

III.—THE BICYCLE FOR WOMEN.

The advent of the bicycle was a glorious boon to womankind. Multitudes of the fair sex owe increased health and lighter spirits to this ingenious mechanism, aptly yclept the "silent steed." Time was when women were regarded as chattels, the same as chairs or bedsteads, and they were exchanged and bartered like horses or cows. Ever since that time woman's emancipation from the enslavements of habit, custom, fashion and conservatism has been continuous and progressive, until now the bicycle seems destined to annihilate the last remaining fetter which binds her to servitude and renders futile her effort to be man's equal, if not his superior in everything save crude strength. The subject of woman's dress has occupied the minds of philosophers and demagogues for a long time. In spite of all the efforts of reformers to change it, the trailing skirt is still with us—or rather, has been with us until the bicycle wrought a change.

From time immemorial, woman has been clothed in the very graceful and modest but

very unhygienic and inconvenient trailing skirt. Whether our great-great-grandmothers regarded them as a nuisance or not, has not been handed down by history, so that we do not know, but it is positively asserted by the women of to-day that long skirts are decidedly inconvenient at times. Especially those women who exercise the privilege of this decade and take part in business declare the long skirt hampers them in many ways. In wet weather it becomes wet and muddy and uncomfortable and dangerous to health. In dry weather it sweeps the streets and stirs up the microbes in swirling dust clouds. But the main objection to it by the up-to-date woman is its impediment to the pursuit of exercise in a free and untrammelled way. So great is the impediment that when bicycle riding was attempted with long skirts, it became dangerous, and the alternative immediately arose either to eschew the bicycle or discard the skirts. So strong had the love of the wheel grown in the female breast that all the precedent of ages was thrown to the winds; the bicycle was retained and the skirts cut down. Thus did the bicycle accomplish what reformers and philosophers and demagogues had striven in vain to do.

But as important as the reform in dress is, the

bicycle has succeeded in effecting another innovation in the life of women. It has taught her that the condition of health depends a great deal upon regular systematic exercise. Not that this is a new theory just discovered ; it has been recognized for ages, and its precepts followed by the male sex generally and a few sensible women who have organized gymnasia and athletic clubs. But it takes a great deal of strong mind and tenacity of purpose to swing clubs and pull at weights for any length of time, and then it is not out-door exercise, and is devoid of the spirit of sport. So that the scope of the gymnasia and athletic clubs was limited to the few.

The great majority of women had no opportunity for healthful out-door exercise, except such as was presented for a few months in the summer season. Even then only the few were benefited, for rowing, or mountain climbing, or tennis, or swimming, depended upon a trip to the country, which in itself was expensive if extended, and a trip of a few weeks was of no material benefit, for it could not be expected to last over the fifty weeks of the rest of the year.

Then what was the daily life of the average woman during the winter months ? Those who did not occupy themselves with house-work, which

is woman's safety-valve for many of her nervous troubles, were compelled to sit around in-doors, during the day, reading or sewing or gossiping, and building up towers of headaches and mountains of backaches ; or perhaps indulging in a shopping tour, with its constant standing and walking in dusty streets and dustier stores ; jostling and pushing amidst bustling crowds ; a tension to the nerves, a strain to the muscles and an insult to the lungs.

The manner in which the evening to such a day was spent was even worse. A trip to the theater means from two to three hours in an overheated, poorly ventilated room, sitting still in a narrow seat, often with the street wraps unre-moved. Many people on coming from a theater have a desire to yawn and stretch themselves—signs that the system needs exercise. Men primarily went out between the acts simply to stretch themselves and get a breath of fresh air. The drinking was an afterthought. If not to the theater, perhaps a dance is attended. The same unsanitary conditions of overheat, bad ventilation and dust prevail here, no matter where the dance is given. If the dancing is done on a crash or carpet, fine particles of floss or napp are whirled into circulation, to be inhaled ; and if on

a board floor, although not so bad, still some dust and fine splinters will find a resting-place in the lungs.

The evening may be spent in bowling. Women entirely unused to muscular exertion will attempt to bowl an entire evening, with the effect that their right arm is nearly paralyzed before they cease and remains lame for days afterward. Bowling would not be so bad, if both hands were used, but as it is at present, only one side of the body is developed.

If one wants to be convinced of what bicycling has done for our women, let him compare a modern, up-to-date bicycle girl with a girl who has followed a mode of life similar to that outlined above. The springy step, the erect carriage, the clear eye, the fresh complexion, the well-balanced poise of the head and body, all proclaim the new order of things—the triumph of the bicycle.

Wheeling is an alluring outdoor exercise. It can be indulged during the major part of the year by old and young, rich and poor, male and female. It is a sport which will permit of single solitary enjoyment or participation by any number of people together. It is particularly attractive to women on account of its novelty. It is something new for them to have opportunity to enjoy ex-

hilarating out-door exercise without restraint. The rapid and easy motion, the companionship, the competition, the exploration of new country, each adds its charm. The bicycle has become a fixture in the life of womankind.

Compared with horseback riding, wheeling has everything in its favor. In the first place the position of the rider on a bicycle is vastly better than that usually assumed by women on a horse. When women progress far enough to ride a horse astraddle, this difference will vanish. The attempt to sit on a horse sideways and look straight ahead is wrong in principle and detrimental to physical beauty. The wonder is that more cases of curvature of the spine are not reported as the result of the present fashion.

The jolting of horseback riding is regarded by some as good for the liver. This is not denied here ; but if good for the liver, it is decidedly bad for the pelvic organs. In wheeling there is no jolting to speak of.

The cheapness of the bicycle compared with the horse is apparent to all. The silent steed requires no stable, no feed, nor any water. Safety is also a consideration of importance. Although many cases of bad falls from the bicycle have been reported, they are due to carelessness of the rider,

generally. A wheel will not get frightened and run away, or shy, or balk, or otherwise misbehave, as a horse is apt to do.

Critics, dissenters and moralists have antagonized the bicycle for women for various reasons, chief among which is its moral influence. This phase of wheeling has acquired such importance through sensational discussions and newspaper articles, that it will be carefully considered in the next chapters. The other pretext of the critics lies in the field of health.

The subject is of course an important one, for everybody prizes health. Especially is this so in the feminine world. The questions usually heard on all sides are :—“Is it healthful for a woman to ride the bicycle?” and “Are conditions of chronic female complaints benefited by wheeling?”

The argument most commonly advanced by the critic is that bicycle riding is akin to operating on the sewing machine, and it is hard to understand how a physician can recommend one and condemn the other.

It ceases to be difficult of comprehension when the two are analyzed and their differences contrasted, for they are as different as can be.

The sewing machine necessitates a stooping

posture, similar to that assumed by some people in writing or studying. It is fine work : the needle must follow a straight line close to the edge of a fabric and not run over the edge. Close application is necessary, and the eye and the mind are constantly concentrated on the work going on, at the same time the legs are constantly moving from the knees down, in a see-saw motion, and both together. They occupy a position in advance of the body and support none of its weight. There is no alternate motion such as the spinal cord is accustomed to in the acts of walking, running, etc. Add to this the fact that the operator is sitting still, in a confined, indoor atmosphere, with no diversion or change, for perhaps a whole day at a time, and you have before you the factors potent in rendering sewing by the machine harmful.

In bicycling there is no stooping posture ; the eyes are not concentrated upon a spot within twelve inches of the nose ; there is abundant motion, lots of excitement, plenty of diversion ; the legs are under the body, supporting part of its weight and working alternately as in walking ; the thigh and hip, and, for that matter, the whole body, as well as the lower leg, is exercised ; and the operator has plenty of fresh air and sunlight.

Thus it will be seen the two are incomparably different.

Another contention, advanced by some medical men, is that riding the bicycle is apt to render child-bearing more painful and dangerous than heretofore. They reason that by increasing the strength and power of the perineum muscles, they will more effectually resist the birth of the head, and instead of the sphincter dilating it will rupture.

The fallacy of this reasoning can be proved in a few words. Bicycle riding tends to make childbirth easier and safer in the following way. A muscle will perform its functions more naturally when it is healthy and sound. Bicycle riding tends to bring all the muscles, tissues and organs up nearer to the perfect health limit. The natural function of the perineum muscles is to support the pelvic contents, it is true, but they are also supposed to stretch easily when required to do so by the efforts of nature to expel the foetus. Then the uterine muscles and the abdominal muscles, being healthier and stronger, exert more propulsive power, which would more easily overcome the resistance of the perineum muscles.

Of course the healthfulness of bicycling is modified by the conditions under which it is prac-



PHOTO BY BUTLER

Upright Position (female)—Loop Frame Wheel—Long Skirt Costume—
High Handle Bars

—Page 63.

ticed. The costume, the position of the rider, the length of the ride and the method of riding are all factors to be counted in. But taking for granted that the fair rider is anxious to, and is doing everything right, the question, "Is it healthful for a woman to ride?" is simplified and can be answered with one word, "Yes."

There is no valid reason why a woman may not derive as much benefit from cycling as a man. True, she is built differently, but she breathes the same air, eats the same food, and she has a heart and muscles that need exercising to keep them healthy. The theory seems to be perfectly correct that what is good for a man's muscles is also good for a woman's.

All that has been said in the previous chapters refers equally to women as to men. It should be understood, however, that a woman, being more finely organized than a man, cannot endure as much hard work, nor for so long a time. Therefore her rides should be shorter. She also suffers more nerve strain than a man; therefore her riding should be slower. With these amendments the same rules of hygiene govern the female bicyclist as the male.

"But you don't mean that a woman should bend over like a man?" Precisely, if you will sub-

stitute the word "incline" for "bend." The inclined position is the only rational one to assume on the bicycle. The definition of this position and its many advantages have been carefully considered in the chapter on Hygiene. If it is advantageous for a man to ride in this position, it is equally so for a woman. Even supposing she is conformed differently in certain parts, it simply necessitates a change in the form and adjustment of the saddle—not the position.

In addition to the better control of the wheel and the greater facility for the exercise of the power, the inclined position has a correcting influence on a female complaint which is commoner than it ought to be in otherwise healthy young women. Reference is made to the backward displacement of the womb. The causes which produce this condition are various, but one of the commonest is the habit of bending over a desk while writing or studying. Here the pelvis is straight while the body is bent at the small of the back and the shoulders brought forward. All the abdominal organs are thus crowded down on the anterior aspect of the uterus, pushing it backward and straining and stretching the round ligaments which are meant to hold it in place. Now what does the inclined position on the bicycle

do? It tilts the pelvis forward too, so that its inclination is exactly the same as that of the body:—they form a straight line. The organs are not crowded down but occupy their normal positions. The round ligaments are relaxed by the falling forward of the body of the uterus, and are enabled and stimulated to regain their tone and take in their slack, by the increased nutrition sent to them by the healthful exercise.

But if the inclined position is assumed, it is necessary to have a saddle which is so formed that it will support the bony points of the seat (called the ischial tuberosities), and not cause any pressure on the soft parts. In order to effect this, the saddle must be wide enough in the posterior two-thirds to full contain the buttocks, and narrow enough anteriorly to avoid chafing the thighs.

This brings up the important question, “Which of the saddles on the market is the best?” Almost every conceivable invention of a saddle is now manufactured, so that there is a wide choice and almost everybody can be satisfied.

A woman's saddle should be wider than a man's, and a woman with a wide pelvis should have a wider saddle than a woman with a narrow pelvis. Stoutness does not necessarily imply the posses-

sion of a wide pelvis. I have seen very slender women with very wide pelvis. When choosing a saddle the best way is to select one which you think will meet your requirements and then try it. If it causes pressure or soreness where it ought not to, change it, for it will be dangerous to try and break yourself into a faulty saddle as people break in new shoes. There is a concern in New York where they fit saddles to each individual. Impressions of the seat are taken in plaster, and the saddle is constructed after the model so obtained, and a perfect fit guaranteed.

A saddle for women should not contain a raised pommel ; rather a depressed one. Some saddles have no pommel at all, the rider sitting on them as on the edge of a chair. They are not comfortable to riders who do not ride a great deal in their pedals. The vicious "center ridge," or "ridge pole" saddle, formerly seen so frequently, is seldom seen nowadays. It was the chief fault of a cheap saddle. The sagging of the leather on either side produced a ridge in the center which was the cause of many injuries. The "hammock" or "sagging" saddle was produced in the same way—the weight of the body causing the center to relax.

The adjustment of the saddle is next in impor-

tance to its shape. You will have to find out your own proper adjustment by your experience. On general principles, for women, and in fact for all riders, the saddles should be straight—neither tilted up or down in front. If tilted, the poise is at once destroyed, the proper support gone and the adjustment of the parts altered, so that a good fitting saddle, wrongly adjusted, may be more injurious than the worst saddle made.

When you first begin to ride you will like a soft, cushiony saddle, a regular feather-bed sort of saddle, for you will sit in it with your whole weight, especially if you affect the upright position. But after you have become a proficient rider, and abandoning the upright position assume the inclined, you will want as hard and light a saddle as you can find. The reason is you will have learned to ride more in your pedals, using your saddle only as a rest to be leaned against. Even in horseback riding, a good mount rides in his stirrups, using the saddle only as a rest.

The costume which is proper for a woman to wear has been the subject of more literature, more discussion, more argument and more difference of opinion than any other one phase of wheeling. Modesty has been pitted against serviceability, morality against attractiveness, and con-

servatism against progression ; and a right royal combat was waged until Dame Fashion stepped into the arena and settled all disputes by proclaiming " le habilimente propré" to be a short skirt, reaching half-way from the knee to the ankle, and leather leggins or boots. The skirt was made full and bloomers were worn beneath.

This kind of skirt, however, had its drawbacks. At times it was awkward, got caught in the wheel and in the pedals, and was immodestly tossed by the wind. A few women abandoned it altogether and appeared in bloomers, but such a howl of derision was raised that the bloomers soon went out of sight.

At this stage a fashionable New York *modiste* came to the fore with a costume which he designed and called after himself, the "Luey costume." It consists of a divided skirt so arranged that when the wearer stands it falls together and looks exactly like a complete skirt, but when seated on the wheel, it divides in the back, to hang down gracefully from the saddle. So popular has this costume become that it is now worn by four-fifths of all the female bicylists in this vicinity.

But whatever kind of a costume you select, be sure it does not confine the movements of your



PHOTO BY BUTLER

Correct Position—Luey Costume—Loop Frame Wheel—Droop
Handle Bars

—Page 68.

body, or constrict any portion of it, for you need all the freedom possible. Tight corsets while exercising do damage in many ways. The stomach and spleen are pushed upward and backward, against the heart, interfering with its action. The liver is pressed upon and pushed upward, diminishing the space in which the lungs expand. The intestines are crowded down on the pelvic organs, which are liable to be displaced, and the pressure on the large vessels causes a stagnation of blood in the valveless veins of the sexual organs—a potent cause of many of the ailments peculiar to women.

If the corsets are abandoned and the waist constricted by tight waist-bands of skirts, etc., it is worse than if the corsets were worn, for the constriction then is a narrow string, while the corset is a diffuse pressure. Health waists are no better than corsets if worn tight. It is true they have no steels, and this is an advantage. They are the best to wear if something of this nature must be worn. They preserve the shape and support the back muscles, which are weak in women who have worn tight corsets for a long time.

It would be better if women went without corsets, even if they put them on again after leaving the wheel. An immense advantage to health

would accrue, but personal appearance would suffer, and this is a great desideratum in most feminine eyes.

Considered from a hygienic point of view, the best and simplest costume yet devised for women is as follows :—

1. Union garments of silk or thin wool.
2. Equestrian tights from knee to waist, or bloomers same as for men.
3. Stockings.
4. High boots.
5. Shirt waist or woolen waist.
6. Short skirt.
7. Eton or Luey jacket.
8. Alpine, Derby, straw, or Tam O'Shanter hat.

The equestrian tights are made of heavy woolen and reach to below the knee. The stockings are held up by the band of the tights or bloomers. Garters should not be worn, as they constrict the surface veins and may cause varicose veins. The boots should fit well and lace snugly to just below the knee. The skirt should be short enough to clear the pedals. On most women of average height, this would bring it to a few inches below the knee—a point entirely modest and very becoming. The jacket may be discarded on hot days. The choice of hat will depend on individual fancy

and taste. Derbys are not becoming to all faces. A trimmed hat looks as bad on a wheel as a silk hat would look on a man.

Although this seems to be the regulation costume for women, a great variety can be obtained merely by the choice of material. Individual taste and personal requirements will of course be consulted in this matter, but a tip may not be amiss. Brown is a color which is most serviceable and looks best under all conditions of travel. A black suit will become covered with dust and look nasty; a blue one will fade; and so on through the list of the colors. If a woman wears a plaid or other loud color, or a combination of striking colors, she will attract attention and perhaps incite ridicule or occasion unkind remark.

Cloth or leather leggings, worn over ordinary shoes, make the leg and ankle look clumsy and awkward. It is far more becoming to wear no covering at all over the stocking, and in warm weather it is vastly more comfortable. Low shoes with black or tan stockings are getting to be very commonly worn now.

Sweaters are worn by many women, either with or without a coat over them. They are comfortable on cool days, but are not very becoming. The combination of a sweater with bloomers and

a Derby makes a girl look very mamish and perhaps "tough," especially if she rides a diamond frame wheel and bends over like a scorcher.

The diamond frame wheel is much better than the loop frame to ride on if one's skirt is short enough. Its advantages are : It is lighter ; it is more compact and handier to manage ; and it is easier to maintain the correct position upon it. If the skirt is a divided one and reaches only to the knee, the diamond frame may be used with safety and propriety. To mount it, the skirt must first be lifted over the saddle and then the mount made from the rear over the saddle in the same manner as described in a previous chapter.

Of the effect of wheeling on the female organism, much might be said and little understood by the lay reader. Therefore I will confine myself, as far as possible, to common terms, and endeavor to explain clearly and concisely the nature, causes and consequences of the numerous female complaints, and to show how the bicycle affects them.

The diseases peculiar to women which may be benefited by wheeling are :—

Painful Menstruation.

Backache.

Constipation.

Headache.



PHOTO BY BUTLER

**Bloomer Costume—Scorcher's Position—Diamond Frame Wheel—
Ram's Horn Handle Bars**

—Page 72.

Nervousness.

Hysteria.

Malaise, or "Tired Feeling."

Leucorrhœa, or "Whites."

The manner in which the bicycle helps these ailments involves the same principle which governs its effect on other diseases. The healthy outdoor exercise and muscular exertion, stimulating the heart and circulation, carries better nourishment to the organs and tissues, giving them a healthier tone and an ability to perform their function more naturally. The increase in the general health exerts a marked influence on local disease—an effect which prolonged local treatment may fail to accomplish.

Painful menstruation is a female disorder more common than it should be. Normally this function should be painless. It was never intended that women should suffer during this period. The causes are various, and are mostly due to a faulty development or position of the uterus and chronic inflammation of that organ. The bicycle will not help it if caused by a tumor or deformity, but if due to a chronic congestion or inflammation, the wheeling does good by improving the tone of the pelvic organs.

Backache is probably the commonest of all

female complaints. It accompanies almost all of the disordered conditions peculiar to women. Some of the more frequent of its causes are:— Backward displacement of the womb, chronic inflammation of the uterus or ovaries, tumors, and procidentia, or falling of the womb. If your backache is caused by chronic inflammation of the uterus and ovaries, it will be benefited by bicycling. But if there is present a fixed backward displacement it will be only aggravated by wheeling. If the displacement is movable, and the womb is placed forward by your physician, and treated locally, discreet bicycle exercise is immensely valuable and may exert a complete cure. The bicycle cannot help the backache caused by tumors or falling of the womb.

Constipation is produced from the same causes as backache, together with the contributing causes of sedentary habits, inactivity and errors of diet. It is common to nine-tenths of all women, whether they have anything else the matter with them or not. It may be cured by wheeling if it be caused by sedentary habits, inactivity, errors of diet, or movable displacements that are treated: but it will be only slightly relieved if the additional conditions mentioned under backache are present.

Headache goes hand in hand with backache. It is sometimes the only symptom that a woman will complain of. A celebrated professor of therapeutics has said there are fourteen kinds of headache, and therefore fourteen causes of it. If your headache is located in the top of your head, and is more severe at the time of your period, you may attribute it to your ovaries. If it occurs in the front part of the head, through the temple, look out for your stomach and cure your constipation. If in the back of the head, perhaps the entire contents of your pelvis are chronically congested. Wheeling exerts a markedly good influence on all kinds of headache. The general toning up of the organs, the exhilaration of the exercise, the change of the scene and the fresh air have a more potent influence than any drug.

Nervousness, hot flashes, cold hands and feet, flushing, etc., are all manifestations of the nervous system due to a local disturbance probably in the ovaries.

Hysteria is this nerve manifestation accentuated. The name itself is derived from the Greek word "Hyster" meaning uterus, and applied by the ancients to that profound disturbance of the nervous equilibrium emanating from the uterus.

Wheeling helps these nervous disorders by relieving the nerve tension in much the same manner as a locomotive "blows off" its accumulated steam, when it is at a standstill. If the steam was retained an explosion would result. Hysteria is an explosion of the nervous system and bicycling is a newly invented safety-valve.

Malaise, or "that tired feeling," or laziness, whichever you wish to call it, is frequently caused by an unhealthy condition of the sexual organs, coupled with constipation and inactivity of the liver. It may also be caused by overwork, and then the remedy is rest. Otherwise a little work often cures that tired feeling. Some wit has tersely said, "If you feel tired, work it off." The kind of tired feeling which wheeling helps is that caused by indolence,—the stagnation of the system's machinery. A ride in the open country revivifies the whole system.

Leucorrhœa, or "whites," is not necessarily an indication of weakness, as many suppose. When you have a cold in your head, the nose secretes abundant mucus, as is commonly known, and the cause is understood. The neck of the womb secretes a mucus, because there is a chronic congestion present, and this secretion is Nature's method of relief to it. Another cause may be

lacerations or tumors. When these are present, bicycling will do more harm than good. Otherwise wheeling is very beneficial to leucorrhœa. The force at work here is the increased blood supply and the improved nutrition of all the pelvic organs.

The bicycle is not a panacea for all the ills of womankind. It has its limitations, and there are certain conditions in which it will do absolute harm.

Pelvic tumors of all kinds are a contra-indication to the use of the bicycle. From its use these tumors may be stimulated to grow larger by the increase in the blood supply to the pelvis.

Acute inflammation should, of course, prohibit the wheel, as should the condition of pregnancy. Wheeling will also be much safer dispensed with during the period of menstruation.

Lacerations of the pelvic floor should be repaired before wheeling is attempted.

Adherent retroversion, or fixed backward displacement of the womb, should be treated first, the adhesions broken down and the uterus replaced before wheeling will be of service as a curative agent.

Wheeling is prejudicial to procidentia, or fall-

ing of the womb, and should not be practiced if this condition is present.

The bicycle has been known to have a favorable effect on the nervous disturbances of the menopause, or change of life. It may seem to some that forty-five years of age is rather late in life to begin bicycle riding, but it is not an uncommon sight to see gray-haired men and women astride a wheel on the boulevards or pathways, enjoying it as much as the youngest.

When a woman undertakes to ride a wheel, it will pay her to remember the following tips :

Be careful to increase the length of the ride gradually.

Always dismount and walk up steep hills.

Never go so fast that breathing becomes labored.

Never sit down on damp or cool ground when heated.

Learn to use the pedals instead of the brake.

Rest frequently during long rides and after riding.

If the heart palpitates stop and rest.

The future of bicycling for women is even more promising than its present is fulfilling. What is done by the present generation will have its effect on future generations. With healthier women will come healthier children. And child-

bearing itself will be easier. As the health of woman increases, she will acquire stronger muscles and steadier nerves. Her menstrual periods will tend to become painless. And last, but not least, she will wear a more hygienic dress—an epoch toward which the female world has been struggling for a century.