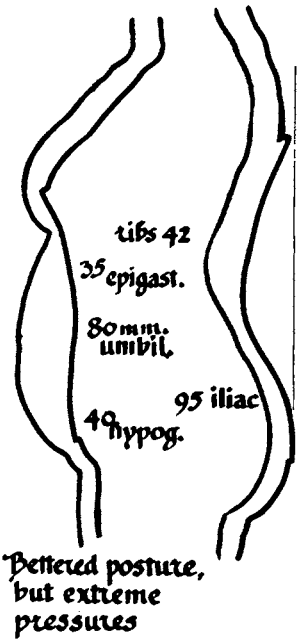


FIG. 33.

FIG. 32.—Positions in which the readings were taken.
FIG. 33.—Example of extreme pressures, limiting play of ribs, girdling most tightly at navel level, less above the pubes.

use a thin 10 inch book, in the same way that one takes a child's height against a door. The patient undresses to her corset. The inner skirt, or a sheet, is dropped to the top of the pubic bone in front and the lower edge of the buttock behind, and held snugly by an elastic band bearing a garter catch. Sidewise to the paper, her heels together at the mark and her toes apart, she stands with the elbow just clearing the wall. The book, held level, bottom edge on wall, long side to the back of the

patient's shoulder, gives the point for marking the out-curve of the upper back, and it is then moved down to enter on the paper the most prominent part of the buttock.

The note of pressures is next made, in the manner shown further on.

The patient steps away and slips off her corset, again squares herself to the wall, her feet as before, and two new marks are made on the paper, giving the shoulder and the buttock line.

It is at once seen that this particular corset, as worn by this patient, throws the shoulders 1 1/2 inch forward and the hips

FIG. 34.—Chart plotting 20 consecutive pressures, the red line showing the least harmful amount and location of pressure.

1 inch backward. Therefore the trunk is 2 1/2 inches out of balance, and there is ample cause for ache and strain. The body is looked over. The condition of the back muscles confirm the findings, and perhaps the back of the leg adds evidence of spasm from long continued faulty posture.

A second patient comes in. She is round shouldered; her viscera sags and she has constant backache. She brings, to be tested before wearing, the new corset we prescribed Her posture without the corset is noted by the method given above. She puts on the corset according to the instructions of the corsetiére or the office nurse, fastens the garters and drapes the

sheet, and stands against the wall again. At once it is evident that the shoulders have gone backward, the hips forward, the whole center of gravity backward. The stoop is nearly gone. The pressures are found to be right, and the corset is commended. Exercise is planned for her and she is told to return soon to report, and that further alterations will be needed in one month or two, as only partial correction is undertaken at first.

With a little more trouble one secures more picturesque evidence by taking front and back outlines, and for this one needs no draughtsman's skill. A square that traces an outline may be improvised as follows: Into the groove between the covers of a thin book of about 10 inches in height, one may lay two pencils of different colors (Fig. 35) the tips projecting just beyond the top and bottom. Elastic bands hold them, and, if looped around the wood, permit a little play. The two hands hold the book steady and level as its short edge hugs the paper and its long edge follows the patient's body profile, marking the outline as it goes, from neck to upper thigh. More or less complex and costly devices I have seen or tried, such as those of Schulteis, Kellogg, Reynolds and Lovett, and others. Certain devices I have had made. Shadow tracings and photographs in numbers were used. With all these, accuracy in detail fails to compensate for cumbrous inconveniences and slow processes, as compared with a long pencil held at right angles to the paper by some simple square.

In time, as has been said, any man, or his nurse, may dispense with these means, if he choose, and will quickly size up conditions without records.

In noting pressures, in office work, manometer readings are needed only for research or to convince the skeptical—though to one's manometer hung on a wall the attachment of an extra under-corset-testing-bag by a T connection is a small matter. In practice, the test of the hand run down inside the corset suffices. The ribs first. Have they decently easy play? Is the epigastrium practically without pressure? Is the pressure in the umbilical region moderate—somewhat more than a man's summer belt? Is the suprapubic pressure more than the umbilical? It must be greater. Is this pressure well down to the pubes, or is there a gap between corset and bone, with lower abdomen thrust downward? Does the corset grip and girdle and get its real hold on the space between iliac crest and trochanter, as it should? How wide is the gape at the back? How

FIG. 35.—Simple method of recording outlines. Against a heel bar the subject stands. The paper is clipped to wall or drawing board. A pencil, held by elastics in the groove of a narrow book that acts as a square, follows the profile and makes a tracing. The knee action is shown by the snug sheet.

many laces? Can the patient unhook the corset without unlacing it? Unhooked, with steels drawn gently toward each other, is the gap more than two or three inches?

Costs.—As office cases average, for the most part little outlay for correction is called for. The corset that is relatively harmless; the corset which the owner can alter; the worn one just ready for a change to a better; these constitute a majority.

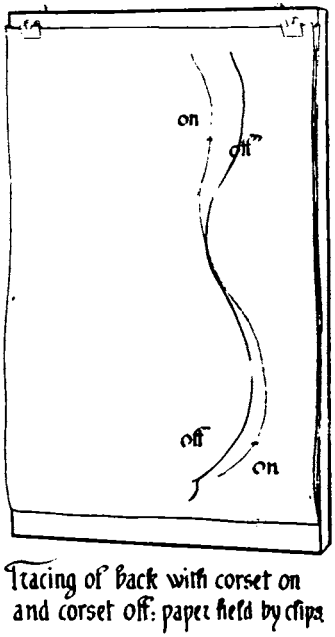


FIG. 36.

FIG. 37.

FIG. 36.—Outfit for the tracing.
FIG. 37.—Example of full record; without corset; with harmfu corset; with tolerated corset, and the measurements.

Where a new corset of special fit and shape is needed, most commonly such can be found in a large ready-made stock, the alterations made when buying—say for from $3 to $6—from a corsetiére who has been taught to understand medical needs. Corsets made to order expertly by those trained to our ideas are to be had for $12, while corsets of the most durable material, least likely to alter in shape, run up to $25 from expert hands. Often with the well-to-do one may elect to begin with a cheaper fitted corset, in order to bring about the desired result by degrees.

Even in the case of the wage earner where one has a reasonable assurance that corrected posture and lifted contents will enable her to resume work, abandoned for disability, one may argue that an outlay of $6 or even $12 is less costly than doctor bills.

Alterations are often possible. The most frequent fault, hourglass constriction, may often be corrected by using a separate lace in the six lower holes (provided the corset sets low enough to grasp the hips and lower abdomen), and by leaving the upper laces looser. This also makes, usually, for better

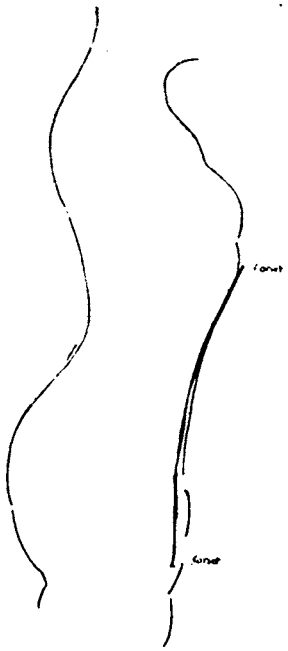


FIG. 38.—Simple tracing, seen to be expeditious—yet not without character.

posture, allowing wider separation above, and permitting the shoulders to drop backward. The seams most commonly needing alteration are shown in the dotted lines of Reynold's diagram (Fig. 51) and to these attention can be drawn. Thus it will be seen that it is possible to buy ready-made corsets, or to have these altered as many dealers will. In a certain time one learns to determine what figure can be fitted in a ready-made corset, and which particular cases call for adaptations or corrections that only the made-to-order article will help.

The following card is given to these patients:

"CORSET SUGGESTIONS: CHOICE, FITTING, ALTERATION, ADJUSTMENT.

"In general there should be the least possible downward pressure on internal organs; no undue tightness, and no forward carriage of shoulders or droop of chin as a result of wearing a particular corset.

FIG. 39.

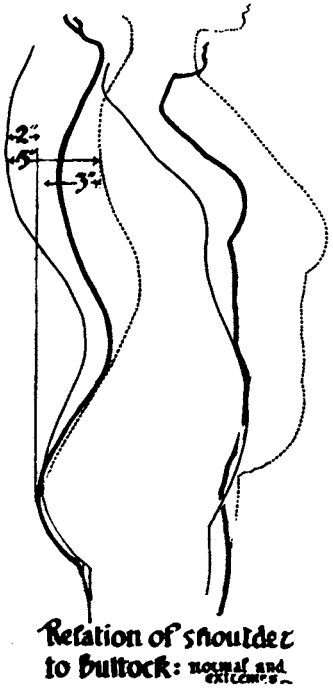


FIG. 40.

FIG. 39.—A group of 47 tracings superimposed to show that the normal and the average are by no means the same. The average chin is forward, the average abdomen is fat, the breast pendent, the back flat, the buttock long and low—only the average location of the shoulder is related to the normal.

FIG. 40.—Extremes in carriage of shoulder, red line being the normal. Both the individuals, shown by black lines, were disabled by backache and promptly relieved by correction of attitude, with muscle strengthening. Yet search for such a cause is rarely part of the office routine.

"The designs to be preferred show the front straight, with little or no incurve at the waist, long below, reaching nearly to the pubic bone; back curved, low at top; separate lace for lower six or eight holes.

"Pressure should be greatest around the hips, carefully and snugly adjusted, diminishing above this zone, being less at the waist line than below the waist. The lower ribs must have play. With regard to posture or carriage the shoulders must not be thrown forward and hips backward, the comparison being made first in undershirt and then after corset is put on. Large or

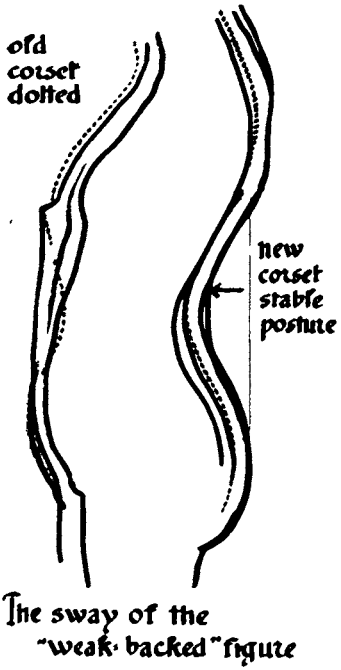


FIG. 41.

FIG. 42.

FIG. 41 —An unusual vacillation. The red line showing woman in underclothes. A stable posture and cure of backache were brought about by exercises and proper corset.

FIG. 42.—Postures rarely vary more than this in a given individual. Red shows patient in union suit; black, with corset.

relaxed breasts are to be supported independently, from the shoulders. Front or back lacing has to be chosen for the particular case. A stock corset may often be altered to suit the above, as well as to meet individual requirements.

"When taken off, laces must be loosened. When front lacing permits, women with large or relaxed abdomens should put on the

corset while lying on the back, raising the body on the heels to send the organs upward. In any case, lacing should always begin at the lower edge. To reach downward inside the corset and raise the abdomen before tightening is another method of attempting the same end. The above applies to the dress corset.

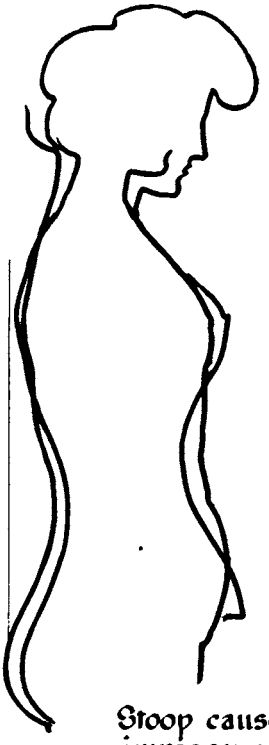


FIG. 43.

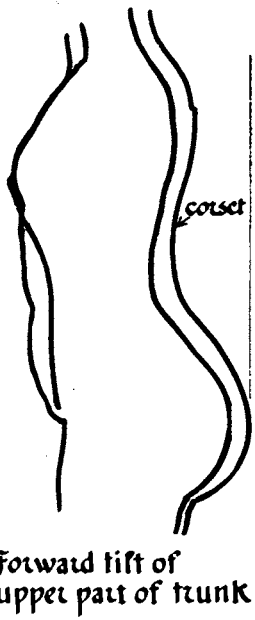


FIG. 44.

FIG. 43.—The red line without corset, the black with hourglass corset.

FIG. 44.—Here the corset improves the position of the shoulders which are much too far forward (see Fig. 47). It is to be noted that this is enough correction to make as the first step: too rapid straightening causes discomfort with discouragement.

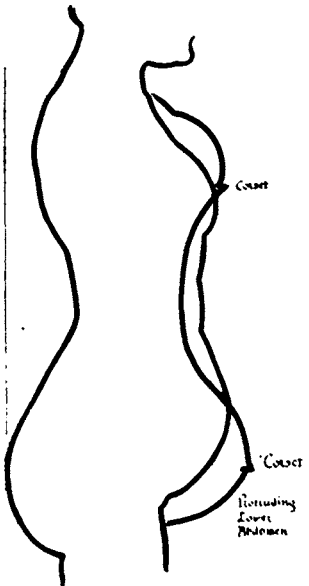
For active work a very flexible, short, loose corset may be worn, or merely shoulder straps to support the skirt."

It is not a difficult matter to adjust a corset to the standing figure so that the pressure shall be relatively harmless, the posture bettered, and the dressmaker pleased. The girdle grip is

planned to encircle the potential groove between hip crest and thigh top, and dips low to lift and not to force downward the abdomen and its contents.

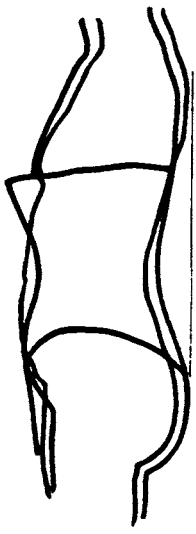
Thus theory and corset are perfectly fitted. Patient, fashion, and doctor,—all are satisfied.

Thereupon the lady indulges in a habit of sitting down. She sometimes adds the practice of stooping forward. This is



Need of supervision after operation: the prolapse would have recurred.

FIG. 45.



"Health-waists" may produce pressure downward and stoop.

FIG. 46.

FIG. 45.—A not uncommon effect of an hourglass corset on a very relaxed abdominal wall, which in this instance would have soon resulted in return of displacement.

FIG. 46.—An average health waist: unless very loose and thin and with light skirts it may do harm.

disconcerting and exasperating. For it develops that the bottom of the hip girdle, planned for uprightness, is driven down on the front of the bent thigh, and as the result this edge presses uncomfortably. Or else the impact pushes up the whole carefully built structure.

At this point we abandon compromise. There is no perfect

compromise. Like the Greeks, we are driven to admit that faultless form and decorative dress are for the poses and purposes of leisure, and arduous work and active play demand loose and less comely clothing. Snugly encased, no one can scrub floors or pick up baby or tennis ball without squeezing the bowels and shoving things out of place. The harmless work-corset must be a non-figure-producing corset, merely a skirt sup-

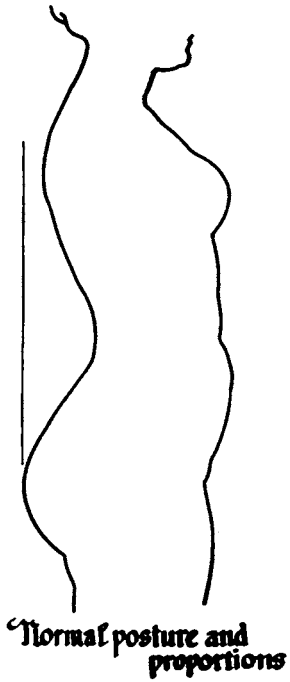


FIG. 47.

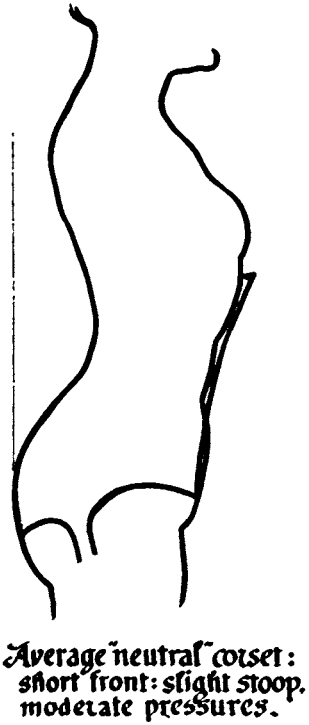


FIG. 48.

FIG. 47.—The normal posture, drawn from a considerable comparison of standards.
FIG. 48.—Red line, without corset.

port, loose enough to let the hand through inside, and is to be allowed when the worker will not consent to confine herself to skirts supported by shoulder straps, for work or athletics. As a separate proposition, for afternoon or evening, our lady may stand and be admired, encased in conventional mould, or sit complacently erect, bending only when she must, and then from the hips forward.

This is one of the many medical problems that call for team

work. Corsetiéres, women, and doctors must work together. Corsetmakers and retailers should have more knowledge of anatomy and more respect for physiology. Their aim should not be wholly to make a corset that reduces the size of the waist. They should study to provide corsets adapted to different types of individuals that do not unduly compress and restrain, that neither fatigue nor grievously deform.

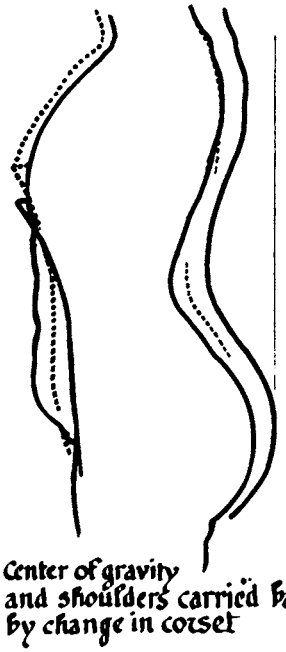


FIG. 49.

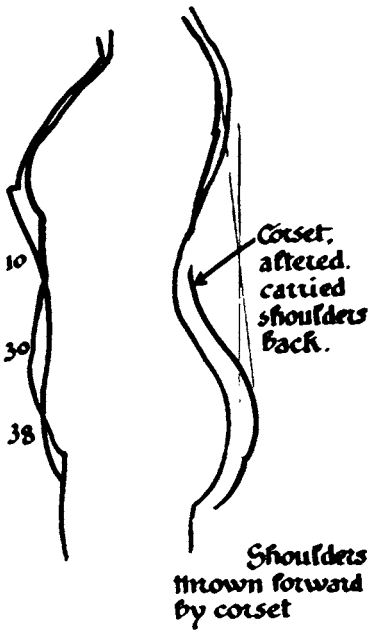


FIG. 50.

FIG. 49.—Posture bettered and headache lessened by change in corset.

FIG. 50.—The red shows this patient's normal posture. By altering the corset slightly the attitude corresponded with the red line: the pressures were as they should be.

The practical application of this study is that, with a certain flexibility in our ideas, without straight-lacing facts to fit a theory, without attempting to girdle within one general rule all the variety of conditions, and with the expectation of failures at first, the practitioner may secure a number of excellent results, particularly in cases of displacement and defective posture.

By and large, the problem is, at present, hygienically insoluble. In the long years it will care for itself. First, there will be developed in the race habits of vigorous exercise which will make

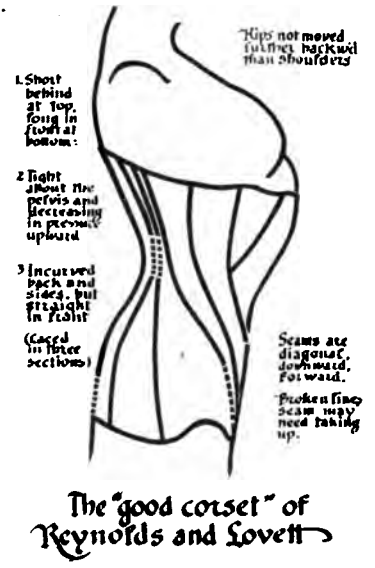


FIG. 51.

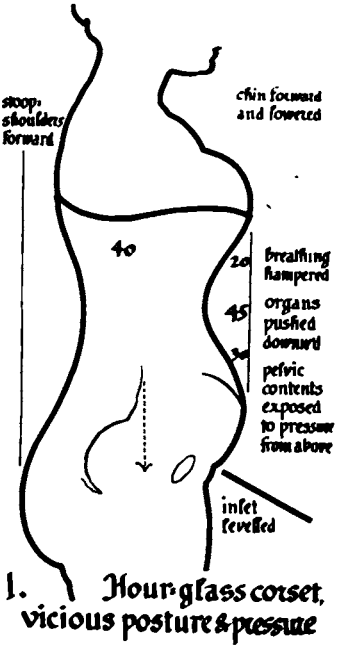


FIG. 52.

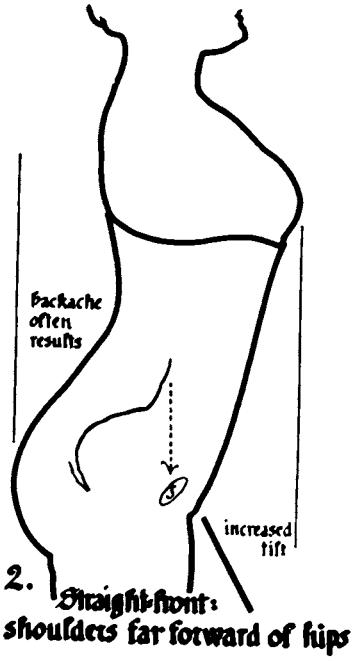


FIG. 53.

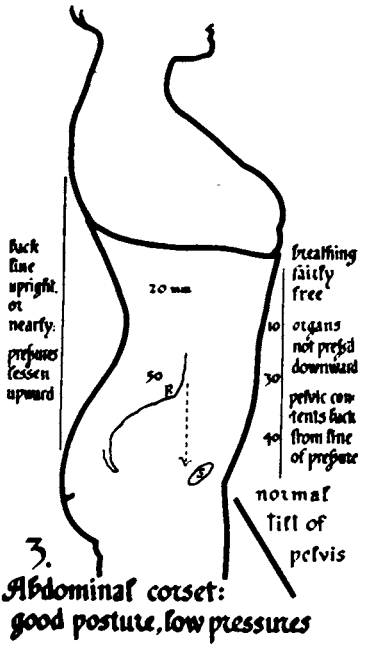


FIG. 54.

FIGS. 52, 53, 54.—The three types of corset, hourglass, straight, abdominal. Vicious pressures compared with tolerable pressures; harmful forms vs. neutral; bad posture or good; pelvic inclination inviting displacement as against tilt which saves from pressures. Picturesquely unfavorable instances of the first and second class are here selected to contrast with a good or corrective example of the third.

restraint impossibly irksome; second, cultivation of the appreciation of the grace and beauty of the normal form of the body will render voluntary deformity ridiculous or pitiable; and,

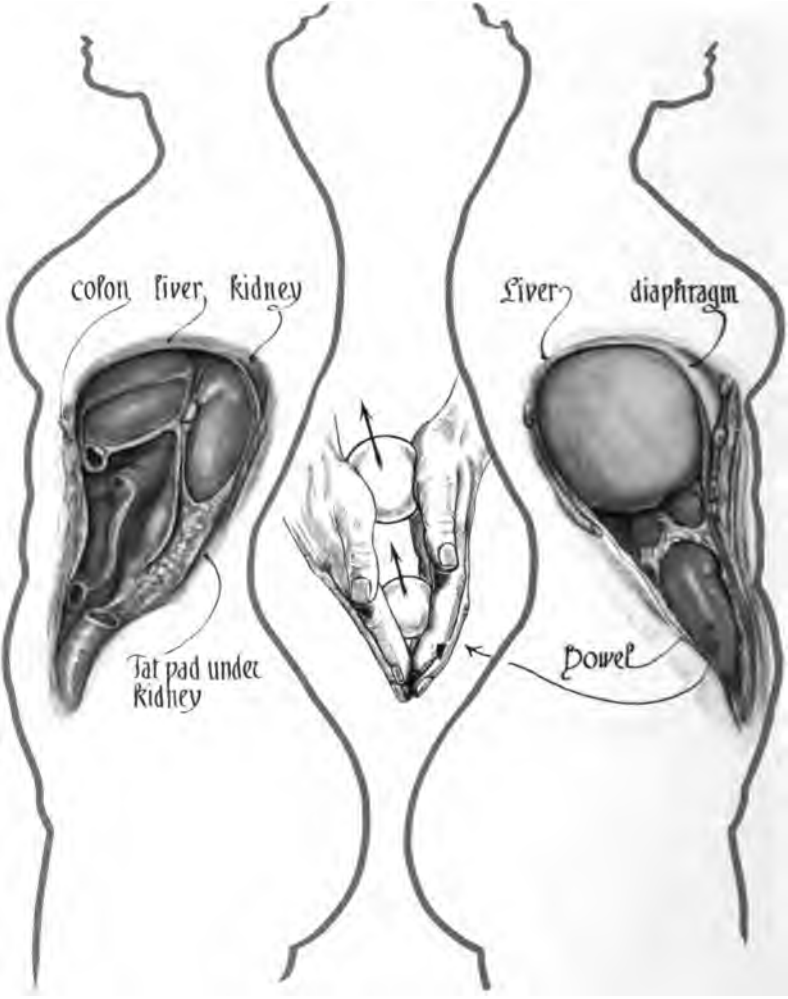


FIG. 55.—Nature's corset, the anterior abdominal wall: normal wedge-shape of abdominal cavity (from Cornung): strong front muscles hold the organs, or lift them up along the posterior slant.

lastly, such a knowledge of true taste in dress and understanding of real loveliness of line will be inherited and instinctive that art will replace artifice.

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