

STRENGTH

Vol. V. No. 11.

MAY, 1921

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HOW DO
THEY DO IT?

THE MAKING OF
A BIG LEAGUE
BALL TEAM



LIFTING--
The Ideal
Exercise

HOW TO
SWIM

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STRENGTH

Vol. 5

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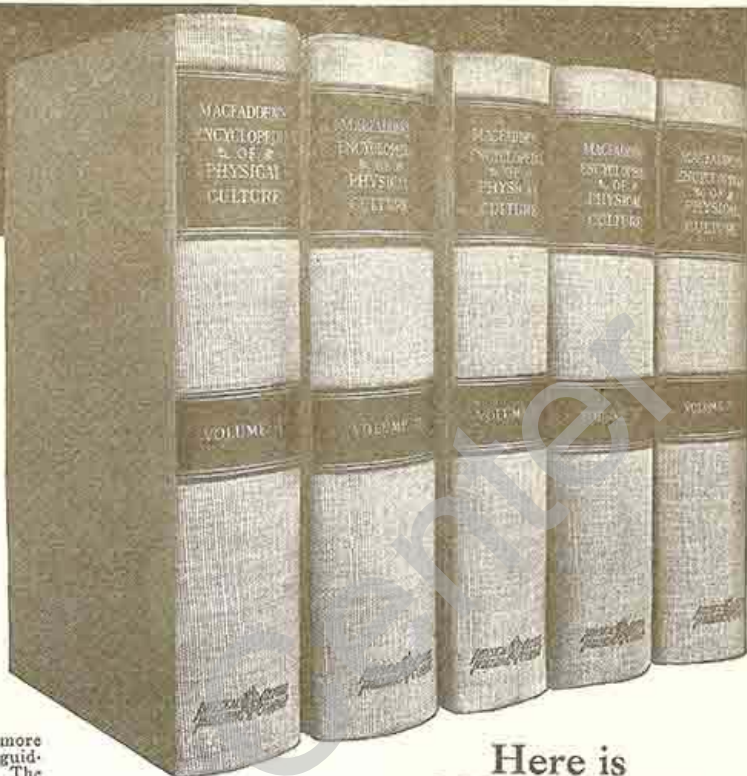
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 avoid disease
 fast as a curative measure
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 apply home treatment for disease
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 build nervous energy
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 understand the process of reproduction
 benefit by laws of sex and marriage
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A Strong Back and a Weak Mind

DO they bear any relation to each other? In the minds of some people they are inseparable. Perhaps they are sometimes found together, but not so frequently as are a weak mind and a weak body. And to find the answer we must look, not among the strong backs, but among the great minds.

Men eminent in public life are known to us only for their intellectual qualities. Their physical strength must necessarily be eclipsed by the greater vigor of their minds. It is only natural, therefore, that they should be known to us for the strength of their intellects and not for the strength of their muscles. And yet, the greatest minds of our nation have had both.

Three men among our Presidents stand out head and shoulders above the others—Washington, Lincoln and Roosevelt. The latter was well known as an advocate of the strenuous life, and as one who began life as a weakling. It is not so well known that George Washington established a record in the broad jump that was not beaten until more than a century later, and that Lincoln was credited with having picked up a 600-lb. pigeon house. He also had considerable fame as a wrestler, having been thrown only by one man. History will probably rank Woodrow Wilson among the greatest minds of the nation, but it is quite certain that his fame would have been even greater had he had the physical strength to complete the projects planned by his superb intellect.

And if you care to investigate, you will find, with few exceptions, that the men of great intellect in every age have also had a considerable degree of physical strength. No matter what a man's ambition in life may be, a strong, healthy body will help him to obtain it. The slogan of the ancients, "A sane mind in a sound body," was the real dope.

Speed, Stamina or Strength

Which goes first: Speed, Stamina or Strength? Grantland Rice, in a recent article, cites Zbyszko as an example of this, and proves that speed goes first, stamina next, and that strength lasts longest.

A man may become a phenomenal sprinter or a marvelous long distance runner, but in neither case do their powers last very long. A few years at best, and they are ranked among the has beens.

The man who develops speed, and the man who develops endurance, may both be as healthy at the time as the man who trains for strength. But, after all, the real value of any sport or exercise lies in its health giving qualities. The man who trains for strength retains his strength over a much longer period, and if he retains his strength he also retains his health.

Will Paddock, the sprinter, still be contending for championship honors a few years hence? He will *not*.

Will Dempsey or Carpentier still be topnotchers in their professions? They will not.

How many of our present day ball players will still be in the big leagues?

On the other hand, there are any number of wrestlers and weight lifters who will still be contending for championship honors for many years to come.

Professional athletes will always take up the branch of sport for which they are best adapted, and, of course, the one which will pay them best. But the man who participates for better health will do well to train for strength, as it stays with him over a greater period of years.

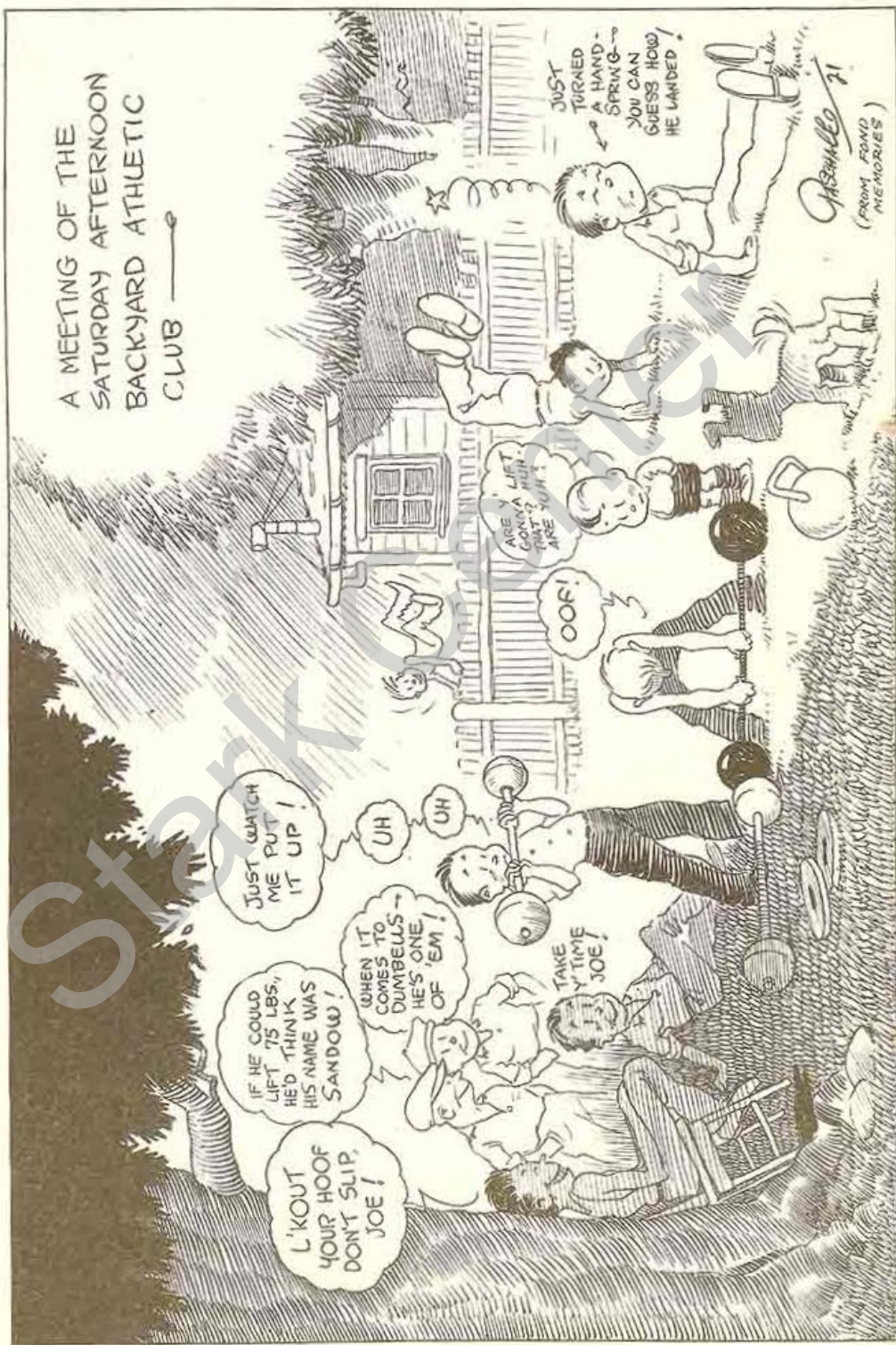
Compulsory Physical Training

The value of physical training is being recognized as of supreme importance in training the youth of our country. Just as education is compulsory in most states, so physical training will some day take its rightful place in the curriculum of our schools. Children are educated to prepare them for life, and their physical equipment is of just as much importance as their mental equipment. What better heritage could the schools or the nation give them than a sound, healthy body?

France is one of the first countries to realize the national importance of health, and has made physical training compulsory for school children of certain grades and ages, and children over sixteen must continue various forms of outdoor sports for a certain period after leaving school—a step in the right direction.

But France is not the only nation in need of such a program. America needs it, even though her physical loss was much less than that of France during the war. Not only is it needed to insure our safety in time of war, but for the business of every-day life. The child of today is the man or woman of tomorrow. And no nation can hold its own and progress without due regard for its greatest asset—national health.

A MEETING OF THE
SATURDAY AFTERNOON
BACKYARD ATHLETIC
CLUB —



How Do They Do It?

By ROBERT W. MAXWELL

Mr. Maxwell has visited the spring training camps from Tampa, Florida, to Pasadena, Calif., and presents this interesting story of managers and managerial methods in big league baseball.

THE guy who first pulled that wise crack about many a true word being spoken in jest, certainly orated an armful. For years the joke-smiths and professional jesters on our great daily papers have been handing out side splitting paragraphs about pennants being won in the winter league and in the hot stove circuit, little knowing they were dishing out some serious facts. Every time they felt in the mood to pry some giggles from the mob, they mentioned some ball club that always wins the championship on or before April 10. That's usually a few days before the opening game of the season is played.

Gentle reader, don't gurgle with glee when I step into the picture with the remark that many big league pennants really are won in the month of March and the first week in April. This isn't a comical crack nor is it slap stick stuff. From personal observation in the last four years when I visited every big league training camp during that time, watched the teams in the making, noticed the methods of preparing for the coming season, I have drawn my own conclusions. The team which gets itself into shape to play good baseball the first month is the team which is a serious contender for the flag.

Managers do their hardest work and put in their most strenuous sessions during the training period. The players are not so keen about it because they are not on the payroll and their work is gratis; but the

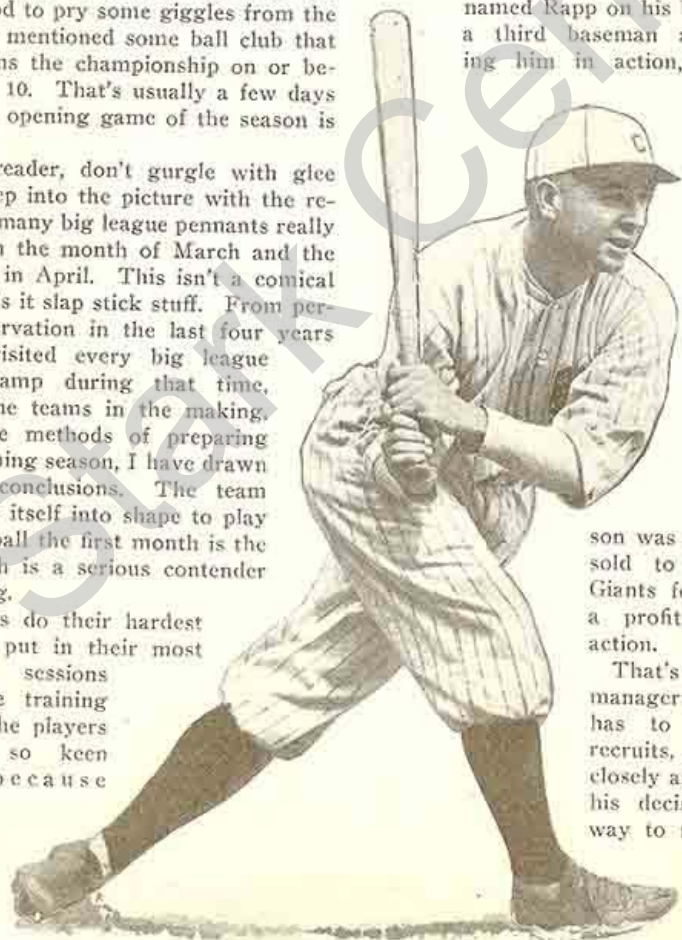
big league pilots are on the job every minute of the day and most of the night. They have to look over some twenty or thirty new players, learn how good they are and then decide what men are to be retained. Sometimes he makes a good guess and nothing is said. Other times a boner is pulled and the fans are on the job to furnish the rollicking roo-hoo.

Last year, Pat Moran had a person named Rapp on his ball club. He was a third baseman and after watching him in action, Pat decided he would not do. Therefore, he was placed on the open market and sold to St. Paul for \$1,000, a small price these hectic days.

Rapp turned out to be the best third baseman in the American Association and before the season was over, he had been sold to the New York Giants for \$15,000. Quite a profit on one transaction.

That's the thing the manager is up against. He has to work with his recruits, study each man closely and when he makes his decision, there is no way to rectify a mistake.

Last year, after a trip around the training camps, I predicted that Cleveland



TRIS SPEAKER, CLEVELAND

would win in the American League and Brooklyn in the National. I am not pinning any medals on myself because the guess happened to be correct, but it was based on the work which had been done in the training camp. The men went about their daily practices as if they meant business, took things seriously and made an earnest effort to get as much as possible out of the preliminary work.

This year, I made another trip, starting at Tampa, Florida, and ending in Pasadena, California. Sixteen big league camps were visited, sixteen big league clubs were closely scrutinized and once more I make the assertion that the work in the training camp up to April 1 was most important.

There are sixteen managers in the Big Show and for that reason, there are sixteen different ways of getting a ball club in shape for the season. Every pilot has his own ideas and puts them into effect. For example, Hugh Jennings believes in morning practice. "It's the greatest thing in the world for a team," he says. "All of the mistakes can be corrected, the man can get batting practice, the pitchers can work out and in a short time everything is running smoothly."

On the other hand, take Ty Cobb, who succeeded Jennings as manager of the Detroit Tigers.

"Morning practice is the worst thing for a ball club," he says. "The players have to get up early, and after eating a hearty breakfast, go out on the diamond and practice before the food has been digested. They work so hard in the morning that they are all in when the time comes to play the real game in the afternoon. My ball club will not start work until 12.30 P. M. now or in August."

You could not get two opinions which are so far apart. Yet, each believes he is right and trains his men along his own ideas.

It is interesting to note how the managers work. "How do they do it?" is a question which has been asked by fans for many years.

The most picturesque manager is William Kid Gleason, of what is left of the Chicago White Sox. The Kid is the hardest worker of all the managers and he usually gets results. From the time he steps on the field until he leaves, Gleason is bouncing around like a bundle of runaway springs. He hits to the infield, pitches to the batters,

plays in the infield and outfield and runs races with the players. He never is quiet and has his men in the same condition.

When I visited the training camp in Waxahachie, Texas, and stepped on the field, Gleason greeted me in his real, original manner. He climbed on my back, threw his muscular arms around my neck and did his best to throw me to the ground. That was his opening chorus and address of welcome. After that, he pulled his cap over one eye, looked aggressively at me and said:

"Well, take a look at the best ball club in the American League!"

Gleason, despite the loss of Gandil, Weaver, Risberg, McMullin, Jackson, Felsch, Cicotte and Williams, eight of the very best players in the league, still believes he has a chance for the gongalon. That is because he believes in himself and knows he can get the men fighting for ball games. And he knows how to do that very thing.

There is no morning practice in this camp. The Kid meets his rookies about noon and for one and one-half hours puts them through the paces. The pitchers are in one corner warming up, the outfielders are chasing fly balls and the infielders battling with tricky grounders. Gleason supervises everything—he works without an assistant. He is with the pitchers one minute and the next will find him at the other end of the field telling an outfielder how to make a catch and throw the ball home. He keeps this up until the practice is over and then does the same thing with the regular team.

In other words, the White Sox have two practice sessions. First the rookies and then the regulars. In this manner Gleason has a chance to do more work and study his new men.

Lee Fohl, of the St. Louis Browns, is the opposite. He is not a hard worker, but takes things as easy as possible. Lee believes in taking a bird's eye view of the proceedings. He conducts a door step campaign the same as Harding and the front porch at Marion last summer.

Fohl steps out of the clubhouse, walks a couple of steps and sits down on the doorstep. From that point of vantage he looks at his ball club. If he wants to say anything, he calls one of his assistants and the information is imparted to the player. This is something new in big league baseball. It will be interesting to learn how it comes out.

The Browns trained at Bogaluse, La., a

thriving little town run by the Great Southern Lumber Company.

Tris Speaker is an ideal manager. He is one of the players, has their confidence and at the same time, lets them know he is absolute boss. His word is law and no one can change it. One day in Dallas, President Dunn of the Cleveland club questioned the methods used by his manager. Speaker flared up immediately and said:

"Please remember that you are only the president and owner of this ball club. I am the manager and what I say goes!"

That ended the argument.

Speaker has but one long practice and for the first week there is little baseball played. His men play soccer football, run around the park, toss the medicine ball and wrestle. The baseball is tossed around to get the arms in shape, but not until the second week is there any real practice. By that time the arms, legs and wind can stand the work. By the way, Speaker has a calm, sensible ball club this year and the boys are not at all swelled up over winning the world series. They feel they have to play better this year than last to win the pennant and they expect to win.

Everybody knows Connie Mack. He is called the Tall Tutor and he lives up to the name. Connie does not don a uniform. He is the only big league manager who doesn't, now that Stallings and Ed Barrow are out of the fast set.

Connie holds two practices a day. He had his men on the field morning and afternoon in Lake Charles, La., and much work was done. He also believes in starting early and was the first to take his men south.

Mack just strolls around the field, occasionally speaking to a player, but just observing most of the time. His assistants, Harry Davis and Danny Murphy, are his spokesmen. Connie spends most of his time with his pitchers. He has been working with the same ones for three years and at last he believes he has the best hurling corps in the league. He plays many ball games, sending the rookies against the regulars and in that manner gets a line on his players quite early.

Miller Huggins has a ball club all selected for him, but at the same time, has to do much work with the recruits. He has the new

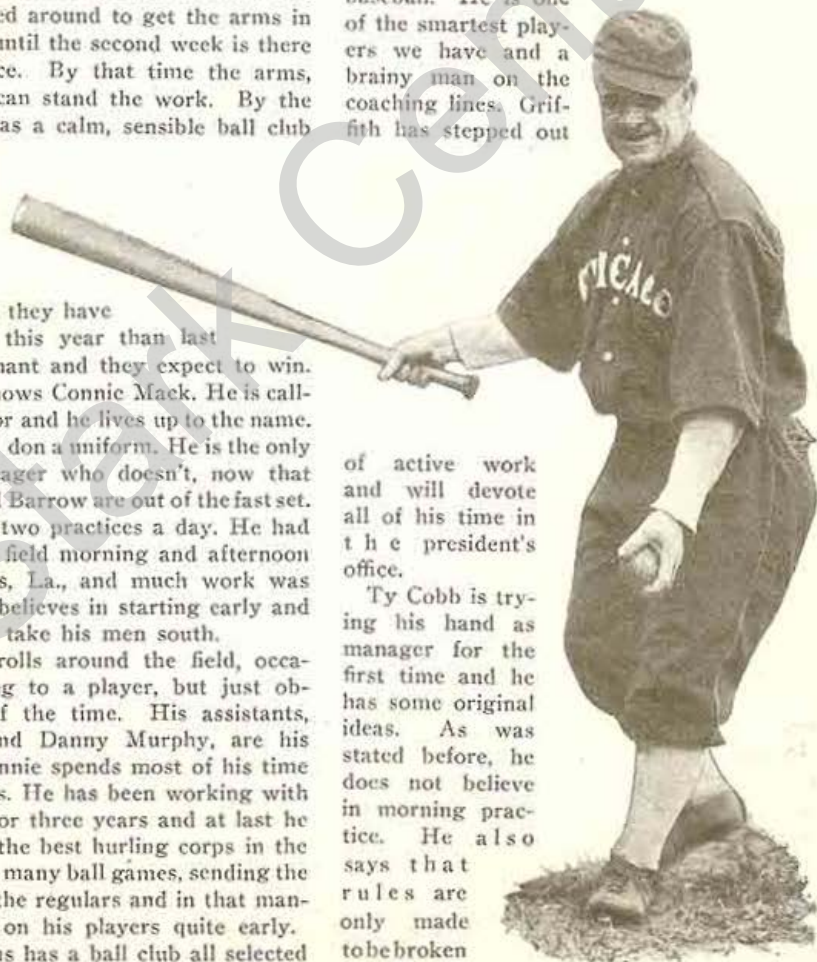
men on the field every morning and that leaves the afternoon for the regulars. Huggins is a great man for combinations. He has to combine hitting with speed, which is a tough job this year because there is no speed. His hitters have to knock the ball out of the lot to get around the bases.

Huggins tried out forty new men this spring and has selected six from the mob to stay with the regulars.

George McBride, the new Washington manager, worked his squad only once a day in Tampa, Fla. George used the methods he learned while working for Clark Griffith, and is assisted by Nick Altrock. Nick is considered a nut and a comedian, but don't think he doesn't know baseball. He is one of the smartest players we have and a brainy man on the coaching lines. Griffith has stepped out

of active work and will devote all of his time in the president's office.

Ty Cobb is trying his hand as manager for the first time and he has some original ideas. As was stated before, he does not believe in morning practice. He also says that rules are only made to be broken and therefore there



KID GLEASON

will be no rules on his ball club.

Ty is a hard worker. He is with his men all of the time, gives them advice and has developed into a real pal. He wants every player to be perfectly satisfied and will go to any length to accomplish this. Cobb has changed considerably since last year and he should be successful. He did some good work in San Antonio and started the season with a first class team.

Hugh Duffy is a newcomer in the league. He had his club at Hot Springs and practiced twice a day. He had an advisory board which consisted of every member on the team and worked with his players. Jimmy Burke, formerly of the Browns, is his assistant.

Duffy believes in getting his team in shape slowly and was careful not to overwork his men the first two weeks.

Johnny Evers is a serious minded person these days. Out in Pasadena, he had his men working twice a day and they certainly worked. He wanted to get his players in shape as quickly as possible so he could perfect team play. The only thing that worried the Trojan at the start was the diet of his players. Johnny believed they ate too much, and therefore allowed them to eat but twice a day, eliminating the luncheon. This scheme worked out well.

John McGraw is a hard worker. He dons the uniform early in the morning and usually is first on the field. He works with his men, teaches them how to run and slide, even going to the sliding pit to demonstrate his ideas. Because of his long experience, McGraw sizes up his new men quickly and knows what each can do before the first week has ended. He spent three weeks in San Antonio before starting on the exhibition tour north.

The manager of the Giants does not do much with his older men. Pitchers like Slim Sallee, Toney, Douglas and Barnes are allowed to train themselves, but it is up to them to get into shape. The new men are put

through the paces and know they have been in a training camp.

Fred Mitchell in an easy going, serious manager, who frowns instead of smiles and believes in lots of hard work. In Galveston he worked the

Braves twice a day, the pitchers and catchers doing most of their work in the mornings.

One of the busiest camps I visited was in Hot Springs where the Pittsburgh Pirates did their preliminary work. George Gibson had a squad of forty-four, which worked twice a day and the sessions were long. Gibby has two ball clubs, a veteran and rookie. Some of the new men are pressing the vets for their jobs and that makes things interesting. There is lots of spirit in the Pittsburgh club and this will make it a serious contender for the flag.

Bill Donovan is an easy going boss—apparently. He has a way about him which makes the men work hard and the sulkers soon learn where they stand. Bill can call a man down as well as anyone and he knows how to keep the athletes in line.

Pat Moran is a driver. He believes

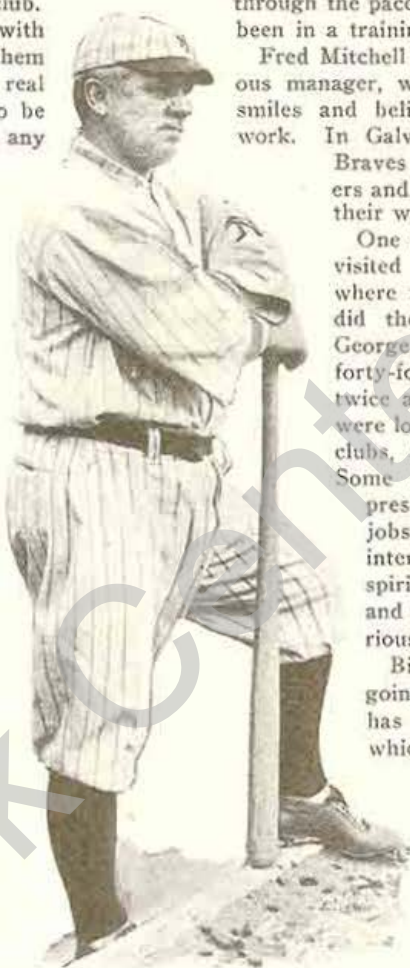
McGRAW

in two a day and in Cisco, Texas, kept the Reds on the jump. He had to develop a new infield and outfield and spared no one. Moran believes in signs—that is, baseball signs. He devotes much time in teaching the most intricate codes and keeps this up all season. Moran works with his pitchers in the training camp and usually has them in shape for the opening game.

Wilbert Robinson is an easy going manager, because he has a veteran team. He is standing pat on last year's team and has but one rookie infielder to be annoyed with.

Robby's best work is with his pitchers. He does not tell them how to throw to the batter, but teaches them how to cover first

(Continued on page 44)



How to Swim

By L. E. EUBANKS

ONLY about 20 per cent of the people in the United States know how to swim. This means that on the average four persons out of five are in grave danger of drowning should they in any of numerous possible ways fall into deep water. When we remember that about three-fourths of our planet Earth is water, we have to admit that there is always a strong chance of an encounter with it sooner or later.

The argument of some that usually the distance from the shore, in case of accident, is too great for the average swimmer anyway, is groundless. Some chance is always better than none, and really, the main thing in most cases is to stay afloat for a matter of minutes—till help can arrive. To swim only indifferently is worth a great deal for that reason, though it is much better to acquire real proficiency. The good swimmer not only can care for himself in water but sometimes save the life of others. I purpose to tell you more of this later on.

In addition to being directly useful, swimming is a splendid body training. It is what I term a constitutional exercise, like walking or running; it uses all the muscles in a natural way and invigorates all the vital functions, respiration, circulation and digestion, when properly practiced.

Much has been written about the power of the swimmer's muscles. The fact that they remain soft yet acquire marvelous endurance (when distance swimming is practiced) has puzzled some people. The fact is that muscles should not be hard except when contracted. One writer says that "those soft, enduring muscles" come from the mildness of their contractions in swimming; but I do not believe it, because many athletes who have developed themselves by training that required great muscular contraction have wonderfully soft, pliable muscles when in repose. Sandow was a striking example. I think the softening action of the water should be considered; and here is another important point: The swimmer's movements are of the sweeping kind; in the breast stroke, for instance, the limbs are extended, the movements finished. I learned years ago that short, cramped movements tend to bind mus-

cles, that is, shorten their latitude of comfortable action and stiffen the tendons at their juncture with the bones. "Muscle-bound" virtually means just that, a condition wherein the muscles are "short," easily pained in certain position, and unable fully to relax. As I have said, swimming usually brings long, smooth, soft muscles that possess wonderful endurance, though it would not be true to say that this exercise alone develops remarkable contractile power of muscle, lifting strength.

Further still, as a bath, the daily swim is beneficial. True, it may be overdone. If one swims daily, ten or fifteen minutes is enough, keep briskly busy and a lot can be done in that time. I think twenty minutes should be the limit for a healthful swim. The cold shower just before dressing should never be omitted; it is the very best preventive against colds. The air bath incidental to swimming is not to be overlooked; air and light exercise powerful influence on the skin and nervous system, they are tonics of the first order. A nerve cell uses several times as much oxygen as a muscle cell; air is the very life of nerves, and all nervous persons would be the better for swimming—always with proper precaution against shocks and colds. For catarrh, too, a daily swim in the open is fine indeed.

And the pleasures of the sport are not surpassed by those of any other game. Somehow, you meet people at their true worth in the water; there is a certain "democracy of the pool" that makes for a desirable extension of one's acquaintance and wholesome social intercourse. Water sports themselves are far more interesting and varied than the inexperienced person would believe; there are countless contests, games, tricks, stunts, etc., and these help to keep swimming "ever new and interesting."

Begin easily. Do not rush into the thing carelessly. You have plenty of time, and will learn better and faster by being deliberate, knowing the "why" of every move. Swimming, when we go into it for real skill, is decidedly scientific, and it is to the pupil's advantage to get started right. Even if it took three times as long to master a stroke correctly as to get it just any old way, it

would be economy of time, because to "unlearn" a movement after using it a while is hard for anyone. Take time and get the foundation right.

You can do a lot of your practicing on dry land; in fact, this is an important part of the training. But it is like going through a boxing blow without an opponent—it alone won't bring efficiency. No matter how perfectly you learn a stroke on shore, the water introduces greater difficulties.

Fear in the water drowns more people than inability to swim. The learner should thoroughly digest this fact, that he is lighter than the water; a passive, relaxed body, with a moderate supply of air in the lungs will not sink easily. It is the panic of fear that causes the trouble and ends in drowning. The moment a stranger to the water sips a few mouthfuls he thinks he is a goner and starts to "fighting."

You must get over all this before you can swim. As a part of your dry land exercises use a big basin of water and practice holding your head under the surface. This will show you that you can hold your breath for some time and open your eyes without harm. Any clear water, especially salt water, is good for the eyes. Take a deep breath, submerge your face, then exhale through your nose. For reasons I shall not analyze here, mouth-breathing is proper when swimming. Of course you exhale through the nostrils when the face is under water.

Some instructors teach floating before giving any strokes, claiming that this dispels fear by showing the pupil how simple it is to stay afloat. In theory this is fine, but to lie on one's back (the usual position for floating), perfectly relaxed, is the "tallest order" you can give a beginner. A fellow who can do that to start with will have very little trouble to swim, because he has just about conquered fear. The average person, when learning to swim, cannot keep still in the water; and because of this I recommend a stroke or two before the float. Further, it is natural to want to see in the direction we are falling. Really, most people could swim on the back most easily if it were not for instinctive fear. A beginner is wild with nervousness when sinking backwards, and for this reason the simple breast stroke usually makes the best starter.

Let us begin with the arm movements. Though the legs are of far more importance

than the arms in propelling the body through the water, it is the upper limbs mainly that keep the swimmer's head out, and for this reason their use is of special value to the beginner. We will do a little land practice first, till you understand the movements and execute them readily.

Stand erect, upper arms at sides of body, palms of hands together, thumbs near chest. Now shoot the hands forward to full extent of arms, shoulder height. Next, separate hands, turn palms downward, and swing arms back till they make a straight line with shoulders. As you start this backward swing twist the wrists still further, bringing thumbs down, and slightly cup the hands. Be sure to keep the arms approximately straight at elbows till swing is finished. Now bend the arms and bring hands to first position preparatory to a repetition of the stroke.

The legs work alternately with the arms; they are drawn up as the arms sweep round and are kicked out as the arms shoot forward. This alternation is what sustains the body's propulsion. Since you are going to use your legs simultaneously, you must lie across a chair or stool. Bring the legs well up (but not to an uncomfortably tight angle), let the heels touch, turn toes out, and spread knees well apart. Now the stroke proper: Kick to full extent of the legs, spreading them and giving a sort of leg twist as you do so. The moment legs are straight snap them sharply together, ready for drawing up again.

Recovering of both arms and legs must be prompt but gentle. The stroke itself must be vigorous, but you should slide back into position with as little resistance action as possible.

Now use the arms and legs together, remembering that the latter are drawn up as the arms are swept round and are kicked out as the arms shoot forward. Breathe out as the arms go forward, inhale as they sweep round. A famous swimmer framed the rule thus: "Blow your arms away." I do not favor exact statements as to the number of strokes of each breath; people differ too much in lung capacity and number of inhalations a minute. Breathe easily and to a depth that gives comfort and endurance; the number of inhalations will take care of itself.

A word about support. Of course you will not enter water deeper than four or five feet while learning, but to prevent too much

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Lifting—the Ideal Exercise

By ADOLPH NORDQUEST

With artistic muscular poses by the author

THE most satisfying results can be obtained only by employing proper methods in physical training. Too much stress cannot be laid upon the importance of all-around muscular development in its bearing on health and strength. To acquire this prized possession should be the aim of all.

So many strength seekers make the serious mistake of developing certain sets of muscles, particularly those of the arms, while overlooking the needs of the other muscles of the body. This faulty procedure naturally results in inharmonious development, instead of the ideal for which they should strive.

In taking up his exercises the beginner should be thoroughly grounded in correct principles, and then set to work with the necessary determination to bring about the desired results. Exercise, in order to be of the greatest benefit, must be of a live, interesting nature. In this respect weight lifting gives us just what we want. No better exercise has ever been devised for imparting to the body its highest state of muscular and vital perfection than judicious weight lifting.

In the lighter forms of exercise, such as calisthenic drills and the like, the muscle increase is so slight as to be hardly noticeable, if there is any at all. Whereas in the heavier exercises a great increase in muscular development may be obtained in a short time. We may sum it up in this manner: Heavy work gives a man heavy muscles, and

light work, light muscles. Nature sees to it that our bodies become adapted to the exercises we indulge in. Of course, I don't wish to give the impression that light exercise is of no value. On the contrary, great benefit may be derived from a few light, quick movements after the lifting of heavy weights or some equally strenuous work that the muscles have undergone.

It has been my pleasure to have indulged in nearly every form of athletics. As a boy I took naturally to athletic sports, such as running, jumping and wrestling. In this I was stimulated in doing my very best in competition with my eldest brother, Arthur. It was all this early training that laid the foundations of my strength. It is true at this period I knew very little about weight lifting. The first professional strong man I

had the pleasure of seeing was Walter Strickney, who gave a fine exhibition of lifting and juggling weights at Ashtabula, Ohio, my home town. This had its effect on me. My greatest desire from then on was to become a strong man. This led Arthur and me to purchase a dumbbell, with which we trained faithfully for about a year. At this time I was nineteen years old, when it occurred to me that I might enter the strong man ranks. This was in 1901 at the time of the Pan American Exposition, which was held in Buffalo. I was fortunate on my arrival at the Fair in getting an engagement at a theatre on the Midway where I stayed on, giving exhibitions of



feats of strength, till the close of the Fair.

Fortified by my experience in Buffalo, I decided to go to New York where my chances of getting on with the act were better. While there I became acquainted with Otis Lambert, who impressed me by his splendid muscular development. We became partners in a vaudeville act. Our act consisted of lifting each other in the same manner as one might lift a dumbbell or a bar bell. In addition to this we did muscular posing and some acrobatic stunts. Lambert's feature lift required the highest degree of strength throughout the body. In this feat of strength I would assume a doubled up position alongside him as he lay flat on his back. With one hand he would grasp me firmly by one arm and slowly rise to his feet, holding me at arm's length overhead. This is a very difficult lift when you take into consideration that my weight was one hundred and ninety-five pounds and he weighed only one hundred and sixty-five. What is more remarkable, on one occasion he succeeded in lifting me in the manner described with the added weight of a twenty pound dumbbell tied to my body.

At Brown's gymnasium in New York, Lambert performed a daring acrobatic feat. In preparation for this he was blindfolded, his ankles securely tied together, and with a twenty pound dumbbell, one in either hand, he turned a backward somersault. The other acrobats after witnessing this nery stunt termed it the suicide act. It is needless to add that none other present would try this dangerous somersault.

Thomas E. White, of Chelsea, Mass., is a great all around athlete. He weighed but one hundred and fifty-five pounds when he succeeded in lifting me three times in succession in the one arm bent press. My weight at the time was one hundred and ninety pounds. His agility was wonderful. One of his favorite stunts consisted in his running up to a man standing facing him; with a leap from the floor he would land with one foot on the other man's chest. From this position he would turn a backward somersault. His muscular control was remarkable. He could make all the muscles of his body shake in perfect time to music.

One thing worthy of mention regarding strong men is the fact that some of them have made their best lifts around the age of forty and over. This at a time when

most other athletes have passed their prime.

A notable example of great strength retained over a long stretch of years is John Y. Smith, of Boston. He could perform his record lifts when he had reached the age of forty-five. I had the pleasure of training with him at the Young Men's Christian Union gymnasium in Boston, where I witnessed some great feats of strength performed by him. Smith was known in Boston as the father of weight lifting; and a great deal of credit is due him for his share in making weight lifting popular. He was of a very jolly disposition; I relate herein one of his pranks. One evening in Boston while standing in line to purchase a theatre ticket, a curious incident took place; I felt myself lifted bodily to one side. On turning around I was confronted by the smiling face of John Y. Smith. In this impromptu lift he grasped me firmly under the arms, lifted me free from the floor, and carrying me free from his body set me to one side as easily as though he were lifting a child in place of lifting a two hundred pounder. You can well imagine the strength is required to perform this difficult feat.

For pure endurance my brother Joe is a wonder. In a New York gymnasium I have seen him try out and accomplish nearly all the pet stunts of the other athletes, and after they were tired out from their exertions, Joe appeared to be as fresh as ever.

In 1917, at the Greek Athletic Club in New York, Joe and I were getting ourselves in condition for some record lifts. Day after day Joe pressed with his left arm overhead a bar bell which weighed over 300 lbs. After one particularly strenuous day spent in training I felt somewhat tired, and I remarked to Joe that he must also be tired. On the contrary, he said he felt like doing a little more lifting. So he insisted on lifting me instead of a bar bell. On this occasion he pressed me overhead several times in succession with one arm. At the fifth successive lift I halted the proceedings by gaining my feet. Evidently Joe was not pleased with this. In a grieved tone of voice he turned to me and said, "Why didn't you stay on my hand a little longer? I could have lifted you a few more times if you had remained in position."

Of course, it is not advisable for the beginner to go to great lengths in tests of endurance. Even the seasoned athlete finds

himself at times in a condition of staleness, due to excessive training. It is far better to be moderate in your exercising habits. The athlete who watches himself in this regard becomes, as a result, a consistent performer, that is, he is able to give a good account of himself at all times. Having conserved his strength he has a good reserve to draw from when called for.

It is well for the aspirant to keep ever before him the ideal physique he wishes to acquire. His main efforts should be directed toward strengthening his weak points if he has any.

But it must be kept in mind that exercise, in order to do us the most good, must have as its foundation a well nourished body. In my case I believe in plenty of beef, vegetables and fruits. Whole wheat bread, and bread made of whole rye contain the essential food properties that go to make up bone and muscle. White bread is lacking in this respect.

In exercise I hold no set rules. I have taken up nearly every form of athletics and believe each branch has played its part in my physical betterment. I am fond of running and jumping because these sports have the effect of keeping me lively. By running I mean the short sprints. The long distance runs have the effect of wearing out the muscles. Just compare the sprinters as a class with the long distance runners, and you can readily prove to yourself that the one hundred yard dash athlete on the average is better built than the Marathon runner. This is clear evidence that exercise in order to do us the most good should be taken in a concentrated form. In this respect weight lifting gives us just what we want. The various exercises to be had with weights call vigorously into play every muscle in the body. And just a few minutes spent in this manner daily will do you more good physically than any other form of exercise I know of.

There is one exercise in particular to which I wish to call your attention. It is a very effective abdominal exercise.

Sit on a stool; place your feet under a heavy object, or better still, place feet through leather strap loops that may be fastened to the wall about six inches above floor. From sitting position bend backward till your head touches the floor. To make the exercise more effective the hands should be clasped back of the head. When accustomed to the movement, repeat about twenty times. Try the same exercise with a twenty pound dumbbell held in place in back of the head. With the weight added it becomes a good test of abdominal strength.



There is no single physical attribute more desirable in the athlete than a waist line in good condition. Athletes know the value of this and accordingly spend a lot of time on this part of the body.

The following is a very good exercise for the upper body: Lie flat on your back, and have a bar bell within reach of your hands back of the head. Use both hands in pulling weight over face to chest. With elbows resting on floor while supporting the weight with hands, press it to arm's length. It is a very comfortable position to lift in; but by using a weight sufficiently heavy it will bring powerfully into play the muscles of the arms, shoulders and chest. It is a favorite exercise with wrestlers.

In conjunction with exercise it is well to consider the importance of fresh air. Get all the fresh air you can at all times.

Some strong men have done their best lifting outdoors. I have seen my brother Joe lift outdoors in the coldest of weather. In his case it may be due to another consideration besides fresh air. When lifting a huge weight overhead he prefers stepping to one side, letting the weight crash to the ground. A floor would have to be quite strong to withstand such treatment.

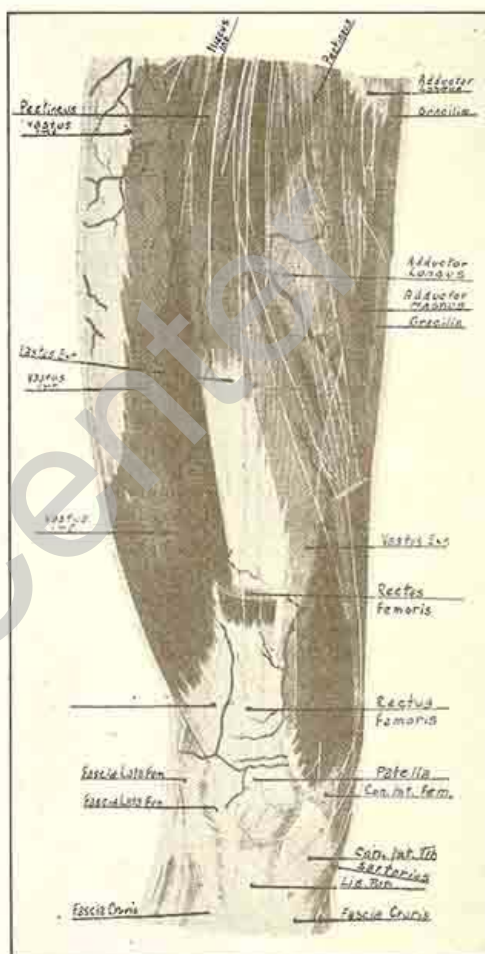
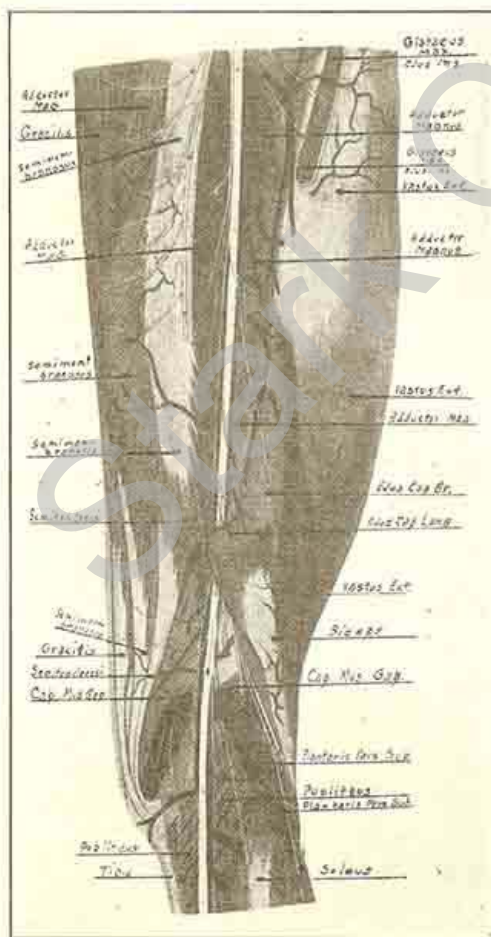
Of course, a well ventilated gymnasium or an airy room will serve the purpose of supplying all the fresh air needed in exercising.

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66—**and From the Waist Down**⁹⁹

By WALTER MANN

Whenever the muscles of the hips, upper leg and calf are mentioned, I am always reminded of what a full fledged private in my platoon said about a friend of his. I may say that this description came from one who had been born round about Whitechapel. One of the men who boxed rather better than the average insisted upon wearing long trousers in the ring, and refused to "go on" when told to don the athletic tights supplied him. I asked the Cockney why his friend insisted on the trousers and he replied "Bill is one of these 'ere 'ipless wonders; and 'e's bashful, Bill is. We 'ad 'im in kilts once, but the shirk was too blimed much for the Captain, so Bill was transferred to a bat-



talion where 'e could wear long trousers."

I often wonder how many of the young men one meets on the street would also "feel bashful" if they were sent out in fighting togs. Judging by some examples seen on the beaches, "ipless wonders" are not confined to the army."

The Hip Muscles, which are our first consideration, are among the most important that we have. And of all the groups of muscles those to be taken up in this article are called upon more often in everyday work; in athletics and in sports than any others. For a short while there was a much mistaken idea that a man should be shaped like

an inverted triangle; the shoulders being the the base and the ankles the peak. Anyone who cares to read up on the subject will find that the highest authority, all over the world, are one in considering the hips as the base or seat of strength. The test of one of the greatest experts we have is to "check up hip development."

First of all there are eighteen hip muscles—nine pairs—nine for each hip. These are known as the Gluteal Muscles, and while you will find these taken care of in the illustrations, it is not necessary to burden the reader with descriptions of them all. We will only go into the three main ones, namely, the Gluteus Maximus; Gluteus Medius and the Gluteus Minimus. The Maximus being the most important of the three, we will take it up first.

The shape of this muscle is of a four-sided nature; it is constructed of extremely coarse fibres, made up in bunches and as a consequence is of great strength. It is broad, thick and fleshy, and lies close to the surface. It is supplied with a lubricating system known as Synovial Bursae, which is made up of three sacks containing Synovial Fluid. As might be expected, there are two small and one large sacks. The purpose of nature in placing these sacks here is to obviate friction, because as we all know these huge muscles are subject to friction. When one sees an example of fine hip development, rest assured the Gluteus Maximus is well developed. The two main points of origin of this muscle are from the hip bone (upper edge) and from the spine, at its bony end. Its origin is varied and complicated, but the above will suffice here.

Our next muscle, the Gluteus Medius, is situated along the outer surface of the upper portion of the hip bone, below its crest. This muscle is broad and thick, and like its partner is of fibrous nature. Its origin is between the upper and middle, curved lines on the hip bone, with an insertion by means of a strong flat tendon in the upper part of the thigh bone.

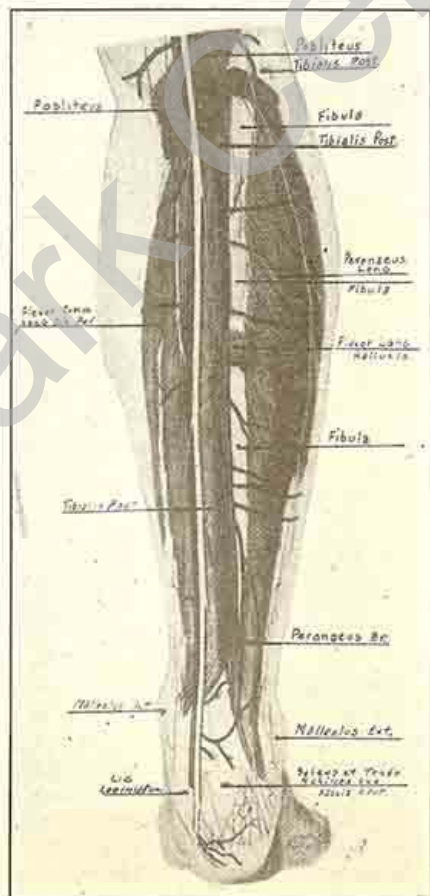
The third muscle, the Gluteus Minimus (the smallest of the family), finds protection beneath the Gluteus Medius. In shape it somewhat resembles a triangle, and is of a fibrous character. As it, also, is subject to friction, Nature has provided lubrication in the form of a Synovial Sack. It has its origin close to the upper part of the hip bone.

The main functions of these muscles may be placed in three classifications; first, to keep the body erect; second, to draw forward and extend the thigh, and third, to rotate the leg.

While we are really dealing with muscles, it may not be out of place to mention that the bony structure of the hips consists of three bones, two of which are called "nameless" (one on either side) and the Sacrum, which go to make up what is known as the Pelvis. How important this region is can be fully appreciated when one considers the amount of protection it affords us every day.

For more detailed information as to the call made upon the hip muscles, and as a verification of statements relative to their importance, I would like my readers to read carefully the splendid series of articles appearing in *Strength* over the name of O. R. Coulter.

Between the hip and the knee will be found the upper leg muscles.



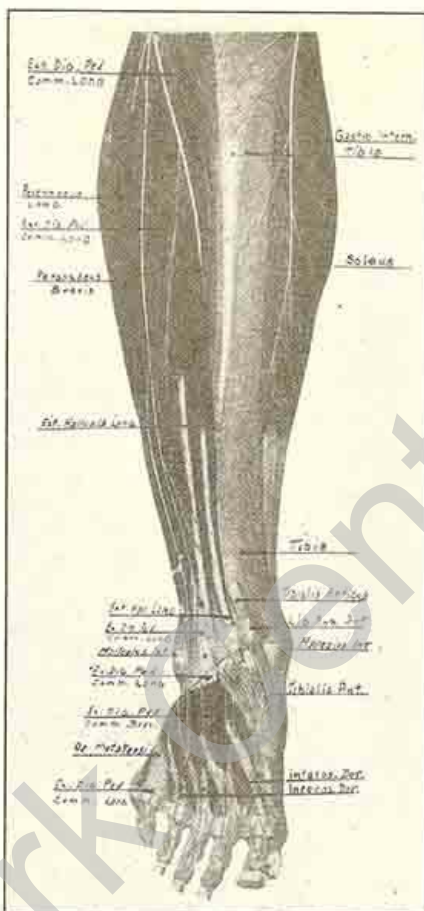
Here again we find a group of muscles very much neglected by many athletes. It is altogether too common a sight to see an otherwise well-developed man with the muscles of the upper leg so poorly developed that if they were the only group visible, the owner would at once be put down as a very much under-developed man. And I really think that regardless of the other muscles of the body such a judgment would be right. To quote a time worn saw "The chain is only as strong as its weakest link."

There are six muscles of the upper leg for description. The first being the Tensor Fasciae Femoris, situated at the side of the leg, between layers of Fascia Lata (which latter you will find on reference to your anatomy, to be a membrane which acts as a protector or sheath for the muscles). It has its origin on the outer side of the crest of the hip bone, and is attached to the smaller of the bones of the lower portion of the leg, called the Tibia.

The Sartorius is the next on our list, and it has the distinction of being the longest muscle of the body. It is ribbon-like in its shape, being long, flat and narrow. Its insertion is close to the top of the larger bone of the lower part of the leg, and in fibrous tendons will be found its origin.

The Vastus Externus, Vastus Internus, Rectus Femoris and the Crureus go to make up the Quadriceps Extensor Muscle, and while it is really a four-headed muscle, we will take each of the heads separately.

The Vastus Internus and the Crureus are very close together, and at first sight would seem to be one muscle; but closer inspection shows that there are really two. They are



both located along the front of the inner part of the leg and like all the heads of the Quadriceps Extensor they come to a single end which is attached to the knee cap. The origin is at the front part of the shaft of the thigh bone.

The Rectus Femoris and the Vastus Externus are found in the middle front portion of the leg and along the outer side of the leg, respectively. The former has its origin from the hip bone, in two heads; the latter in a fibrous attachment to the upper portion of the thigh and hip bones.

Back of these muscles, or more correctly speaking, the muscles of the back of the upper leg are found; three in number, known as the Biceps, Semitendinosus and Semimembranosus.

The Biceps is located at the back and outer side of the leg. It is a large, long muscle and

is very powerful. It has two heads; one longer than the other, the longest head finding its origin on the inner side of the hip bone and close to its lower edge, while the shorter has its origin from the thigh bone. The two strands of this muscle, like so many others, join into one strand with an insertion at the outer side of the head of the Fibula.

The Semitendinosus is remarkable for its length, located at the back and inner side of the leg. Its insertion is close to the head of the Tibia, and arises from the hip through the same tendon that attaches the longer of the two heads of the Biceps Femoris.

The Semimembranosus is, as its name would apply, partly membranous. Its origin is from the lower part of the hip bone, and its insertion is close to the head of the shaft of the main bone of the lower leg. While it is, as has been stated, partly membranous, nevertheless it is a thick tendon.

There may be more truth than fiction in the words of a dancing master that "the men discarded knee breeches because they were ashamed of their under-standing." I know that when puttees were donned in the army, many a man who in civilian clothes stacked up well, looked like a broom handled scare crow; and this may have something to do with the "long pants" permitted in fatigue dress.

As we all know the development of the muscles of the lower leg calls for strenuous exercise; and this is not to be wondered at when one sees the size and character of these muscles. As a matter of fact a glance at the accompanying illustrations will give the reader even a better idea of the location and make-up of these muscles than any written description could. However, a short description of the eight or nine muscles and the Tendon of Achilles will not be out of place.

On the front part of the leg we first will take the Tibialis Anticus which is located on the outer side of the main bone of the lower leg. It raises the inner part of the foot and flexes the sole. Part of this muscle is made of tendon (the lower portion); and the upper part is what might be termed fleshy.

The Extensor Proprius Hallucis is a long, flat muscle, located between the Extensor Longus Digitorum and the Tibialis Anticus. Reference to the illustration will show that the work of this muscle is to care for the extensor work of the big toe.

The Peroneus Tertius is, in reality, part of the Extensor Longus Digitorum, its function being the flexing of the bones of the foot.

The Extensor Longus Digitorum, found



near the Tibialis Anticus, is a long flat muscle, and its work is the extending of all the toes.

The muscle nearest the surface of those of the calf of the leg is called the Gastrocnemius. It is a two headed muscle, one of the heads, the inner and larger, having its origin close to the base of the thigh bone. The second head, the outer and smaller, has its origin at the outside of the lower end, rather to the back of the base of the thigh bone. It is this muscle whose lower portion helps form, with the soleus muscle, the Tendo Achilles, which tendon will be mentioned later.

The Soleus Muscle will be found beneath the Gastrocnemius. It is a broad, flat muscle, with three points of origin; the back of the head of the Fibula; lower on the shaft of the Fibula and close to the

head of the Tibia. It is part tendon and part fibre. This is the second of the surface muscles.

The Plantaris is a rather small muscle located between the Soleus and the Gastrocnemius, whose chief function is to assist the other two muscles just mentioned in extending the foot, which is their main work, also.

The Tendo Achilles is the thickest and strongest tendon of the whole anatomy, and is located at the middle of the back part of the lower leg. It has an average length of six inches. This is the tendon we read so much about in stories of old frontier days.

There are, of course, other muscles deeper below the surface, but they can better be grasped from the cuts.

The Development of the Hips and Thighs

By O. R. COULTER

(Continued from last month)

PROGRESSIVE work with the weights is the easiest to apply of all the effective methods of thigh development and gives the best results. No matter how undeveloped the man may be he can always adjust the weight to suit his strength and the many remarkable thighs possessed by weight lifters are a practical proof of the benefits of weight lifting for the purpose of thigh and hip development. Nearly every one has at some time or other witnessed feats involving extreme thigh and lower back strength.

You have perhaps observed that these are performed mainly by trained lifters. If you are a regular reader of *Strength* you also know that this great strength in the thighs is developed by the use of heavy weights. However, you may or may not know what lifts or exercises are the best to practice for developing strength in the thighs and buttocks. The most practical way to determine this would be to select a large group of men with exceptional development in these parts and ascertain what lifts and exercises were practiced by them. With this purpose in view I am going to select Cyr Saxon, Henri Graf, Snyder, Bonnes, Petrus Bareuther, Adolph Nordquest, Sandow, Maurice Deriaz, Launceston Elliott, Clarence Weber, Young, Merke, Rolandow, Oscar Attila, Anderson, Johnson, Travis, Marx, Redam and Rudolph Klar.

Cyr possessed about the largest thighs of any American lifter and I cannot recall any European strong men with larger measurements. He was naturally of a herculean build, but he could never have attained the maximum of his tremendous all-around strength had it not been for the years he put in at lifting. His thigh strength was in keeping with the strength in other parts of his mighty frame and this accounts for his great ability at all-around lifting. He was at home at lifting bar bells, barrels of sand, platforms of men or in fact any effort requiring extreme strength. His lift of 1897½ lbs. is still the world's record and is a wonderful example of thigh strength. He was the greatest back lifter of his time and with

one or two exceptions the greatest of all time. He also excelled the American lifters of his day on the snatch. He snatched 188½ both right and left on the same date. The bar bell that he used for the two-arm jerk was the heaviest ever lifted above the head in his day, and has as yet to be equalled by any of the other American lifters, notwithstanding their superior agility. It would be hard to ascertain just how much of his thigh strength was due to his method of training, but it is certain that the all-around lift that he performed afforded an enormous amount of exercise for his thighs.

Saxon is recognized as the professional champion of Europe. His greatest reputation lies in his ability on the bent press, which is a scientific lift, but after the science of the lift is completely developed, all further progress must be due to increased strength. To press over 300 lbs. in the bent press position, regardless of science or accuracy of position, necessarily imposes a tremendous strain in the thighs. Saxon was one of the best men on the snatch and swing and did around 350 in the two-arm jerk. He always advocated all-around lifting and his strength was not by any means limited to dumb bells, as he could lift almost anything possible. He was good at handling sacks and barrels, and although he is better known to most of us as a dumb bell lifter he was also exceedingly good in the dead weight style. He always considered weight lifting superior to any other training for developing strength and practiced nothing else but a little hand balancing and some belt wrestling.

Henri Graf is but little known in this country, but he possessed about the most massive thighs for his weight of any one I ever heard of. He only weighed 121 lbs. but he jerked with one arm (78kg) 172 lbs. and with two arms (112kg) 246.9 lbs. He is certainly one of the greatest examples of thigh strength at his weight extant and was trained by Theodore Siebert, the noted German trainer, who used the continental bar bell system.

Robert Snyder is well known to the most

of us as one of the very best lifters of his weight with bar bells in this country. His thighs are very strong and well developed and no one knows any better than the writer just how he developed them. He devoted his training period with the weights to the standard bar bell lifts and the bent press. He has done but little of other exercises with weights, but the clean pulls to the shoulder jerks and snatches have developed for him a very efficient pair of thighs.

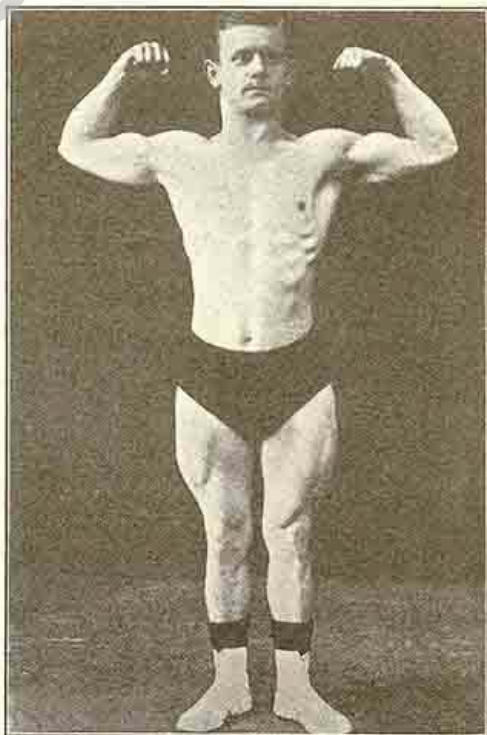
Bonnes is one of the greatest lifters of France. He is considered the most accurate lifter on the continent. His thigh strength is exceptional. The most of his training was devoted to the clean style of lifting and the lifts that he performed attest to his thigh strength. His lift of 337.3 lbs. in the two-arm clean to the chest was a world's record for a long time. He also accomplished 319.7 lbs. in the two-arm clean and jerk. He devoted some time to special thigh exercise and one of his specialties was the deep knee bend on one leg with a weight fastened to the other. It is true that he was one of the best understanders for hand to hand, but his strength and development was largely attained previous to taking up this work; in fact, his lifting made him a modern understander when he first took up his hand balancing work.

Petrus Bareuther was another pupil of Siebert's continental school. He possessed magnificent thighs and was exceedingly good at the snatches, which, besides agility, require a maximum of thigh strength. He was one of the very few who snatched more than his bodily weight with either arm. Siebert taught both special exercises with weights and standard lifts, and Bareuther's thigh development was the result of this method of training.

Adolph Nordquest is known to all of us as one of the greatest examples of the strength athlete, but I wonder if we all appreciate the enormous strength of the thighs necessitated for the successful accomplishment of his most noteworthy feat of strength. Nearly all of us know that he holds the official record for the bar bell lift from the floor, but only those who have tried lifting in this position can fully comprehend the combination of grip, thigh and buttock strength necessary to lift 638 lbs. in this manner. Nordquest has been lifting for years

and considers lifting the best of all exercises for strength and development.

Sandow has been considered by many medical and scientific societies as an example of the limit of possibilities in muscular development. Students of weight lifting know that Sandow's physique was one of the most beautiful ever seen, but they also know that at least as far as size and strength is concerned that it has been equalled by many other good lifters. Sandow's thighs, like the rest of his physique, showed thorough cultivation. Some critics said that his legs seemed pressed down. Like the most of strong men he had relatively short legs and as they were so heavily developed they naturally gave this impression. I find that the general public and even the average physical culturist does not have a clear understanding of how he attained his development. Sandow was a man with a clear foresight. Physical culture was a business with him and he realized that it would be easiest to sell the public something that they would be most likely to buy and the results of this was his "Sandow's Developer" and "San-



HENRI GRAF

dow's Spring Grip Dumb Bells," but I know Sandow had reached his limit of development previous to the invention of these and that his own development was the result of scientific progressive exercise. This he accomplished mainly with weights, but in addition to this he used an apparatus made of rubber strands for the express purpose of developing those muscles of the thighs used in closing and spreading the knees. This he made for his individual use and should not be confused with his light resistance developer. His special leg machine no doubt assisted in the development of the muscles of the thighs, but for developing lifting strength in them it could not possibly equal lifting, and that the lifting exercises were probably of paramount importance in Sandow's case is attested by the numerous weight lifters who have thighs as large and as strong as Sandow's.

Maurice Deriaz is a magnificent example of the strength athlete. He is something of a hand balancer and a good wrestler. Perhaps some of the readers may have seen him in action in this country, as he wrestled here a few years ago. Deriaz is first of all a lifter. His brother, Emile, conducted a lifting school in Paris and taught him the continental methods of training. Maurice has extraordinary strength and development in the thighs and buttocks. He is an expert on one-arm quick lifts. He holds the world's records of 202.82 for the one-arm swing and 254.63 for the one-arm clean and jerk. These lifts require extreme speed and strength in the thighs. He drops exceedingly low in these lifts. Otto "Arco" informed the writer that he considered Maurice's form for the one-arm jerk the best of any of the lifters. He could drop so low and fast to get under the weight. Imagine the work on the thighs when coming to an erect position with over 200 lbs. at arm's length above the head. I think the readers can all see how he developed his thighs.

Launceston Elliott was one of the most magnificent examples of manhood produced in England. He was a large man with tremendous measurements. His thighs were not only of colossal size, but were also muscular and well proportioned. The clean style of lifting has always been in vogue in England and Elliott practiced this style from the time he was in his teens and owes his development to this method of training.

Clarence Weber is the champion strength athlete of Australia and is considered one of the finest examples of physical perfection in the world today. He is a wrestler, runner, jumper, as well as a lifter and is a living refutation of the theory held by some that weight lifters are by necessity clumsy like draft horses and fitted for nothing but elevating masses of metal. Weber's thigh development is absolutely phenomenal and he is almost unequaled at deep knee bending with heavy weights. He actually claimed to the writer that he had accomplished a deep knee bend on one leg while holding a 220-lb. bar bell on his chest. Hackenschmidt testified several years previous to this that he saw Weber do the same exercise with 160 lbs. three times in succession. Weber is an all-around performer at the clean style of lifting and holds several Australian records for lifting and his development is mainly the result of this kind of work.

Noah Young, in my opinion, is one of the strongest men in this country. His measurements are all very large and his thighs are quite in accordance with the other portions of his big frame. No doubt the reader has noticed his large thigh development in some of the pictures of him that have appeared in this magazine. I understand that Young is very good at the snatch, two-arm clean and jerk and the back lift. These are all lifts that require strong thighs and I know that Young used to practice pressing a bar bell on his feet. I have been informed that he took up ballet training in addition to his work with the weights and this is another refutation that weight lifting makes one unfit for any work requiring agility. When a man of Young's size and weight can perform the movements of ballet dancing it speaks considerable of the merits of training with weights, for just picture in your imagination, if you can, an average man of Young's weight attempting the movements of the ballet.

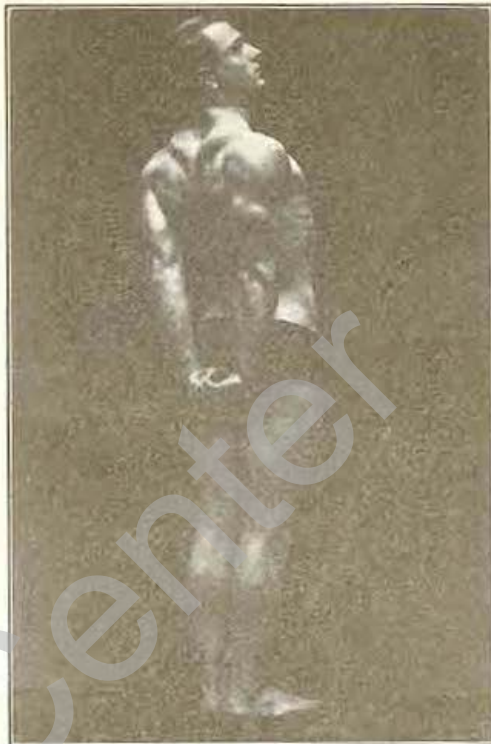
Karl Moerke is one of the greatest lifters in Europe. He won a recent championship lifting tournament and in a competition held a short time ago rose from a deep knee bend with over 400 lbs. on his shoulders. Personally, I consider the deep knee bend one of the greatest exercises for the extensor muscles of the thighs and superior for testing sheer strength in these muscles

to any of the standard lifts or any other bar bell exercises. Reading these two accounts about Moerke would prove to me that he received his thigh development from weight lifting and that the deep knee bend played an important part in his training without any reference to other information of him that I have in my files.

Rolandow is best known to the average student of weight lifting as being exceedingly proficient at the bent press. It is not quite so well known that he was one of the greatest exponents of the one-arm snatch extant. He was also very good, especially for those days, at clean lifting to the shoulder. In nearly all of his competitions he included lifting with the hands alone. In his practice and in some of his exhibitions he not only lifted weights in common lifting positions, but also performed high and broad jumping while carrying them in his hands and even accomplished such novel feats as the backward somersault with weights and jumping backwards and forwards through a bar bell held in his hands. He certainly did not develop his arms at the expense of his legs and the amount of leg work which he did was one of the big reasons why he became a lifter of first rank.

Oscard Attila was the senior and heaviest member of the act known as "The Attila Brothers." They were quite well known on the continent and in England. Oscard was of a short and extremely powerful build and his thighs were wonderful in both size and strength. In his act he supported a bar and eight men on his feet while lying on his back. In practice he would use a bar bell and two men and push them up and down on the soles of his feet. He was good at the two-arm jerk with either bar bell or two separate dumb bells and was a very proficient all-around lifter and developed his thighs by this same all-around lifting.

Arvid Anderson and August Johnson are two of the most noted strong men produced in Sweden. Anderson held the world's record for the two-arm clean and jerk until recent years. Johnson was the first man in any country to reach 330 for the two-arm jerk. As I stated in my article on developing the upper arms he possessed only 15½ in. biceps measurement. His shoulder development and powerful thighs more than compensated for his comparatively small upper arm.



CLARENCE WEBER

Anderson was of a larger and more massive build than Johnson and was also good at the standard overhead lifts. His thighs were tremendous and withal quite shapely. Johnson's were smaller and of a superior contour. Their lifting work was quite similar and I believe the results were about the same when due allowance is made for the natural difference in physique that existed between the two.

Travis and Marx possess considerable ability in common. Travis is the present champion at the deadweight style of lifting and Marx was for years recognized as the best in Europe at this style. Marx has been said by some authorities not to have done much dumb bell lifting, but the lifts that he has made with two separate dumb bells for the two-arm jerk would suggest that he either had an almost unequalled natural ability or must have done more practicing with bells than some have implied. Travis is also said to have done but little overhead lifting. The bulk of his training has, no doubt, been in the deadweight style.

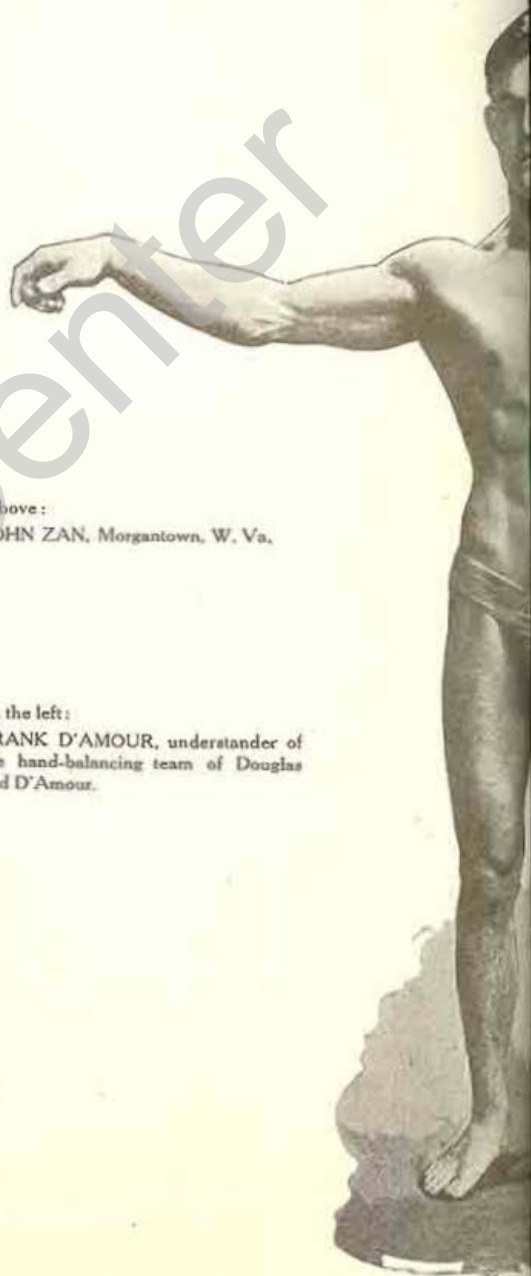
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Above:
JOHN ZAN, Morgantown, W. Va.

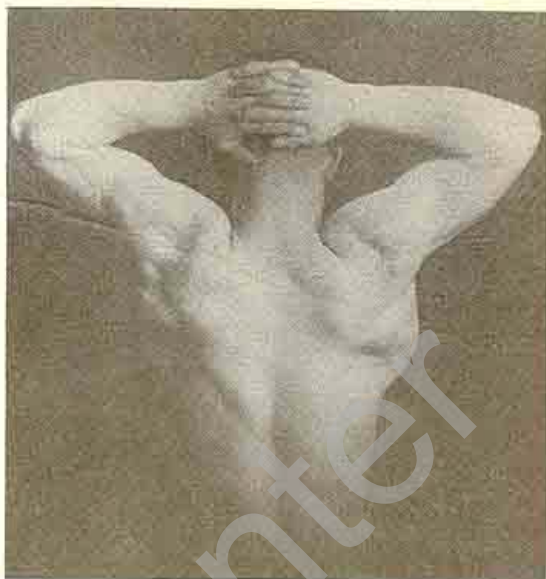


At the left:
FRANK D'AMOUR, understander of
the hand-balancing team of Douglas
and D'Amour.

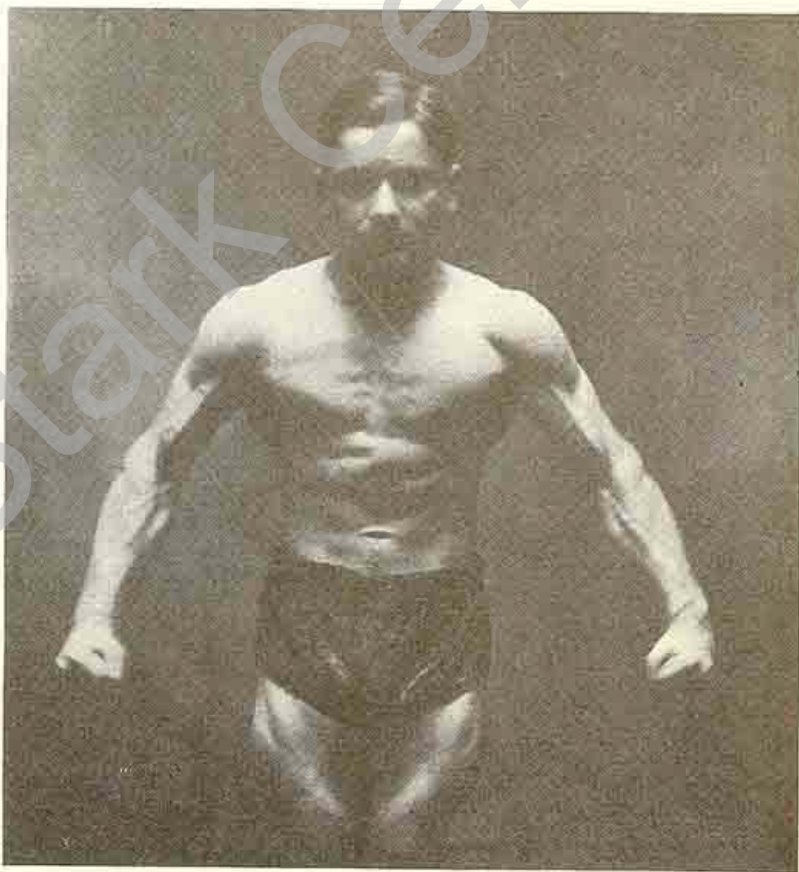


HARRY

SECTION



CLARENCE KELLER, Denver, Colo.



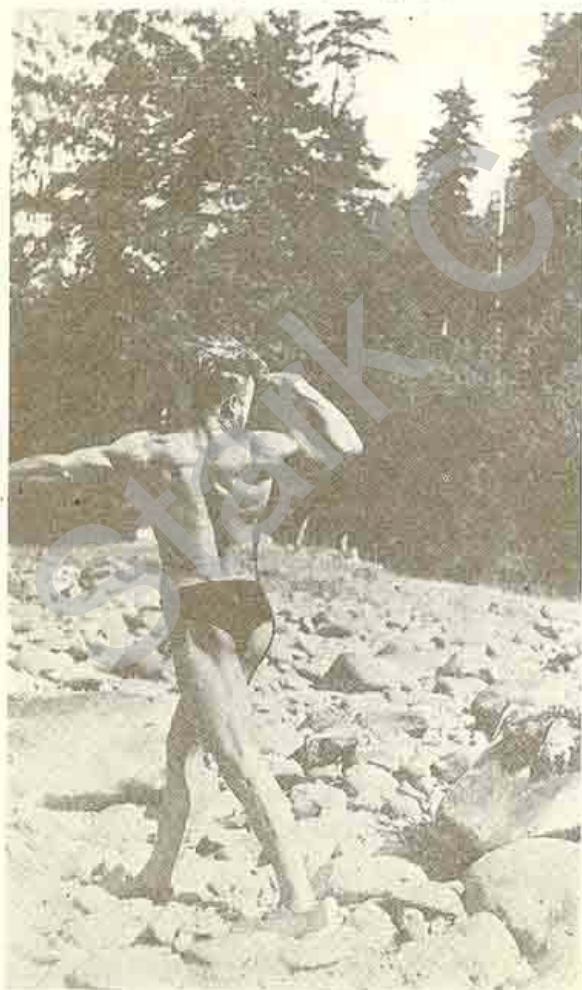
DUSHAN K. MEHTA, Bombay, India

ANTON PASCHALL

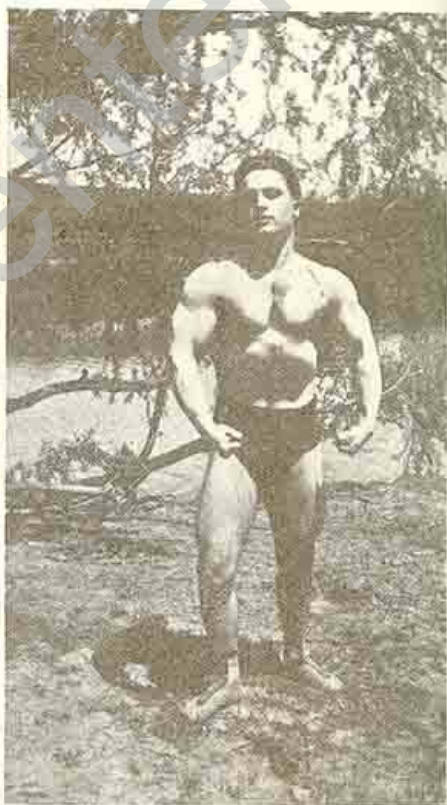
Nature Studies



CORBETT JOHNSON, Elmira, N. Y.



FRED ROHDE, San Francisco



ROBERT SNYDER, Jr., Hagerstown, Md.

Helps in Building Strength

By NORMAN EVAN PRICE

OF COURSE you know that the one great essential in building strength is exercise—muscular effort. You must exert yourself in order to develop the power to exert yourself. And yet there are other factors that have a great deal to do with building strength and which partly determine whether or not you will get as much strength from your exercise as you should. Every once in a while you find a man who is said to be naturally powerful. He takes very little exercise, and yet he has a great deal of strength. It is because he is well provided in these other factors that make for strength.

Strength is not merely a matter of muscular development, as you may note from the fact that on one day you may be able to break all previous records, whereas on another day, with obviously the same muscular development, you may not be able to approach your own standard of strength. Why? We do not profess to be able to state exactly or scientifically, but it is obviously because of certain differences in the chemistry of the body and in the matter of available nervous energy. Now if in addition to your exercise you can learn to employ other general measures, whereby the chemistry of the body may be improved and the nerve forces augmented, then you may be in a position to insure your best muscular fitness at any time that you may be called upon to test it out.

We recently discussed the question of success in training as being a matter determined not only by effort, but by the factor of recuperation. It is in this respect that many athletes go wrong. We considered the point that in some cases it is better to train three days a week rather than every day, in order that the two-day period of recuperation will enable one to build up an accumulated store of energy. Those undergoing extreme tests of strength, as in long-distance running, the lifting of heavy bar bells or those training for the maximum of strength and endurance in boxing or wrestling, would often do much better to train only three days a week. This gives one that freedom from fatigue which is not

possible in too continuous training or excessive effort.

Of course there are two forms of fatigue, one being in the nature of exhaustion of nervous force, the other, with which we are more familiar as muscular fatigue, being in the nature of an accumulation of waste poisons, or fatigue poisons. You experience this whenever you continue to use a muscle until it becomes tired, aches and finally loses its strength or power to act. It is because the waste products due to muscular action have accumulated until the tissues are powerless to respond to the nerve impulses. It is like a furnace choked with ashes. It is only after these waste poisons have been carried away by the blood that the muscle is rested and its power restored.

That is why massage is so well recognized as a help in physical training. Indeed, massage is valuable because it quickly rests one. After an exacting athletic trial or other effort the thing that will rest one most quickly is not sleep, but a thorough massage of the tired muscles. By promoting active circulation the fatigue wastes are rapidly carried out of the tissues, removing all soreness and stiffness, and sometimes with such good effect that following this treatment one may repeat the previous effort and establish an even better record. Such is the value of massage. In other words, it gives you back your strength. It is for this reason that not only does the athlete enjoy a "rub-down," which is a general massage of the body after his contest, but it has come to be the practice among all athletic teams for each athlete to receive a rub down *before* undertaking the event, loosening up the muscles, giving them a state of complete restfulness and enabling him thereby to do his best.

The lesson of this is, of course, that not only may the athlete take advantage of this practice, but any one seeking strength and general physical fitness may improve his status by the same means. While it is true that one cannot always have a masseur to help him out, there is a certain amount of self-massage that can be accomplished, particularly where the legs and arms are con-

cerned. One may also use a mechanical vibratory apparatus to accomplish the same result.

If massage will help to give one back his strength quickly, or, in other words, rest one, then warm baths or hot baths are likewise of value in this connection, inasmuch as they help to free the system from the poisons of fatigue. A cold bath may be stimulating because of its effect upon the nervous system and the circulation. A warm bath or a hot bath, however, stimulates activity of the pores of the skin and is just as much internally cleansing as it is externally cleansing. It literally cleans the blood because of the active elimination of wastes through the pores of the skin. In other words, warm baths are not only restful, but they are strengthening in the very fact that they are restful and thereby calculated to restore one's strength. If too hot they may be weakening, but if only moderately warm or about the temperature of the blood, they may be prolonged indefinitely without ill effect. Being eliminative in character, they relieve the kidneys. Naturally, the best time for a warm bath is immediately before retiring, but if taken just before going outdoors it would be wise to wind up with a quick, cool shower or cold sponging.

Like massage and warm baths, electricity and sunshine are effective influences for promoting this constitutional basis of strength of which we have spoken. It would be strange, indeed, if such a marvelous though mysterious force as electricity might not be effectively applied to the functions and processes of the human body. Whether it directly electrifies the body itself or merely wakens up slumbering nerve cells or whether it simply stimulates metabolism or circulation may remain more or less of a question. Many of those practicing electrotherapeutics hold that electricity is particularly effective as a means of stimulating the circulation where necessary, or in overcoming congestion.

Many years ago at the time of the Fitzsimmons-Corbett championship fight, won by Fitzsimmons, it was reported that Fitzsimmons, during the period of training was taking a course of electrical treatments, just as in later times many boxers have employed osteopaths to insure perfect alignment of their spines. Skillful and mighty boxer that he was, it would perhaps be too much to

say that Fitzsimmons owed his victory to the electrical treatment which he employed. But it may very well be that it was of material value in helping him to condition himself for the greatest emergency of his life.

As to whether electricity in moderation is ever harmful, there would seem to be no evidence to this effect. One may be safe in saying that so long as the electrical current, whether static, galvanic or faradic, is kept within the limits of comfort, that is, to say, is not too violently shocking or disagreeable, no harm can be produced. Electricity is now much used in most of the great sanitariums and to a large extent in private medical practice. If it is valuable in convalescence and in chronic disorders it may be equally valuable as a means of toning up the man who is not sick, but who is striving for greater physical fitness and for bodily strength.

Sun baths are not only of distinctive value in quickening metabolism and circulation, but are found to have a direct effect in stimulating the formation of red blood corpuscles. The difference between the indoor man and the outdoor man, we have often thought, is not so much a matter of breathing a different type of air, as in the relative absence or enjoyment of sunshine. Experiments tending to determine this point would be of interest. We personally suspect that even in spite of the confinement suffered by men in prisons and penitentiaries they might avoid the well known "prison pallor" if in their cells they were enabled to secure a certain amount of sunshine, irrespective of the condition of the air which they have to breathe. This is no argument against fresh air and oxygen. The point is that many indoor workers enjoying fair conditions of ventilation and sleeping with windows wide open all night through, still show the effect of their indoor life in their complexions. May it not be chiefly the absence of sunlight from which they suffer?

Upon this theory the cultivation of sun bathing, whether indoors or outdoors, through glass windows or through the open spaces of the atmosphere, should be of value. The only caution to be observed is that of those blond and fair skins cannot stand too much sunshine in summer, espe-

(Continued on page 44)



'SCISSORS' JOE STECHER

Exponent of Scissors Hold.

The man who made the scissors famous.

Scissor Holds

by

WILLIAM J. HERRMANN

of

Herrmann's Physical Training Institute
Boxing, Fencing and Wrestling Academy
Philadelphia, Pa.

"The most instructive article on Scissor Holds in print"

"Scissors" Joe Stecher

EDITOR'S NOTE--**Toe Holds, Head Locks, Scissors and Other Torture Holds.** This is the second of a series of articles on these punishing holds. The Scissor Holds will be concluded in the next issue, and will be without a doubt the most complete description of them ever printed.

Combination Head Lock and Body Scissors Hold.

Another exceptionally powerful combination scissors hold. In this effective combination you apply a head lock on opponent as soon as you have rolled him towards you and snapped on your body scissors hold. Practice this hold diligently to enable you to use it effectively.

Fig. 30 illustrates this punishing head lock and body scissors combination hold.



Fig. 28

Counter

By Means of a Full Front Body Hold.

Another effective counter against a body scissors by means of a full front body hold can be secured as follows: Counter your opponent's body scissors on you by quickly turning to your right and towards your opponent. This move, if properly performed, will enable you to more or less ignore his body scissors, which lost its potency due to your counter move by slipping his body

scissors from direct in front and in back of your body to your sides instead. This move at times, to a great extent, weakens the punishing effect of your opponent's scis-



Fig. 29

sors. Work tight to your man, keep close to his crotch. In consequence, you can more or less ignore his body scissors hold and follow up your advantage by securing a full front body hold with which you can readily press opponent's shoulders tight to the mat and score a fall in your favor.

Fig. 31 illustrates a fall secured from this effective counter by means of a "Turn In" and full front body hold.



Fig. 30

Block Against a Body Scissors.

This block is described under the supposition that your opponent is just about ready to snap the scissors on you and before he has brought your right arm back towards the mat.

As your opponent swings his right leg over your body in order to lock his scissors, reach over with both hands and grasp his right leg (the leg over your body) and bring



Fig. 31

it up, towards and over your head and around your neck. This move on your part effectively prevents him from closing his scissors and enables you to successfully slip out and escape from his hold. Although this move on your part does not lead to a direct fall, it nevertheless will put your opponent on the defensive and give you an opportunity to follow up your advantage and possibly score a fall in your favor.

Bear in mind that this escape must be applied before opponent's ankles are crossed

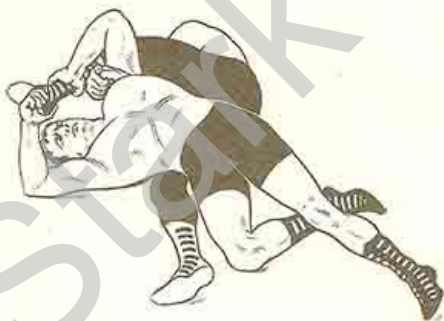


Fig. 32

and his scissors locked and while your right arm is still free to catch his leg. This block against his efforts to close his scissors is most effective just as your opponent swings his right leg over to lock his hold.

This move is both a block against opponent's efforts to close his scissors and an opportunity to slip out and escape from a position that might lead to a fall against you.

Fig. 32 illustrates this block against opponent closing his body scissors hold by means of a "Duck Out," as this move is generally termed by professionals.

To Properly Lock Scissors.

Just a final reminder, even at the risk of repetition, in order to avoid the possibility of any misunderstanding on how to correctly cross ankles in locking a body scissors hold: Be sure you lock the back of your right ankle (the leg on top of your opponent's body) over the instep of your left leg (the leg under your opponent's body) and hook from below the toes of your right



Fig. 33

foot under the sole of your left foot. The toes of the right or upper leg will be the lowest toes (the toes farthest away from you) if legs are properly crossed at ankles.

Incorrectly crossing your legs at ankles so that the back of the ankle of your under leg locks across the front instep of your upper leg, not only exposes you to punishment, but really weakens your scissors hold. This is due to the tendency of the crossed ankles to loosen instead of tighten as you turn your chest and body more or less towards the mat in order to help pin down opponent's shoulders.

Should your opponent cross his ankles incorrectly, counter his body scissors by trapping his left foot, ankle and toes. Force his left foot backward over his own right instep and ankle. Severe punishment can easily be inflicted in this manner. Besides,



Fig. 34

you can readily force him to quit or concede the fall in order to avoid further pain and punishment.

However, in practice, be sure to release your partner's ankle at his request to avoid any possible injury to his ankle.

Bear in mind that as far as punishment primarily is concerned, this counter would have been ineffective had opponent's ankles been correctly instead of incorrectly crossed in locking his body scissors.



Fig. 35

Don't labor under the false impression that a body scissors is ineffective unless ankles are correctly locked. A strong body scissors can win out even if ankles are incorrectly crossed. However, you run less chances of losing out with your hold if it be correctly instead of incorrectly held and applied.

Not that you could not successfully score a fall by the use of your body scissors even if ankles be crossed incorrectly, but that



Fig. 36

you could not successfully use it against a stronger and more superior opponent unless your "scissors" be correctly held and applied.

Fig. 33 illustrates the proper method of crossing ankles to correctly lock a body scissors hold.

Fig. 34 illustrates the incorrect method of crossing ankles in locking a body scissors hold.

Fig. 35 illustrates how to take advantage of opponent's incorrect method of crossing his ankles in locking a body scissors hold by scissoring the instep of opponent's lower leg (opponent's leg which is under your body.) Exceptionally severe punishment on opponent's ankle can be inflicted in this manner.

Combination Head and Leg Scissors.

This hold is described on the supposition that you are working on your opponent from your left side on your hands and knees. You are trying for a combination head and leg scissors and the easiest way to apply this is to force your man to his right side. While he is laying on his right side circle your right leg around his left leg. Seize his left wrist with your left hand and lift his arm up in order to enable you to apply a half nelson with your left leg. Your right



Fig. 37

leg is now around his left leg and your left leg is around his neck. By bringing his feet together and locking your ankles you have obtained both a head and leg scissors. Lean over to the left side so that his feet will be up in the air to enable you to force his shoulders to the mat. This puts your opponent at your mercy in this helpless "doubled-up" position.

Fig. 44 illustrates this clever, unusual, exceptional and powerful head and leg scissors combination rarely seen except amongst the best of our professionals.

HEAD SCISSORS AS AN ESCAPE FROM A FAR LEG HOLD

This escape is described on the supposition that your opponent has secured a far



Fig. 38

leg hold on you from your left side. Opponent has lifted your right leg up in the air, on the style of a crotch lift, preparatory to forcing your shoulders to the mat for a fall. Your opponent has now the advantage. However, you can escape from opponent's hold by means of a head-scissors applied in the

following manner: Swinging your left leg over the left side of your opponent's head will give you an opportunity to snap a scissors on your opponent's head and by the strength of your legs holding the head scis-

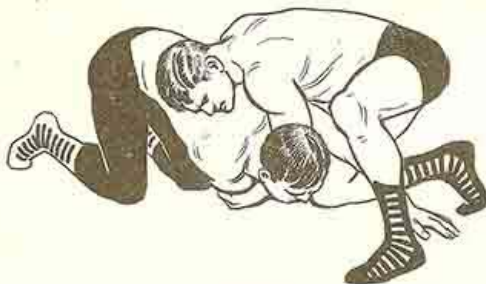


Fig. 39

sors you can readily throw your opponent off his feet by twisting his head to the right. Although this escape, the same as all other escapes, does not lead to a direct fall, it, nevertheless, puts your opponent on the defensive and if properly followed up may lead to a fall in your favor. A good and spectacular escape from either an outside crotch lift or a far leg hold lift by means of a head scissors.

Fig. 45 illustrates a head scissors on opponent as a counter against a far leg lift.



Fig. 40

HEAD SCISSORS AS COUNTER AGAINST SIDE CHANCERY

This counter is described under the supposition that you are on your knees on the mat at your opponent's right side and held by your opponent in a side chancery hold under his right arm. Counter his chancery hold in the following manner: Brace yourself with your right hand and forearm to prevent him from forcing and turning your shoulders down to the mat for a fall. Lift up your left leg and swing it over and across the right side of opponent's face. Use the strength of your left leg to good

advantage by pushing his head away with your left leg. This will help open his chancery hold and enable you to quickly snap a scissors hold on his head.

Follow up your advantage by grasping and controlling his right arm. Force his right arm to the mat and score a fall in your favor by means of a combination head scissors and arm hold.



Fig. 41

A good and spectacular counter against a side chancery hold on the mat by means of a head scissors.

Fig. 46 illustrates fall gained by a counter against a Side Chancery by means of a Head Scissors.

ARM SCISSORS AS A COUNTER AGAINST SIDE ROLL

This double is described on the supposition that your opponent countered your near side half nelson with your right arm by means of a side roll and you doubled, or, in



Fig. 42

other words, countered his counter by means of the following arm scissors.

On opponent's attempt to side roll you, quickly swing your left leg over his head and across the right side of his face. With the strength of your left leg it will be com-

paratively an easy matter to push his head back with your left leg and follow up your advantage by snapping an arm scissors on your opponent's right arm.

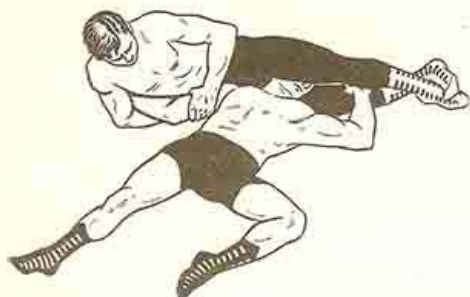


Fig. 43

Although this counter is a good exhibition move it nevertheless is not likely to be successful except against a slower and less clever opponent unless you freed your right

arm. However, in case you did successfully slip your right arm (the arm he side rolled) free from his side, then the above counter will be a good and successful counter even against the cleverest of wrestlers.

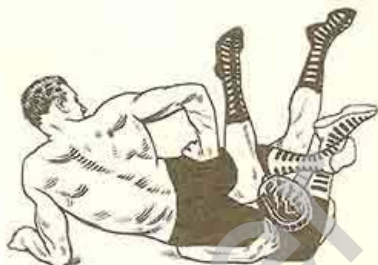


Fig. 44

Fig. 47 illustrates beginning of securing an arm scissors as a counter against Side Roll.

Fig. 48 illustrates a fall gained by means of this counter. *(Continued next month)*

Lifting—the Ideal Exercise

(Continued from page 15)

The main thing is to use good judgment in training. Either too little exercise or too much is out of place when we wish to get the best results.

A knowledge of the body and its proper care is of greater importance than anything else in the world. We can not say that a man is truly intelligent unless he understands how to take care of his body. And with all the advantages now offered to those seeking health and strength, no one should fail to avail himself fully of the benefits to be derived.

Always bear this in mind—your muscles sum up whatever life you possess. No movement of the body, however slight it may be, can take place without muscular action. Isn't it important with this in view, to see to it that your muscles are in good working order? After you have come to a general understanding of the needs of the body you will have acquired an intelligence of the highest order.

The Greeks fairly worshipped the human form. Their fine examples of perfect manhood and womanhood are portrayed in their sculpture. The first time I gazed upon the massive carved figure of the Farnese Hercules I was held in amazement. There before me in the Art Museum stood this personification of strength.

How well the Greeks knew the human body is fully appreciated by the modern sculptor, who strives to equal their art. In those days of the long ago the Greeks were representative of the finest race, both physically and mentally. We know from their writings and their art that they were great all around athletes. But I am inclined to think that weight lifting played an important part in giving them such fine physiques. Just as is the fact to-day, weight lifters as a class are the best developed athletes.

Many wrestlers have finely developed bodies. Hackenschmidt is a fine example, but we must take into consideration that he laid the foundations of his wonderful muscular development by lifting weights. He was a champion wrestler and weight lifter, a combination possessed by no other athlete.

It is a great pleasure indeed to note the ever growing interest displayed in athletics in this country and abroad. And it is highly pleasing to strong men to see the great number of young men who are constantly being added to their ranks. This shows a trend in the right direction, the results of which will be a great credit to the race.

You owe it to your best interests to join in this great movement.

Records and Weight-Lifting Department

To THE EDITOR:

Kindly let me know what are the Eight Standard Lifts. In lifting contests do they make one use both the right and left arms? In that case, it would be fifteen lifts instead of eight.

My lifts are as follows:

Right Arm Jerk 90, left 80; Right Arm Military 52½, left 47½; Right Arm Bent Press 100, left 75; Right Arm Snatch 65, left 60; Right Arm Swing, 62½, left 62½; Two-Arm Snatch, 85; Two-Arm Press, 110; Two-Arm Jerk, 140.

My present measurements are:

Neck, 15¼ in.; normal chest, 38 in.; waist, 32 in.; hips, 39 in.; thigh, 24 in.; calf, 15 in.; biceps, 14 in.; forearm, 12 in.; wrist, 7¾ in.; height, 5 ft. 6½ in.; weight, 160 lbs.

H. C. INGRAM.

The right Standard Lifts are: One-Arm Press, One-Arm Jerk, One-Arm Snatch, One-Arm Swing, Two-Arm Jerk, Two-Arm Snatch, Two-Arm Press, One-Arm Bent Press.

In contests calling for one-arm lifts the contestants have the privilege of lifting with either arm, unless specifically stated in the conditions.

To the Editor:

I would like to have a list of weight-lifters in the state of Wisconsin. I am getting together a list of amateur lifters who were in the forces of the U. S. during the late war, and who are from this state. This list will go to the State Athletic Officer, American Legion, and he will if possible put on a contest at the state convention next August.

Yours Sincerely,

WM. A. WEST,

Route 3, Marshfield, Wis.

Here is a chance for Wisconsin weight-lifters to put on a real weight lifting contest. All those interested will please communicate with Mr. West.

Thomas Inch holds the record in the side press (with straight legs), having raised 200 lbs.—8 lbs. more than his body weight—in this manner. One of our readers inquires as to the possibilities of establishing a record for his weight in this lift, stating that he has raised

145 lbs., which is 8 lbs. more than his body weight, in this manner. In this connection it is interesting to note that Robert Snyder, Jr., weighing 128 lbs., has pressed 150 lbs. in the side press.

To THE EDITOR—Please send me my February and March issue of STRENGTH as soon as convenient, as I have not received them yet and am anxious to get them.

I am sending you a photo of myself, although it doesn't show a good muscular effect, due from improper posing, I suppose. I can lift 125 lbs. in the one-arm jerk and can press 125 lbs. in the two-arm military press ten times; can press in the one-arm military press 80 lbs. right and 90 lbs. left three times each. I am confident that I could lift more if I just practiced, but I



have a job which calls for vitality and endurance and a free, easy movement of the body, therefore I practice light dumbbells with the barbells. I find that it sure builds strength that way; on the whole I am pleased with the bells.

I intend having my picture taken with back muscles in effect; that is my lifting power plant.

Hoping to hear from you in reference to the magazine, I remain,

Your pupil,

FRED'K C. CARLETON, JR.

C. A. P.—The size of an average man's wrist is from 6¾ to 7¼ inches. Whether you are light boned or heavy boned would depend of course on your height, which you did not give. Unless you are exceptionally tall, your 7½-inch wrist and 9½-inch ankle would seem to indicate heavy bones. Even if you have light bones, this is no bar to developing strength, as many of our strongest and best developed men have been light boned.

How One Evening's Study Led to a \$30,000 Job

A Simple Method of Mind Training That Any One Can Follow with Results from the First Day

By a Man Who Made Formerly No More Than a Decent Living

I DO not take the credit to myself at all for attaining what my friends term a phenomenal success. It was all so simple that I believe any man can accomplish practically the same thing if he learns the secret.

It came about in a rather odd manner. I had been worrying along in about the same way as the average man, thinking that I was doing my bit for the family by providing them with three square meals a day, when an old chum of mine, Frank Powers, suddenly blossomed out with every evidence of great prosperity.

Naturally the first thing I did when I noticed it was to congratulate him and ask him what had brought the evident change in his finances.

"Bill," he said, "It's all come so quickly I can hardly account for it myself. But the thing that has made such difference in my life lately began with an article I read a short time ago about training the mind."

"It compared the average person's mind to a leaky pail, losing its contents as it went along, which if carried any distance would arrive at its destination practically empty."

"The leak in the pail the writer demonstrated, was forgetfulness. He showed that when memory fails, experience, the thing we all value most highly, is worthless. He proved to me that a man is only as good as his

memory, and whatever progress he accomplishes can be laid directly to his powers of retaining in his mind the right things—the things that are going to be useful to him as he goes along.

"Well, I was convinced. My mind was a 'leaky pail.' I started in at once to make my memory efficient, taking up a memory training course which claimed to improve a man's memory in one evening. What you call my good fortune to-day I attribute solely to my exchanging a 'leaky pail' for a mind that retains the things I want to remember."

Powers' story set me thinking. What kind of a memory did I have? It was much the same as that of other people, I supposed. Certainly it never occurred to me that it was possible or even desirable to improve it as I assumed that a good memory was a sort of natural gift.

But I began to observe myself more closely in my daily work. The frequency with which I had to refer to record or business papers concerning things that at some previous time had come under my particular notice amazed me. The men around me who were going about the same work as myself were no different than I in this regard. And this thought gave new significance to the fact that I had been performing practically the same subordinate duties at exactly the same salary for some three years.

The whole thing hit me pretty hard. I realized that probably hundreds of sales had been lost because the salesman forgot some selling point that would have closed the order. Many decisions involving thousands of dollars had been made unwisely because the man responsible didn't remember all the facts bearing on the situation and thus used poor judgment. There are no greater words in the English language descriptive of business inefficiency than the two little words, "I forgot."

I reached a decision. On the recommendation of Powers, I got in touch at once with the Independent Corporation, which shortly before had published the David M. Roth Method of Memory Training. And then came the surprise of my life. Within thirty minutes after I had opened the book the secret that I had been in need of all my life was mine. Mr. Roth has boiled down the principles of perfecting the memory so that the method can almost be grasped at a glance. And the farther you follow the method the more accurate and reliable your memory becomes. Instead of study the

whole thing seemed like a fascinating game.

The rest of my story is not an unusual one among American business men who have realized the value of a reliable trained memory. My income to-day is close to \$30,000. I will coach that figure at the beginning of our next fiscal year. And two years ago I scarcely made what I now think of as a decent living. I can never be thankful enough that I learned that "leaky pail" and discovered the enormous possibilities of a really good memory.

SEND NO MONEY

Mr. Roth's fee for personal instruction to classes limited to fifty members is \$1,000. But in order to secure nation-wide distribution for the Roth Memory Mail Course in a single season the publishers have put the price at only five dollars, a lower figure than any course of its kind has ever been sold before and it contains the very same material in permanent form as is given in the personal \$1,000 course.

Don't send any money. Merely mail the coupon or write a letter and the complete course will be sent, all charges prepaid, at once for free examination. If you are not entirely satisfied send it back any time within five days after you receive it and you will owe nothing.

On the other hand, if you are as pleased as are the thousands of other men and women who have used the course, send only \$5.00 in full payment. You take no risk and you have everything to gain, so mail the coupon now before this remarkable offer is withdrawn. Independent Corporation, Dept. R-1735, 319 Sixth Ave., New York.

David M. Roth

When Mr. Roth first determined to exchange his leaky mind for one that would retain anything he wanted it to, it was because he found his memory to be probably poorer than that of any man he knew. He could not remember a man's name 20 seconds. He forgot so many things that he was convinced he could never succeed until he learned to remember. Today there are over ten thousand people in the United States whom Mr. Roth has met at different times—most of them only once—whom he can instantly name on sight. Mr. Roth can and has hundreds of times at dinners and lectures asked fifty or sixty men he has never met to tell him their names, businesses and telephone numbers and then after turning his back while they changed seats, has picked each one out by name, told him his telephone number and business connection.

FREE EXAMINATION COUPON

Independent Corporation

Dept. R-1735 319 Sixth Ave., New York

- You may send me the Course or Courses checked below. Within five days after receipt I will either remail them or send you \$5 for each in full payment.
- Roth Memory Course (\$5) Mastery of Speech (\$5)
By David M. Roth By Frederick Houk Law
- Drawing, Art, Cartooning Courses (\$5) Super-Salesmanship (\$5)
By Charles Lederer By Arthur Newcomb
- How to Read Character at Sight (\$5) How to Write Stories (\$5)
By Dr. K. M. H. Blackford By Prof. W. B. Pitkin
- Paragon Shorthand Course (\$5)
By Alex. Lichtentag

Name

Address

Strength, 5-25

The Question Box

TO THE EDITOR:

Can a person who hasn't naturally broad shoulders acquire them by certain exercises? If so, could you illustrate or explain some form of exercise which would tend to broaden them?

E. W. Y.

The only practical way to acquire broad shoulders is by developing the deltoid muscles, which are situated on the points of the shoulders, and cover and protect the shoulder joints. If you increase the thickness of the deltoids by one inch, you are increasing the breadth of your shoulders two inches, which will make a very noticeable change in your personal appearance.

The deltoid muscle is divided into three sections: the anterior or front section, which raises the arm forward and upward; the lateral or side section, which raises the arm straight out to the side and upward, and the posterior section, which raises the arm upward and backward. When the hand is at the shoulder all the fibers of the deltoid combine to help raise the arm upward, and that is why the deltoid is the most important of all muscles to a weight lifter.

The deltoid muscle can only be developed to its limit by a variety of exercises which raise the arm and at the same time straighten it. For this purpose, use the one and two arm press, military press, bent press, etc., also holding weights out at the side.

TO THE EDITOR:

Will a barbell of 75 lbs. be enough to develop during the summer months, as I am going away and only care to carry this amount of weight; and can you explain how it can be carried conveniently?

I have reached 40 lbs. in the stomach exercise. How high are you supposed to increase, and which is the best weight to stop?

R. E. P.

Exercise is of just as much importance in the summer as in winter, and you should not cut down on the amount of weight you are using in the exercises unless you are getting lots of outdoor sport to replace it. The amount of weight to be used depends, of course, on your size and strength.

Do not stop the abdominal exercise, but increase the weight as needed. If you are using 40 lbs. in this exercise you should be using more than 75 lbs. in the two arm press and the back and leg exercises, in order to obtain the proper benefit from them.

To pack a barbell for travelling: Take the barbell handle to a machinist. Have him cut the bar in the center, and to thread both ends. By using a piece of pipe that will fit over the bar, a coupling can be made that will join the two parts of the bar together, and it will also serve as a grip for one hand lifts. The bar and the plates can then be conveniently packed in your trunk or suit case.

TO THE EDITOR:

I am 43 years old, 6 feet tall, weight 203 stripped. My measurements are as follows: Neck 17, chest 44, waist 38, thigh 25, calf 15, biceps flexed 15, forearm straight 12.

I never exercised for physical development until about two months ago, and the exercises that I have been taking are not very heavy, and my measurements have not increased any. I am in good health and I think that I am fairly strong.

I am told that a man of my age can not develop and that it is injurious for a man over 40 to take heavy exercises, and that it will strain his heart. Now I want to know what a man of my age can do. I want to take heavy exercises and to increase my measurements.

J. E. D.

One of the most notable instances of a man past 40 developing great strength was Dr. Krajewski, of St. Petersburg, the trainer of Hackenschmidt, and who was known as "The Father of Athletics." Dr. Krajewski was converted to Physical Culture at the age of 41, and at 63 was more active and vigorous and looked younger than at 40. He exercised with weights only, and some idea of the results he accomplished can be had from reading "Physical Strength and How I Acquired It," by Hackenschmidt. In this book Hackenschmidt says: "He it was (Dr. Krajewski) who taught me how to live and how to train, and he it was who launched me on my career." There are thousands of other men who have begun exercising after 40 and who have obtained ex-

I Can Teach You JUJITSU In One Evening!



Capt. Allan Smith, Formerly Chief Instructor of Jujitsu, U. S. Army.

The "Master Secret" of Jujitsu, which I learned after ten years' study of the science in Japan, now enables you easily and quickly to become an expert RIGHT IN YOUR OWN HOME.

Do not think this is a rash statement! Hundreds of people have mastered the fundamentals of Jujitsu in one evening by my "Master Secret." Tricks that formerly took years to learn can now be mastered in a few hours.

And here is the reason: Every science has rules. Apply these rules and you get quick and certain results. Without them it would take years to get the same results. So it is with the science of Jujitsu. I have discovered the formula—my "Master Secret." The Stahara. With it you can become expert in Jujitsu tricks that took years to learn without the formula.

Wonderful Success of "Master Secret"

This "Master Secret" has already met with amazing success. It was given an acid test during the war. Then it was a question of rush, rush, rush! The War Department at Washington demanded men trained in the best modes of hand-to-hand attack and defence. And they must be trained with the greatest speed possible.

In Infantry Camps throughout the country, thousands of doughboys were trained in hand-to-hand fighting under my direction. They were taught the "Master Secret." Once learned and applied, Jujitsu was no longer a myopic power, but an efficient weapon to use against the Hun. Entire regiments were trained as units, and quickly learned how to apply their Staharas.

Since the War, the success of my "Secrets of Jujitsu" has been even greater. Pupils not only learn easily and quickly with the "Master Secret," but they become wildly enthusiastic about Jujitsu. They find it the most fascinating sport in the world. Jujitsu was "made for Americans." It is adapted to our temperament. Red-blooded, exciting, and skillful! It suits the quick-thinking American. No wonder it is so extremely popular!

NEW YORK POLICE COMMISSIONER Says:

It affords me great pleasure to heartily endorse your system of Jujitsu, as set forth in your lessons "Secrets of Jujitsu." There is no question but these methods will prove invaluable to members of the force. I cannot too strongly recommend the system as a valuable adjunct to the police training.

BENNY LEONARD World's Lightweight Champion

"With regard to your system of Stahara Training, I do not think there is any other method of training so beneficial to the body. This training teaches men how to put their weight into their blows and to use their body when punching instead of their arms alone."

Lt. ELMER Q. OLIPHANT All American Athlete

"I am much impressed with your course, 'The Secrets of Jujitsu,' on account of the very scientific principles on which it is based. It provides an effective weapon of self-defence which one can always carry around. . . . Your system of body-training marks a new era in physical training."

These are only a few of the hundreds of letters received.

Since the War, the success of my "Secrets of Jujitsu" has been even greater. Pupils not only learn easily and quickly with the "Master Secret," but they become wildly enthusiastic about Jujitsu. They find it the most fascinating sport in the world.

Jujitsu was "made for Americans." It is adapted to our temperament. Red-blooded, exciting, and skillful! It suits the quick-thinking American. No wonder it is so extremely popular!

Jujitsu Gives You Instant Mastery

Time after time, Jujitsu has proven its superiority over many other means of defence. I have seen countless bouts between Jujitsu artists and much stronger men. The speed and ease with which Jujitsu usually rendered the opponents powerless without injuring them, clearly illustrated its power.

I am a firm believer in boxing, wrestling and every other manly art. Every American boy should be trained in all of these, but he should also make himself master of the wonderful art of Jujitsu.

And what is most important in Jujitsu is that you don't have to be an athlete or a giant to overcome your opponent. Even if you are smaller, lighter, and in worse physical condition than your opponent, you can overpower him if you know Jujitsu.

During the ten years I was in Japan, I wrestled with the cleverest Japanese Jujitsu artists. Later, when my Jujitsu achievements warranted it, I became an instructor in Central Jujitsu College in Tokyo. Here I unearthed the famous deathholds and the hidden secrets of the Orient. Here I established my Jujitsu formula—the "Master Secret" of the Stahara.

These illusive holds and grips not only proved valuable to our men in fighting the Hun, but they have proven extremely valuable to civilians in furnishing them a defence against any thug or rascal. They are proof against any attacker, be he robber armed with knife, gun or club.

I have on file letters of all descriptions, from High Army Officials, College Professors, Students, Business and Professional Men and Women. The substance of their letters probably could be condensed in the note we received from I. R. Post of Chicago. "Your course (The Secrets of Jujitsu) greatly exceeded my expectations and is the most efficient, business-like system of self-defence I have ever seen."

OVER 250 PHOTOGRAPHS

My "Secrets of Jujitsu" built around the famous "Master Secret" contains over 250 actual photographs, which illustrate every trick thoroughly. It is just as if I were constantly at your elbow, instructing you personally. You absolutely can't go wrong. So clearly is it illustrated and so definite are the instructions that a child could actually learn Jujitsu from it. And the best part of it is that you get a lot of fun out of learning Jujitsu from this course. I have devised rules which not only eliminate danger in practice, but make Jujitsu a clean fascinating sport.

As a body-builder, Jujitsu cannot be beaten. It reaches and develops practically every muscle in the body. It steadies the nerves and the brain. It inspires self-confidence and courage. By practicing only a few minutes a day in your own room with these tricks, you will keep in the best condition possible and be ready to tackle business with new vim.

In my course, I have aimed to combine utility and pleasure. I have given you probably the greatest collection of Jujitsu tricks ever brought to America—many of them giving you power of life and death over your opponent. I have given you the benefit of my experience as Chief Instructor in the U. S. Army. Thousands have tried my course since I have extended it to civilians. Each day we get letters of appreciation, letters praising the course, the Master Secret, and the wonderful benefits derived from them.

SEND NO MONEY

Do not send a single cent. The publishers will send you the course free. Read it over. See for yourself if you cannot learn and apply in one evening my "Master Secret," which enables you to easily overcome your opponent by one of the many holds and grips. Try some of them on your friends. Pick out a fellow larger than yourself, and see how easy it is to subdue him.

Keep it five days. Then decide. If my course in any way falls short, I don't want you to pay a penny. Send back the course and there will be no further obligation. But if you find it a wonderful means of self-protection offering you health and sport, send only \$5 in full payment. Jujitsu can mean so much to you that you should not lose a minute in sending for it on trial. Tear off coupon right away before you forget and lose the opportunity. Mail it NOW. Stahara Publishing Company, 125 Exchange Building, Columbus, Ga.

STAHARA PUBLISHING COMPANY

125 Exchange Building, Columbus, Ga.
Please send me Captain Smith's complete course of seven books containing 50 illustrated lessons. Within five days after receipt, I will either send it back or send you \$5 in full payment.

Name

Address

Orders received from countries other than the United States and Canada are payable cash with order.

GET YOUR FULL SHARE REALIZE ALL IT

Mere Existence Means Nothing

Turn sympathy into admiration. Be a real man, able to accept every opportunity with the assurance that you will come through with colors flying. Benefit greatly in mind, body and affairs, the same as thousands of others, by practicing Matysek's

Muscle Control Course which sells for but \$2.00

An Amazing Opportunity for Greater Strength.

It is the scientific system of control of all the physical functions. You can cure yourself of any functional disorder. You will be independent of all medicines and drugs which you know cannot bring health and are always debilitating. When physicians fail in getting results they suggest Matysek—the Maker of 100% Men.

Matysek's Muscle Control Course Consists of

Two handsomely finished charts containing twenty-one large and beautifully produced pictures of myself, showing every detail as to how to perform the movements with absolute correctness. The instructions are in book form and "straight from the shoulder," such as only an expert who went through the mill himself could ever possibly produce. Some subjects of the course are:

How to quickly make respond the inactive bowels; easily correct the rounded shoulders; in no time expel the bothering gas out of the stomach; promptly chase away the staleness of the body; strengthen the nerves and internal organs; control every muscle of your body—make them roll like the waves; store up energy for feats of strength.

Also complete relaxation and contraction—Effective breathing—The best way to arouse your inactive nerves—Creation of better blood circulation—Easiest way to increase your chest circumference—The famous shoulder blade control—How to thicken the shoulders—How to learn the art of making your shoulders supple from only three days' practice—Development and control of the neck muscles—Spreading of the back—Depression of the abdominal muscles and wall—Control of the Pectoralis (chest muscles) the biceps, triceps, thighs, calf and all other muscles—How to train the abdominal regions to be immune from rupture—How to master correct posture—Simple yet positive cure for insomnia—How to pose for good pictures—Advantages of perfect co-ordination of muscles and mind thru concentration which brings success and all the good things that go with it, and many other vital pointers you need every day too numerous to mention.



Antone Matysek, the man who is best prepared to make a real man of you. My own record is a proof of my ability to carry out this assertion.

RE OF LIFE S JOYS

Let My Muscle Control Exercises Mold Muscle
on You Quickly and Solidly!

Only ten minutes a day, in the privacy of your own room, solves any case. From my own experience, as well as the very large number of pupils that I have successfully aided, I know that in less than five days your muscles must respond, and bulge out to a most surprising extent. If you are already training on some good "system" these muscle control exercises will force your progress to be 100% faster! If, however, you do not exercise, then for your own sake and happiness, start building yourself up into a real man. Do not merely drag on—make your life worth living.

It is My Sincere Wish to Assist Every Reader
of "Strength" to Get Really Strong

For this reason, this Muscle Control Course is being offered you now at such a trifling price that YOU CAN WELL AFFORD IT. Costs but \$2.00. I GUARANTEE QUICK RESULTS AND ABSOLUTE SATISFACTION OR MONEY BACK. MY HONEST REPUTATION PROVES THAT I AM NO QUACK. COME THEN, MY FRIEND, WHEN I AM REACHING OUT TO HELP YOU! I will place you on the real road; I will show you the main secret that helped me to get what I longed for, and now certainly possess. In addition to this Muscle Control Course, you have the privilege to ask any questions pertaining to your physical training; to these I will gladly reply, giving you personal attention. This favor alone is worth the \$2.00 I ask. Matysek's Muscle Control will do wonders for you. You will be the envy of your friends. Learn how to get the most out of yourself. It is easy. GET STARTED RIGHT NOW! Simply tear off the coupon below, mail with but \$2.00 (Canadian and foreign orders, \$2.20), and leave the rest to me.

Prof. Matysek

Dept. 207, 523 North Charles Street,
Baltimore, Maryland

.....
Detach and mail NOW while it is on your mind

PROF. MATYSEK

MUSCLE CONTROL DEPT. 207

523 North Charles St., Baltimore, Md.

I want bulging muscles and yet I want them to have fine outlines. I desire to increase my strength, my internal activity, my energy. I want to be more than I am now and I want to achieve my "chief aim" in a short and efficient manner. For these reasons send me your wonderful Muscle Control Course, illustrated with 21 high-grade pictures of yourself. If I am not completely satisfied my money will be promptly refunded, if course is returned within 48 hours.

Write name and address plainly.....

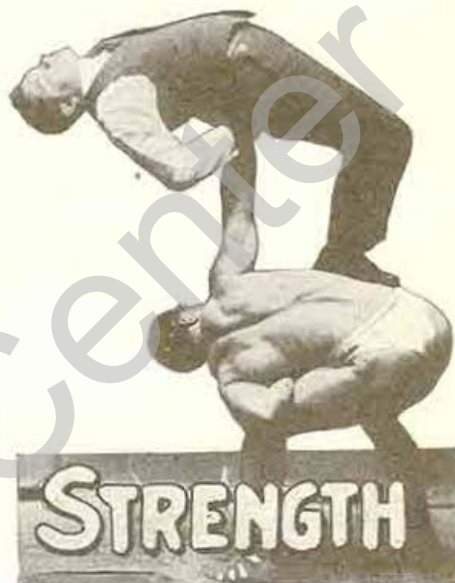
.....

CityStateStrength, May '21

Matysek's Special Course

in Feats of Strength teaches many
HERCULEAN

stunts that will create a sensation
among your friends.



This course contains the most scientific data ever offered on many feats, among which are the

Famous One-arm Bent Press (3 stages)
Two-arm Clean to Chest, using a bar-bell or man

One-arm Clean to Chest

One-arm Swing

One-arm Jerk

Two-arm Continental to Chest, then to arm's length, and includes 18 large poses of myself showing every detail as to positions, grips, dips.

If you are normally strong, I

GUARANTEE

its great strength secrets will enable you to lift a man "over the head" in less than five days!

KNOW as much as the stage strong man.

For a limited time I am offering YOU the complete course for but \$3.00. Order NOW. It's a mighty good investment.

PROF. MATYSEK

Dept. 781

523 N. Charles St., Baltimore, Md.

cellent results by the progressive weight increase system.

It is necessary, of course, that you begin to exercise with a moderate weight, and if you have no serious organic trouble, there is absolutely no danger of heart strain. If there is any question as to your heart condition, it is advisable to have an examination by your physician.

TO THE EDITOR:

I desire very much to know the quickest and best method of bringing the chest out and developing the pectoral muscles. I would also like to know the quickest way of developing the trapezius muscle.

Doctors have told me that I am anaemic, and I have every reason in the world to believe it, too. How can I get some good blood in my body. I know exercising will do it, but how can I help it along?

C. H. J.

See "Chest Development," by Alan Calvert, in the November 1920 issue. The two exercises mentioned in this article are regular exercise number 10 and the exercise for deepening the chest in the Advanced Course. For the

trapezius muscles, practice regular exercise number 7.

To overcome anaemia, pay special attention to diet. This does not mean to restrict the amount of food you eat, but to eat good wholesome foods that you know from experience will agree with you and which are readily assimilated. You must eat sufficient food, as you can not make good, red blood without nourishment. Exercise all parts of the body regularly, and if you have no serious organic trouble, the results will soon be noticeable.

A. P.—S. W. Program satisfactorily provided that you do not overdo things. It has been proven that the best results can be accomplished by exercising every other day, rather than every day, as the intervening day will give your system a chance to recuperate from the efforts of the preceding day.

Wrestling, boxing, acrobatics, etc., fit in very well with weight lifting, but at your age too much exercise is sure to retard your progress. If your gymnasium work is of a very strenuous nature, only practice it one or two nights a week, and be very careful never to continue the exercises to the point of exhaustion.

How to Swim

(Continued from page 12)

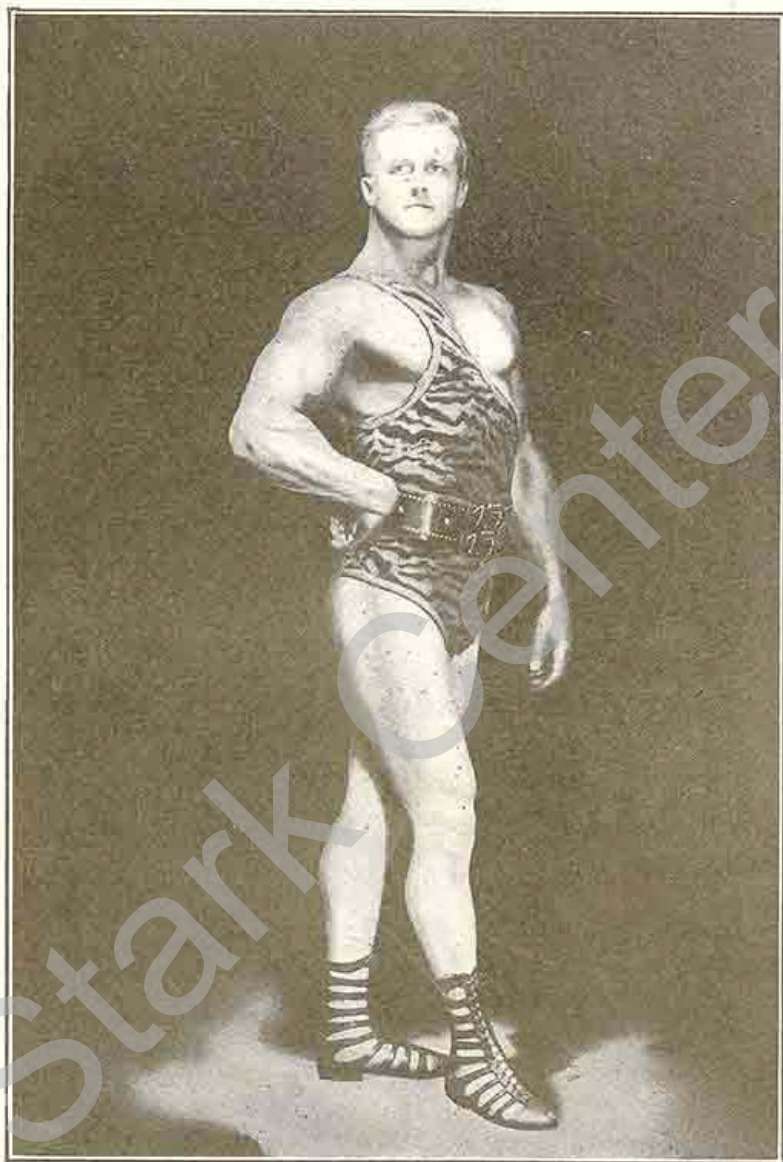
ducking and floundering it is well to have an assistant, preferably a swimmer, to hold your body in position. Having perfected the stroke on land does not help as much as one expects it to, for the reason that one has to get his "water balance." Too much support under your body, particularly by different persons (each using a different "system"), delays you in acquiring that nice body balance seen in good swimmers. Therefore, while admitting the usefulness of support, I think you should stick to one assistant and dispense with support as soon as progress warrants.

Though I sometimes speak of "racing strokes," I think the term is really misleading. Too many people get the idea that such strokes belong exclusively to professionals and such amateurs as can spare a great deal of time to swimming. Nearly every known stroke has been a "racing stroke" in the day

of its popularity. A champion swimmer owes his superiority to his physical condition, practice, and his method of using a stroke, rather than to the possession of an essentially different stroke. You don't have to be a racer nor have any aim at championships to learn the racing strokes—no more than you have to be a professional strong man to enjoy and benefit from weight lifting.

The sport of swimming shows a remarkable history of steady improvement. There is a vast difference between the old-time breast stroke and the up-to-date crawl. From the former swimmers went to the side stroke, then the single overarm, double overarm, trudgeon, Australian crawl, crawl, and the trudgeon crawl.

We have discussed the breast stroke. For various reasons it is not as popular as it was years ago, although recent improvements, particularly in the arm movements, have



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renewed interest somewhat. Some instructors now decline to teach the breast stroke, but because of its usefulness in life-saving I think everyone should learn it. And the same applies to swimming on the back, about which I shall say more later.

The side stroke too, is passing. Any observant spectator at the beach can see that it is giving place to the later strokes. But nine persons out of ten want to learn it, so here are some brief directions, before we pass to more popular methods:

The under arm shoots out to slightly above the shoulder level, but fully extended, and is brought down almost to the side, the elbow then being bent, with the wrist turned inwards and is again extended. The upper arm works what is practically a bent-elbow stroke, moving upwards, from resting along the side, until the hand reaches just above the furthest point attained by the under elbow. It should then describe a small sharp downward sweep back to the side, being extended as the under arm comes in, thus preserving a progressive motion.

The leg work for side swimming is a very short quick stroke, both lower limbs being kept absolutely straight as far as the knee, the under leg being bent back sufficiently to give a fairly powerful kick, while the upper leg is kicked forward from the knee only, the legs crossing each other like a pair of scissors as each stroke is made. Years back side swimmers drew up the legs much as is done in the breast stroke, but the style here described is much better.

The trudgeon stroke, while it is very much like the crawl, shows one important difference, less leg work. This stroke is hard to beat for an endurance contest, and is fine for the none too strong person that wants to swim merely for health and exercise. The upper body action is practically the same in the trudgeon and the crawl. A good land practice for position is to stand upright on tiptoe, head erect, back slightly arched, heels together, feet pointed. In the water this position should show a gentle slant from head to foot. Cultivate the side-to-side roll as soon as possible, as it assists in a clean recovery and facilitates breathing. Do not carry the head constantly on one side, nor very high. Twist it toward the upper shoul-

der to breathe, then return it to normal position—but low. To move the head thus rhythmically with the shoulders greatly helps in a smooth recovery. Professor Handley is a leading authority on the crawl, and I quote the following paragraph from him:

"The arms work alternately, one propelling while the other recovers, and they execute virtually the same cycle of movements, though the under one dips a little deeper, due to the heavier roll of the body toward it. Each arm enters the water with elbow slightly raised, forearm and hand aligned, palm down, fingers and thumb close together. The hand cuts the surface just before reaching full extent above the head, and dips to its own side of an imaginary line drawn between the eyes and through the middle of the body. Then it presses forward under the water so that by the time the arm comes to comfortable extension it is slanted a trifle downward, at the wanted angle to make the power effective as soon as applied, thus avoiding the loss of motion and force experienced if the arm is completely extended above water."

In its downward and backward sweep the arm should press strongly against the water until the hand nears the thigh. Here the muscles are relaxed, the elbow is elevated and the arm drawn out. The palm should be up when hand emerges, wrist bent backward. Then turn it (the palm) downward. As the hand passes the shoulder-line the whole arm should be in proper position for another dip.

The leg action in the crawl has been well described as an imitation of a mincing walk on tip-toe. It is a rapid scissors movement. Be sure to move legs from hips, keeping the knees nearly straight, toes pointed. The best width of the thrash (distance between feet after they pass each other) is about ten or twelve inches. You will be inclined to reduce it as you acquire skill. For beginners four movements of legs to one complete stroke of the arms is usually right, four or six. The term "four-beat crawl" means four kicks to every arm stroke. In the modern trudgeon stroke there is but one scissors kick, a narrow one, at the end of the top arm pull.



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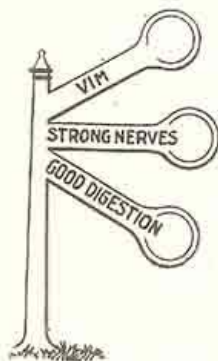
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How Do They Do It?

(Continued from page 10)

base on ground balls, how to field their positions and how to catch a runner napping. The pitchers won the pennant last year and Robby hopes that such will be the case this summer.

Branch Rickey is in a class by himself. He has an organization and the work is evenly divided. Johnny Lavan has charge of the infield, Shotten, the outfield, Sugden the pitchers and catchers, and Ferdie Schupp is boss of the bunting game.

Rickey has specially constructed batting cages and this gives his men all the batting practice they need. He is a hard task master, but gets results. His team trained at Orange, Texas, and trained whenever possible. Branch would have three practices a day if it was possible.

Thus the big league ball clubs do their preliminary work for the championship season. It is hard, unremunerative work, but those who take it seriously and get the most out of it, profit greatly when the season begins.

I have been asked to make another guess regarding the chances of the clubs in both leagues. This year I believe Pittsburgh is the best in the National and Cleveland should repeat in the American.

Helps in Strength Building

(Continued from page 28)

cially the almost vertical rays during the middle of the day.

The question of sleep as a factor in building strength is as important as it is obvious. It has a direct bearing on that question of rest and recuperation which we have already discussed. Sleep is necessary not so much from the standpoint of overcoming muscular fatigue, which, as we have seen, can be more quickly eradicated by massage and warm baths, but because sleep is the only known means by which exhausted nervous forces of the body can be restored. The only recipe, therefore, is to go to bed early without an alarm clock and sleep until your own state of refreshment permits you to wake up naturally, even if it takes ten hours to accomplish it.

The question of diet may naturally have a very great influence upon the building of strength, not so much in reference to the consumption of muscle-building foods, so-called or protein food, as upon the question of the chemical balance of the body. If the body is chemically unbalanced it is unable to utilize tissue building food and unable to express strength.

We are sometimes confronted with the question as to why a man muscularly powerful should become a victim of a disease like influenza or pneumonia. He has so much strength that one would expect him to be able to resist anything. Of course the truth is that the man who has muscular strength usually has with it that quality of blood and vital power that will best resist disease. Nevertheless, the athlete may sometimes become the victim of a disease of this type. It would appear to be because resistance of the body to disease is partly vital and partly chemical in nature, which is a very different matter from the matter of muscular strength.

The really balanced diet is not one concerned with proportions of protein, fat and carbohydrates, but one which is chemically balanced in relation to acid-forming foods and alkaline or base-forming foods. Meat, sugar and pure starches are of an acid-forming character, whereas the base-forming elements are supplied by fruits, green foods and vegetables. Milk, eggs and natural whole-wheat are balanced in themselves by nature. If the athlete develops an acid condition of the system through deficiency of base-forming foods he cannot utilize the strength that is in him. It has even been suggested that this is the condition at fault when an athlete goes "stale." The diet that will most quickly restore his energy, therefore, would be one confined largely to the base-forming foods. That is, little or no meat, but plenty of fruit, green salads and vegetables. This actually works out in practice, as any one may determine by experience or experiment.

If one will take note of these various agencies for keeping himself at his best in respect to the chemical and nervous factors in his make-up, obviously he will accomplish much more through the exercises which he may practice for the building of strength.



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The Development of the Hips and Thighs

(Continued from page 23)

but he always has quite a collection of dumb bells around his home and from time to time has done more than a little dumb bell work. Travis personally considers the deep knee bend a very efficient exercise and told me when I was training under his guidance that he practiced this when he was training with Barre. In the cases of Travis and Marx it can be safely stated that their thigh strength and development was attained by

considerable back, harness and other dead-weight lifting supplemented by more than a little dumb bell work.

Ewald Redam is one of the continental weight lifters who is especially noted for his wonderful deltoid development. His entire physique is most noteworthy and he is one of the best artist's models in Europe. His thigh development is quite as good as his deltoids and he has accomplished some great lifts by reason of his magnificent thighs. He has done some wrestling and hand balancing, but like nearly all men with a really fine physique developed it by progressive bar bell work. At about 168 lbs. he has accomplished a one-arm snatch of 176, one-arm jerk 206, two-arm jerk 300. He pressed 114 lbs. 100 times on the soles of his feet while lying on his back. He also got up with a 110-lb. bar bell from Turkish position on the floor, forty times in succession. These lifts all involve considerable thigh action and he attained his thigh development from their practice.

Rudolph Klar is noted on the continent for his specialty of pressing bar bells on his feet. This is very good work for the thighs and Klar has developed a magnificent pair by this practice in conjunction with the standard bar bell lifts as used in Europe. He weighs 174 lbs., being what we would term a light heavyweight. At this weight he has pressed on the soles of his feet (150kg) 330.7 lbs. thirty-four times in succession and in 1903 pressed (400 pfd.) 440.8 lbs. twelve times in succession in the same manner. To accomplish such lifts would seem to necessitate extremely powerful thighs.

Some of these men are of the lean and muscular type, others of massive build, yet all attained notable results in thigh development. Some of them practiced lifts in the deadweight style of lifting. A few have done some special leg work, but the majority of them attained their results almost entirely from nearly exclusive practice of the standard lifts. Name, if you can, as many men with such notable thigh development attained by methods other than weight lifting and remember that this group represents but a small part of the entire body of men who have attained really magnificent thigh and hip development by training with

PUBLISHER'S STATEMENT

Statement of the Ownership, Management, Circulation, etc., required by the Act of Congress of August 24, 1912, of Strength, published monthly at Philadelphia for April 1, 1921, State of Pennsylvania, County of Philadelphia.

Before me, a notary public in and for the State and county aforesaid, personally appeared J. C. Egan who, having been duly sworn according to law, deposes and says he is the Editor of Strength and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication, for the date shown in the above caption required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

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J. C. EGAN,

Sworn and subscribed before me this 21st day of March, 1921.

JOSEPH J. VOSS,

(My commission expires March 7, 1925.)

heavy weights. Granting that this is true, and, believe me, dear reader, it is true, is it not necessary to believe that this progressive weight system is the best possible method for developing these parts, and if any one practicing it fails to attain proper results in thigh development, that it must be due to improper application caused mainly by an incomplete understanding of the individual peculiarities of the case at hand. In such a difficulty the really qualified physical training expert would rearrange the training work.

If any reader has attained unsatisfactory results in thigh development I would advise him to take a little analysis of the exercises that he has been practicing and see if he cannot add some more lifts involving especially the thigh muscles to his training schedule. Of course if the quantity of exercise that he is already performing is too much of a tax on his energy he will have to exclude some other exercises from his training in order to do the requisite amount of thigh work necessary to a further increase in thigh development. In some cases the thigh muscles may be receiving too much exercise so that the system is unable to build up between the exercising periods, the amount of tissue that is used up by the all too strenuous exercises. If this be the trouble he should decrease his exercises immediately. Sometimes a mere variation in the thigh exercises and without any perceptible change in the quantity of work done by the thigh muscles will prove beneficial. As a rule the lack of proper thigh development is due to the use of a selection of lifts not involving especially the muscles of these parts, and when one begins to do regular practice of the snatch, swing, one-arm clean and jerk or, best of all, the deep knee bend with a bar bell on the shoulders, he soon records an increase in the size of his thighs. He can lie on the back and press a bar bell on the feet, perform hands alone, lift with the bar bell and, if possible, do some back or

harness lifting. This last is not necessary, but gives very strenuous work to the large extensor muscles of the thighs and will afford a variation to all bar bell work. In conclusion I will say that progressive weight lifting is the most practical method ever devised for developing the thighs and hips, and any one who does a proper amount of the right kind of exercises with one will attain results superior to those that can be attained in any other way.

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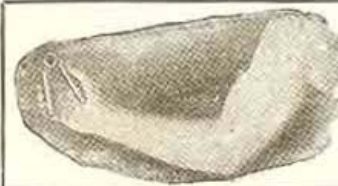
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