

# THE BULLETIN

OF THE ATLAS AND AXIS CLUBS.

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## MEASLES\*

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Measles is one of the common infectious diseases of childhood. Most of the cases occur between the second and tenth year, although we have more cases of measles in adults than of scarlet fever.

**IN ADULTS.** When measles appear in an adult it is frequently quite severe, often causing a good many bad complications to arise, and we really fear measles in grown-up people more than in children, on account of the complications.

**Infectious Agent.** We do not know the cause of measles, that is, we do not know the infectious agent which produces the disease. It has not been discovered as yet. We have a theory that this agent is probably a protozoan infecting the blood stream, but that is simply a theory, and has not been demonstrated thoroughly. We do know that there are other causes for measles besides the infection. If there were not other causes, all children exposed would have the disease, while as a matter of fact only a certain number, perhaps only ten, fifteen or twenty per cent of children exposed to the disease contract it. So we have to take into consideration lowered resistance and susceptibility to the disease.

**Lowered Resistance.** In children who are not vital and well nourished, who have trouble in the upper air passages, enlarged tonsils, and marked inflammation of the nose, the resistance is considerably lowered, and in that class of children we find measles more common than in children who have good strong nervous systems, are well nourished, and that do not suffer from any trouble in the upper air passages.

**Age.** Age, of course, is another causative factor. Practically 90%, or even more, of all cases occur before the tenth year. A few cases occur after the tenth year, between the tenth and fifteenth, and we find a case now and then in a young adult. We never find measles in old people, but in young people, between twenty

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and thirty years of age, we occasionally find a case,—more frequently than scarlet fever.

**Season.** Season is another causative factor. Practically all cases occur in the winter and spring. Almost every year we have a good many cases of measles in Kirksville. If an epidemic comes at all, it usually comes in February, March or April. We seldom see a case of measles in midsummer or fall.

**Incubation Period.** The incubation period in measles is nine or ten days as a rule; that is, the period between exposure and the time of the first symptom of the disease.

**Stages.** The disease is divided by most authors into two stages, the catarrhal stage and the eruptive stage.

**Primal Symptoms.** About the first symptom to occur in connection with measles is some inflammation of the upper air passages, cold in the nose and throat; dripping of the eyes,—that is, the eyes water, and the light will hurt the eyes, so it is usually necessary for a few days to keep the patient in a room that is slightly darkened. There will be a watery discharge from the nose, and the patient will sneeze. These are the catarrhal symptoms appearing early in the disease.

**Onset.** In measles we do not have the rapid onset that we do in scarlet fever. In scarlet fever the child becomes very sick in a very short time. It comes on suddenly, and the child is prostrated with headache, nausea and vomiting, and the temperature runs high. Measles comes on more gently, a little cold, a little headache, a little temperature, no nausea and vomiting; does not come on so violently and abruptly as scarlet fever.

**Temperature.** The temperature goes up in measles during this catarrhal stage perhaps to 101 or 102 degrees and then in a day or two it drops down. It goes up and then comes down to about normal. Then the eruption comes out, on the face usually, and as the eruption becomes more general, the temperature goes up again, so we have a double curve in the temperature. It goes up the first few days, then drops, and when the eruption makes its appearance it usually comes up again.

If the infection is virulent, with plenty of eruption all over the body, particularly over the extensor surfaces, you will find the temperature running up to 101 or 102 degrees again, and as the eruption fades the temperature will drop. That is the characteristic temperature.

**Differentiation of Eruption.** There is no trouble whatever in measles in differentiating the eruption from that of scarlet fever, German measles, or smallpox. In measles we find a patch of eruption, then a piece of skin that is normal. The eruption is quite general, covering the forehead and cheeks, then spreading to all parts of the body, being most marked on the extensor surfaces. The spots are elevated and you can feel them as you run your hand over them.

There is slight edema and congestion of the skin. The eruption looks a good deal like a piece of paper that has been shot with a shot gun. The papules are about as large as the holes in a piece of paper if you stand off 30 or 40 feet and shoot it with a shot gun. Around and between you find places where the skin is perfectly normal. These papules are red, so it gives the patient a spotted appearance. The appearance of congestion is pretty general, but the papules are more red than any other parts.

**Desquamation.** These do not go on to form vesicles or pustules. This eruption stays out usually for a few days, then it gradually fades away, and after that the skin will peel off. It does not peel off like it does in scarlet fever. In scarlet fever it will peel off in big chunks, and sometimes a piece of skin will come off clear across the neck, very thin, of course. In measles you can hardly see the desquamation, just little, fine particles, dust-like, so you can readily distinguish the eruption in measles from that of scarlet fever.

**Differentiation from Scarlet Fever Rash.** In scarlet fever we have a continuous scarlet area, no elevation of the skin, and a brighter red color, while in measles we have a papule of a darker red, and normal spots of skin around here and there between these patches of eruption. These are the chief differences between measles and scarlet fever, so far as the eruption is concerned.

**Common Symptoms.** Some of the other symptoms occurring in connection with measles are headache, from toxemia in bad cases, inflammation of the nose, throat and eyes—the eyes will water and the patient will sweat profusely; there is photophobia, or fear of light, so the windows must be darkened.

**Koplik's Sign.** Koplik's spots in measles come along the second day and appear prominently when the eruption comes out. For Koplik's sign, look on the inner side of the cheek or along the gums, and you will find little spots with a little white center. These spots are sometimes numerous, and at other times we find just a few of them here

and there. They are sort of bluish with white centers, and have a little bluish areola around them. I do not think these spots are present in any other form of exanthemata. That is one of the things you want to look for in suspected measles.

**Nervous Symptoms.** The other symptoms are nervous symptoms, headache and sometimes coma and delirium. The amount of delirium does not always indicate the amount of the intoxication, nor the severity of the disease. In all cases, however, where death takes place from toxemia due to virulent infection, the child will become delirious, and afterward unconscious, or become comatose.

**Delirium.** Frequently children become delirious with slight temperature. Other children may have quite a high temperature and not become delirious. The difference is in the nervous systems of the two children, so you cannot always say that one child was very ill because he was delirious, and another not because he was not delirious—that is not correct. However, delirium is one of the nervous symptoms of measles, and it is always present in extremely bad cases, and may be present in mild cases, particularly if the child has an unstable nervous system.

**Lymphatics:** The lymphatics in measles are not enlarged to amount anything. You will find only slight enlargement in the lymphatics of the neck, back or fore part. This is one of the differences between measles and scarlet fever. In the latter they are very large, while they are scarcely enlarged at all in measles. In German measles they are considerably enlarged.

**Complications.** The complications appearing in connection with measles are really of more importance than the disease itself. The most common complication, the most serious, and the most dreaded in connection with measles, is tuberculosis. I have had quite a few cases, particularly in adults, (it is not so common in children) that were followed by the development of tuberculosis, and in some cases the tuberculosis resulted fatally.

**Tuberculosis.** There are two theories in regard to how tuberculosis develops in connection with, or following measles. One is that on account of the lowered resistance, the patient is more susceptible to the disease, and acquires it. An individual coming in contact with the infection in a devitalized condition may acquire tuberculosis in some form or other, but it seems to me that this is not the most reasonable theory. The most reasonable theory to me is that

the patient is already tubercular; that the tuberculous lesion is in a quiet or dormant state, but on account of measles the lesion is made active, and the disease spreads rapidly following this infection. That is probably correct. If the patient had not acquired measles, he probably would never developed the acute or active form of tuberculosis, as most cases following measles are acute. Perhaps he would have gotten well if he had not had measles, but on account of the disease prostrating him, the quiet focus becomes active, or the disease is spread over the body. Patients frequently develop miliary tuberculosis following measles—that is one of the dreaded complications, particularly in adults.

**Tubercular Complications.** I want to call your especial attention to tuberculosis, because that is the most serious common complication of measles, particularly where the disease occurs in an adult. It also occasionally follows measles in children. One thing we always look out for, and always suspect, is tuberculosis, where an individual has passed his twentieth year and has an attack of measles.

I will tell you about a case. A man came here for treatment, having a bad shoulder. Said he was in the woods chopping, a tree had fallen on him and injured his shoulder, afterwards it got stiff and useless. He came here, I made an examination, and diagnosed it as tuberculosis of the shoulder joint—there was no question about it. It did not bother him much, was not very painful as long as he kept his arm quiet, and probably he would have made a complete recovery, as most cases of tuberculosis of the shoulder joint do if given rest. It bears no weight, and if the arm is not used it is not necessary to put it in a cast, particularly in an adult, because he will let it hang quietly. This man was 28 years old, his arm was getting considerably better. About this time he was taken with the measles, and had a pretty severe attack. He was sick for a week or ten days, but made a good recovery. The symptoms were temperature, his eyes hurt, eyes watered, had a running nose, sneezed, and all that sort of thing; had the eruption, sweat profusely, and was toxic. After a short while he recovered from the measles, but he did not get along well after that. He had some cold; it seemed that the upper air passages were inflamed. On examination we found a case of pulmonary tuberculosis. He did not live more than three months after he had the measles.

As I said before, most of these cases, where tuberculosis develops rapidly after measles, is where the patient is already infected with tuberculosis. Probably the patient does not know that he has tuberculosis,

nor does the physician attending. It may be in a very mild form, a little tubercular focus somewhere. If this man had not had the measles, he would have recovered. Lots of people have tuberculosis and get well, but if a tubercular individual is taken with measles, active tuberculosis is going to develop rapidly, as it did in this case. Here was tuberculosis of the shoulder, but on account of the measles coming on, he took down with acute tuberculosis of the lungs.

In these acute forms following measles there is practically no help. Little, if anything, can be done. There is only one form of pulmonary tuberculosis where any form of treatment is of much benefit, and that is the chronic form. That, however, is the common form, and a great many of those cases are cured by proper living. I examined a man yesterday about forty years of age who has tuberculosis. He is up and around, has a little temperature every afternoon; has been in that condition two years, and still he has not lost much weight. I believe there is a good chance to cure that man by proper treatment, etc. I do not say positively he can be cured, for that is saying too much. You cannot tell what you can do in any case of tuberculosis.

Do not forget that tuberculosis is the most serious and most common complication of measles.

**Pleurisy.** Pleurisy frequently occurs in connection with measles, and oftentimes follows measles. Pleurisy is inflammation of the pleurae. It is of several forms. Sometimes it is dry pleurisy, where there is a dry, tough, fibrinous exudate, which, after the inflammation subsides, becomes organized, and forms adhesions to the pleural walls. In another form we have a fluid exudate which fills up the pleural cavity, and sometimes the fluid is absorbed. If it is not absorbed after a while, or drained off by a needle inserted between the ribs, it is apt to become infected, and a chronic abscess will form there. This condition is apt to follow measles, particularly in adults.

**Broncho-pneumonia.** Another serious complication of measles is broncho-pneumonia. Probably it follows measles in children more frequently than it follows any other infectious disease, unless it is whooping cough.

This is a form of pneumonia affecting the smaller areas of the lung; that is, it does not affect the whole lobe as in lobar pneumonia. It is really a more serious disease than lobar pneumonia, especially when it follows an infectious disease. It usually follows some other disease, or occurs in connection with it. You will have to look out for this form of pneumonia, which frequently terminates fatally, particularly in children, following measles.

**TREATMENT.** A case of measles should be treated and cared for a good deal like you would care for a case of scarlet fever. You should take the same prophylactic measures to prevent the spread of the disease as in scarlet fever, smallpox and diphtheria, although measles is not nearly such a severe disease as scarlet fever.

**Nursing.** If a case of measles is at all well cared for, that is, comfortably nursed, (the mother of the child usually takes care of it, and often no physician is called) if the child has fresh air, with no draft in it, proper baths, is confined to the room, has good food, and the bowels are kept open, that is about all that is necessary in handling measles. Practically all cases get well, but not so in scarlet fever. Scarlet fever is a disease that has a pretty high mortality in general practice, account of the very serious complications, and on account of the fact that it is a more stormy disease—comes on more abruptly, and the toxic condition is greater than in measles.

**Quarantine.** However, even in measles we should protect the other children in the neighborhood as much as possible, and for that reason the case should be quarantined. In Kirksville they do not observe quarantine for measles; it is observed only for smallpox, diphtheria and scarlet fever. It should be observed, even if not required by the authorities. The parents should keep the quarantine for the sake of the rest of the children in the community.

**Object of Treatment.** The treatment is a good deal like the treatment in scarlet fever. We must have in mind two things in particular, first the elimination of the toxin to improve symptoms—we must have that in mind first; get rid of it, and then stop its formation if possible.

**To Assist Elimination.** In order to eliminate the toxin, or assist in its elimination, we treat the spine thoroughly in the lumbar and dorsal regions, rendering the kidneys more active and keeping the bowels open. Also treat the abdomen for that purpose, and occasionally make use of the enema. Then treat the neck thoroughly, particularly when the glands are slightly enlarged, and there is temperature. This tends to equalize the distribution of the blood, tones up the nervous system, and renders it more resistant against toxin.

**Seat of Infection.** We do not know the seat of infection in measles nor scarlet fever. Both are infectious diseases, but just where the seat of the infection is we do not know. In diphtheria it is in the throat, but as to scarlet fever, measles and smallpox, we do not know.

**Production of Toxin.** We do not know much about the nature of the disease. We know the history, symptoms and how to treat them, but we do not know the infectious agent, and do not know just the place where it operates to produce the toxin.

**Warm Bath Bring out Eruption.** The warm bath is especially useful in measles and scarlet fever to bring out the eruption. We like to see the eruption come out early. Sometimes it "fades away" too soon, and the child is more toxic. To bring out the eruption properly in measles or scarlet fever, the warm bath will frequently help. The warm bath renders the skin more hyperaemic, it brings out the eruption, and not only that, but a warm bath is always very grateful to the patients, from the fact that it loosens up the muscles and renders the nervous system less irritable. So, if you have a case where the eruption is not coming out properly, and the child is irritable, cross and toxic, you will find that a warm bath, given a time or two a day, will do good, and the child will sleep better after the bath than before.

**Enlarged Lymphatics.** The lymphatics in measles are not much enlarged. Just a few little kernels, while in scarlet fever they are very much enlarged.

**Ear-ache.** Another thing that occurs in connections with measles, as well as scarlet fever, is ear-ache, although the books do not say anything about it. They speak about otitis media in scarlet fever, and of course there would be ear-ache there, but in both of these diseases the inflammation extends up the eustachian tube, and gets into the middle ear, and then it is that the child suffers from ear-ache.

**Cervical Treatment. Heat.** That can be relieved almost always by a good cervical treatment, getting up into the upper cervical region, pressing in on the tissues, and then follow that up by the application of heat over and behind the ear. A hot salt bag, or something of that sort, seems to be especially good. Salt holds heat, and moisture also, very well. If you have no hot water bottle, use a salt bag. It is good to put against the body wherever heat is needed.

**Suppuration.** You can relieve almost all cases of ear-ache by treatment and heat before pus forms. You cannot relieve pain then, only temporarily. The ear-drum will rupture, and when the pus flows out of the ear, the child will be relieved.

**Puncture of Ear-Drum.** It is advisable to puncture the ear-drum with a knife, or needle, before it ruptures, where there is persistent pain. It is simple enough to do. Use an ear speculum, take a small knife or needle and puncture the drum. It does not seriously affect the hearing. The common impression is that if the ear-drum is ruptured one cannot hear good afterward.

**Loss of Hearing.** That is not what causes deafness, but it is the inflammation of the middle ear resulting in extensive tissue changes.

**German Measles.** Rubella, or German measles, amounts to so little that it is hardly worth saying anything about. There are no complications, practically, and usually no fever. I have gone to see children with German measles and found them playing out in the yard. They do not feel sick, and will be all right in four or five days.

**Symptoms, Rash, Enlarged Lymphatics.** The only symptom that is quite marked in rubella, (and there are only two symptoms we might say), is the eruption, which is kind of a hybrid between measles and scarlet fever. It is more a roughness of the skin than the papular red condition that we get in measles, and it is not so red as in scarlet fever, but a little rough goose-pimple condition of the skin. That eruption will last three or four days. In rubella the lymphatic glands get quite large—three or four times as large as they do in real measles, but they stay enlarged for only four, five or six days, and then disappear.

Patients do not have any headache nor chill, not much temperature, two or three degrees may be for a little while, and then it passes away. As we do not have any complications in connection with this disease, we do not have to pay much attention to it.

## NOBLE SKULL, JANUARY, 1910—MAY, 1910.

Berlin, Wisconsin, is the site of a deposit of blue granite which bears the same relation to it that beer does to Milwaukee. But it is not from this fact that it is of interest to us. The only interest it holds for the Atlas Club is that here, on December 10, 1869, was born the present presiding officer of the Club, brother Paul S. Nichols.



PAUL S. NICHOLS

School life for Mr. Nichols was begun at Berlin, but his parents moved to Lincoln, Nebr., when he was twelve years of age, and it was here that he was graduated from High School.

After graduation he took up electrical work, which had interested him, which line of work he pursued for four years in Omaha, Duluth and Superior. Later he returned to Lincoln, and entered the University of Nebraska. Physics held a fascination for him to such an extent that he completed a two years' course of this study in one year, and was appointed assistant in the physical

laboratory, which position he held for some time.

The second years' work in the University was broken in upon by serious illness, which made it impossible for him to continue with his class. He then went to the Black Hills of South Dakota for his health, which he in a measure regained in time.

In January, 1895, he returned to Superior, Wis., and assisted in the organization of the American District Telegraph & Telephone Company, and was active in telephone work until 1897, when he entered the Railway Mail Service. He remained in the employ of the Government until October, 1907, when he resigned to take up the study of osteopathy at Kirksville.

Mr. Nichols is an excellent student, quiet and reserved in manner, and all he can be accused of in the way of boasting is of his osteopathic baby girl, born in the A. S. O. Hospital in November, '08, and who is pictured in the 1909 Osteoblast as one of the "class babies."

Mr. Nichols has been an active factor in the Club during his connection with it; has been on a number of committees, among which may

be mentioned those on Constitution, Life Membership, Practical Work, and Ritual. He is ambitious to see the Club advance and to be placed on a sound business basis, and is willing to make a sacrifice of his time and abilities to further this end. Another thing which Mr. Nichols desires to see consummated during his term of office is the establishment of Alumni Chapters of the Atlas Club. Under his leadership the Club should make a material advance before the close of this school year.

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## STRAIGHT SPINE.

(Flat Chest, Anterior Dorsal, Flat Upper Dorsal.)

HARRY W. FORBES, D. O.

Definition.—A departure from the normal in the conformation of the chest; characterized anatomically by bi-lateral diminution in size, decrease in all of the diameters, relative increase in the transverse diameter, and flattening of the anterior and posterior walls; characterized clinically by diminution of respiratory capacity, low lung and heart resistance, impaired general nutrition and predisposition to neuroses.

Etiology.—The sexes are equally affected. Heredity is an important factor, all the members of certain families being "hollow chested." Most often, however, in such families, the condition does not exist from birth, but develops slowly, starting at the time the child begins to walk. The larger number of cases appear between the ages of ten and twenty years.

Exciting Causes.—(a) Injury of the upper dorsal and cervical spine; (b) the infectious diseases of childhood, particularly when severe and followed by a slow convalescence; (c) anything which prevents the development of the anterior curvature in the lumbar spine, when the upright position is assumed; (d) attempting to stand erect by throwing the "shoulders back," instead of allowing the scapulae to hang naturally and attaining erectness by curving the lumbar spine forward; (e) pleurisy, broken ribs, pneumonia, or other painful affection of the lungs or chest, which limits the respiratory excursion and causes the chest to be held for several days in a position of expiration, may start the development of a straight spine; (f) tuberculosis and other lung affections which produce consolidations, fibrosis, etc., and pleural adhesions frequently flatten the chest and straighten the spine.

Morbid Anatomy.—The normal antero-posterior spinal curvatures are diminished. The spinal column, in its antero-posterior conformation, is straighter than normal. This straightening is effected by the

dorsal region moving forward and the cervical and lumbar regions moving backward. In many cases the lumbar curvature is reversed, being convex backward instead of forward. In such cases the posterior lumbar may completely compensate for the flattened dorsal. The cervical curvature may then remain normal, or even be accentuated. All of the diameters of the thorax are diminished. The antero-posterior diameter is diminished out of proportion to the transverse. In a normal chest the transverse diameter is one-fourth to one-third greater than the antero-posterior. The sternum is less convex forward than normal, and the angle formed at the junction of the manubrium and gladiolus is diminished. The epigastric angle is more acute. The scapulae drop and their vertebral borders are everted. This condition of the scapulae gives origin to one of the names of this condition,—alar chest,—winged chest. The arms are long, the neck is long, and the thyroid cartilage, "Adam's apple," is prominent.

Two changes occur in the ribs. (a) in their position; (b) in their shape. The ribs occupy permanently the position which the ribs in normal chest reach in expiration. From this position they move up and down in respiration. In quiet breathing, at the end of inspiration, the ribs are elevated to the position they should normally occupy toward the end of quiet expiration. The obliquity of all the ribs is increased. The increase in obliquity is greater from the fourth to the seventh. The sternal end of each rib moves inward as it descends. This produces a greater bend in its costal cartilage and the cartilage must ascend more to unite with the sternum. The cartilages are less convex forward than normal. In some cases the cartilages are straightened and the anterior surface of the chest becomes quite flat. The interspaces between ribs are narrowed.

The ribs are bent more at the side. The bending varies in different cases, being sometimes so slight that it is scarcely noticeable, and in other cases so great that it overshadows the other rib changes. The increased bend at the side brings the sternal end of the rib and the head of the rib nearer together.

The increased obliquity and the lateral bending of the ribs are the two changes which carry the dorsal spine forward and lessen its posterior curvature. Sometimes one, sometimes the other, predominates, but in every case, both contribute, and each must be reckoned on in planning treatment.

Symptoms.—The symptomatology is multiform. No definite clinical classification of cases is warranted. Provisionally, however, cases may be separated into three groups: (1) those in which the symptoms

are latent, (2) those having organic lung and bronchial affections, (3) those having neuroses.

In the first group belong the cases which, without definite symptoms, are manifestly not robust. Seasonal, climatic, social and other environmental changes strain them. They do not possess the normal ability to keep well. They are sometimes said to have a "catarrhal diathesis." They do less than the average amount of the world's work, because they have less than the normal amount of energy to expend in work. Cases are continually recruited from this class for the second and third group.

In the second group are many cases of pulmonary tuberculosis and chronic bronchial catarrh. A flat chest predisposes to tuberculosis and tuberculosis flattens the chest. Not all persons with a flat chest develop tuberculosis or chronic bronchitis, but many do. A normal conformation of the thorax does not confer an immunity to tuberculosis, but it is one of the important elements of such an immunity.

In the third group are many neuropaths. The frequency of neurasthenia, in cases of straight spine, suggests that the relation between the two is not fortuitous. We have observed the disappearance of many neuroses after the correction of a "flat upper dorsal," and believe that the relation is one of sequence; that is, a flat chest is a powerful predisposing cause of nervous exhaustion. "How," it may be asked, "does a straight spine cause a predisposition to neurasthenia?" The chronic deficit of oxygenation is one reason. The straightening of the spinal column, which diminishes its strength, renders it more liable to injury and makes it more rigid, is probably the chief reason.

The nervous disorders that appear in these cases are not special; that is, no particular group of neurasthenic symptoms appears to be connected with this particular predisposing cause. The predisposition is general, not special, and environmental stresses determine the special symptomatology. Thus one case will have dyspepsia, another circulatory disorders, another dysmenorrhea, etc. The number of symptoms that may appear as a result of this condition of the spine and chest is limited only by the number of functions that are presided over by the nervous system.

Treatment.—The removal of the causes is the first indication for treatment. This includes the correction of all lesions—usually cervical and upper dorsal—which interfere with the normal actions of the respiratory centers, nerves and muscles; correction of faulty attitudes; restoring the normal motion and curvature of the lumbar spine; and respiratory exercises for the atonic musculature.

Removal of causes is seldom sufficient. Manipulation is usually required to correct the condition. The object of the manipulation is to restore the normal form and movements to the spine and thorax. In order to accomplish this, the ribs on each side must be lifted to the normal position and the abnormal bend removed. A fact that is frequently overlooked in the treatment of a straight spine is that the dorsal spine is a part of the thorax. Failure to recognize this fact is followed by fruitless attempts to correct a "flat dorsal region," by methods that ignore the existence of the ribs and the sternum. A straight spine cannot be corrected by any means which does not lift the ribs to their normal position and return them to their normal shape. A straight spine will be corrected by any means which does this. The reason is obvious. The sternum in front and the spine behind form the middle of the anterior and posterior walls of the thorax. The ribs and the cartilages form the sides and the lateral portions of the anterior and posterior walls. The sternum and the spine are connected by the ribs and the costal cartilages. The upper end of the sternum is connected with the first dorsal vertebra, by an almost horizontal rib. The lower end of the sternum is connected with the lower dorsal and upper lumbar vertebrae, by the diaphragm. The sternum is practically one piece. The dorsal spine is composed of twelve movable pieces. The ribs form the sides of the thorax and connect the upper seven dorsal vertebrae directly, and the eighth, ninth and tenth vertebrae indirectly, with the sternum. The position and form of the ribs determine the antero-posterior diameter of the chest. Increase their obliquity and the sternum and spine come nearer together. Decrease their obliquity and the distance between the spine and the sternum increases. The dorsal spine becomes less curved as it moves toward the sternum when the ribs are forced to a position of greater obliquity, and more curved as it moves away from the sternum when the ribs are lifted to a more horizontal position. Similar changes occur in the sternum, but they are usually less marked, probably because the sternum, not being composed of movable pieces, offers more resistance to being curved. The straight spine of the tuberculous chest and the kyphosis of the emphysematous chest are due respectively to the increased and decreased obliquity of the ribs. The greater lateral bending of the ribs, which shortens a straight line connecting their heads and sternal ends, is another cause of carrying the spine forward and diminishing its curvature.

Of the many operations that may be used to lift and to overcome the abnormal bending of the ribs, I will describe but one.

Relax the musculature of the spine and thorax. Rotate, flex and extend the dorsal spine. Examine all of the ribs on each side and loosen any that do not move freely. Having accomplished this, place the patient on the table in the right lateral position. Stand at the side of the table, facing the patient; pass one arm under and the other over the patient's body and apply the hands to the right side of the chest midway between the mid-axillary and post-axillary line. Place the front of your chest on the left side of the patient's chest exactly opposite your hands. The hands and body are so placed that a transverse pressure may be made on the patient's chest on a line slightly behind the mid-axillary line. It is usually better to allow the patient to turn so that he occupies a position midway between the right lateral and the prone one. In this position a more effective transverse pressure may be given. With this position and pressure, instruct the patient to slowly take a moderately deep inspiration, to hold it for a few seconds and to expire slowly. Make a few pounds of pressure and counter-pressure with the body and hands at the beginning of the inspiratory act, gradually increase the pressure to the end of inspiration, make the greatest pressure while the "breath is being held" and gradually decrease the pressure during the first half of expiration. No pressure is made during the last half of expiration. If too great force is used the patient is unable to fully expand the chest and the operation is not effective. If the amount and the direction of the force is correct, the dorsal spine will move backward during the application of the pressure. This operation is repeated about ten times and then the patient is turned to the left lateral and prone position and the same operation is given an equal number of times. It is necessary to turn the patient in order that each side of the chest may be equally lifted. It is almost impossible to make the pressure and the counter-pressure equal and exactly opposite. Hence, if the patient is not turned, the antero-posterior diameter of the chest will be deepened more rapidly on one side than the other.

If the entire thorax is flattened the pressure will need to be given at two or more levels.

A similar operation may be given with the patient seated on a stool, leaning forward to rest his forearms and head on a table.

The principle of this operation is a simple one. If the thorax is prevented from expanding in one diameter, it will expand more in some other diameter. If, for instance, adhesive strips are applied to the lower half of the right side of the chest to prevent its expansion, the volume of air taken in during inspiration will not be perceptibly diminished. The portions of the chest which are free to expand will expand



more to compensate for the lost movement in the lower half of the right side. In like manner, when by the moderate transverse pressure applied during this operation, the chest is prevented from freely expanding laterally, it will expand more in the antero-posterior diameter. The ribs are thereby brought more to the horizontal and the abnormal curving is lessened. As the ribs in the middle of the series approach the horizontal, the distance between the sternum and the spine is increased by the vertebrae moving backward. This restores the normal dorsal curvature and the normal shape to the thorax.

With the active and intelligent co-operation of the patient in the matter of holding the lumbar spine forward and by respiratory gymnastics excellent results are obtained, even in cases of long standing. Two to six months treatment is required. Most cases, in patients under thirty, can be entirely corrected. Satisfactory results are obtained in patients much older than this. Treatments are usually given three times each week.—Cosmopolitan Osteopath.

# THE BULLETIN

OF THE ATLAS AND AXIS CLUBS.

IRVIN FISH CRAIG, EDITOR.

M. A. BOYES, BUSINESS MANAGER.

Entered as second class matter, October 12, 1903, at the post office at Kirksville, Mo., under act of Congress of March 3, 1879.

Members should send the Editor prompt notice of address on making first location, and on making any change in mail address thereafter.

Copies lost through change of address without notification can generally be furnished by the editor at ten cents per copy.

KIRKSVILLE, MISSOURI, JANUARY, 1910.



**Smaller Bulletin.**

At the last meeting of the Club it was decided, in view of the fact that our field members are not supporting

THE BULLETIN as they should by keeping their dues paid up, that it is an injustice for the local chapter to go to the expense of maintaining THE BULLETIN on the basis upon which it has been published the past four months. It was therefore determined to reduce the cost of THE BULLETIN to the local chapter not only by decreasing its size, but to drop from our mailing list at once all members not in good standing. Accordingly the January Bulletin will be sent to only such members as are not in arrears in the payment of dues.

There can hardly be objection on the part of field members to this, for there seems to be no good reason why THE BULLETIN should be furnished to them at the expense of the local chapter.

THE BULLETIN could not be nor has it been maintained on its proportion of the dues of field members, which is entirely inadequate to its publication in its past or present form.

**Club Dues.** The editor was astounded recently by seeing a list of members who are behind in the payment of dues. Many of the delinquents we know personally, they having graduated since our matriculation. We know many of them to have been active in Club life, never to miss a business meeting, who have held important offices in the Club, and yet they overlook the payment of yearly dues. The dues are so small that we know it is not a lack of the money but is neglect. •Better take out a Life Membership Certificate brothers, and save yourself the bother of paying dues annually.

\* \* \*

**The Bulletin.** One of our valued field members and once an editor of THE BULLETIN says he very much enjoys the articles which have been appearing each month by Dr. Laughlin, but that in addition he would like to see some articles from field members. He suggests that a personal letter to some of the field members would meet with a response in this matter.

Just to show that time changes things, we wish to say that we have written since our election as editor at least three dozen personal appeals for contributions. To these we had the courtesy of five or six replies. Those who did reply were kind enough to promise articles and two materialized—that of Drs. Hildreth and Smith which appeared in the December issue of THE BULLETIN.

Perhaps our field members wish remuneration for the preparation of articles. Were it possible we would be glad to remunerate them, but no provision has ever been made by the Club for this and we must do as best we can in the matter.

We certainly would appreciate it if our field members would send us in a few articles. Case reports would help also.

\* \* \*

**Bulletins Ten Cents.** The following is copied from January, '08 number of the Bulletin and still holds good:

"It has been voted by the Atlas Club, and by the Axis Club in concurrence, 'That ten cents per copy be charged for back numbers of THE BULLETIN sent to members at their request when failure to receive them has been due to a change of address without proper notification; also that the same charge be made for all extra copies supplied to members, except to contributors of articles'".—Bulletin, April, 1906.

This action of the Club has never been revoked, so if you want your

address correct on our mailing list, don't wait for us to hunt you up, but write.

**Emblem Pins.** A new and better pin emblem has been adopted by the Club and an order placed for them.

Many of the members were dissatisfied with the quality of gold and the workmanship of the old pin, as well as its size. The new pins are smaller, of higher karat and are more nearly a representation of an atlas bone. They cost somewhat more than the old pin so that any member desiring to exchange his old pin for one of the new ones will have to pay the difference between the value of gold in the old pin and price of new pin—approximately \$1.50.

\* \* \*

**Alumni Chapters.** It was thought by the local chapter that 'ere this there would be two or three applications for charter for a subordinate chapter from those field members who had taken the matter up with the Club before the Constitution had been amended so as to permit this. As stated in a former Bulletin, the new Constitution provides for the formation of subordinate chapters upon meeting its requirements.

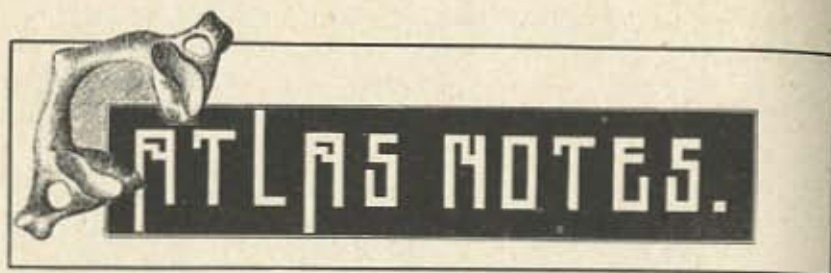
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**New Directory.** There is just off the press a new directory of members of the Atlas and Axis Clubs. It has been sometime in preparation, and is hoped to be as nearly correct as a list of this kind can be. It represents considerable labor on the part of the committees of the two clubs arranging it, in charge of Dr. R. E. Cunningham of the Atlas Club, and Dr. Grace Wilson of the Axis.

\* \* \*

**Axis Club Withdraws.** After an association dating from the first issue, the Axis Club has severed its connection with THE BULLETIN for reasons best known to it.

We regret very much that this step seemed necessary, and hope that at an early date the Axis Club may be able to resume relations with THE BULLETIN.



**New Officers.** Dr. A. D. Becker of the faculty acted as Installing Officer at the Club hall the evening of January 8, 1910. The following officers have been elected to serve until the May installation:

Noble Skull.....	Paul S. Nichols
Occipital.....	Keene B. Phillips
Sacrum.....	Jas. L. Walker
Stylus.....	A. C. Hardy
Pylorus.....	A. B. Caine
Receptaculum.....	E. S. Mitterling
Editor of Bulletin.....	I. F. Craig
Business Manager Bulletin.....	M. A. Boyes
Trustees: .....	Dr. R. E. Hamilton, O. H. Cramer, B. H. T. Becker

The Noble Skull made the following appointments:

Styloid.....	E. H. Bean
Radius.....	H. H. Trimble
Right Clavicle.....	Alex. H. Smith
Left Clavicle.....	D. C. Nye

**COMMITTEES.**

Program:—Russ Coplantz, A. S. Hollis, W. G. Keller, H. W. Clement.  
 Library:—J. F. Krill, G. P. Smith, H. L. M. Betzner, S. A. Brugh.  
 Finance:—F. W. Morris, W. K. Jacobs, E. C. Waters, C. B. Doron.  
 House:—L. C. Marshall, R. M. Wolf, T. Y. Stelle, C. B. Doron.  
 Practical Work:—O. H. Cramer, L. C. Cromer, L. E. Staff, C. A. Clark.

Floor Work:—C. H. Muncie, H. R. McLean, M. C. Hurd, O. H. Gripe.  
 Criticism:—L. J. Bingham, B. McMahan, A. B. Ford, W. P. Hull.  
 Sick:—F. E. Avery, C. E. Medaris, V. H. Edson, H. W. Clement.

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**Presiding Officers.** To make a list for ready reference we reprint and bring up to date the list of presiding officers published in THE BULLETIN some two or three years ago.

**INSTALLED.**

Henry S. Bunting, Chicago, Ill.....	Dec. 10, 1898
Homer Woolery, Bloomington, Ind.....	Jan., 1899
W. E. Dwiggin, Bakersfield, Calif.....	June, 1899
Fred J. Fassett, Seattle, Wash.....	Jan., 1900
Paul M. Peck, San Antonio, Tex.....	June, 1900
George T. Monroe, Warsaw, N. Y.....	Jan., 1901
F. W. Sackett, Springfield, Ohio.....	June, 1901
G. C. Maxwell, Columbia, Miss.....	Jan., 1902
M. E. Pearson, deceased.....	June, 1902
E. J. Breitzman, Fond du Lac, Wis.....	Jan., 1903
Robert H. Graham, Amsterdam, N. Y.....	June, 1903
W. S. Thomasson, Terre Haute, Ind.....	Jan., 1904
W. C. Stephenson, Johnson City, Tenn.....	June, 1904
W. E. Owen, Hoosick Falls, N. Y.....	Jan., 1905
Hugh L. Russell, Buffalo, N. Y.....	June, 1905
Chas. S. Fisher, Milwaukee, Wis.....	Jan., 1906
Chas. F. Banker, Kingston, N. Y.....	June, 1906
Kirk W. Shipman, Milwaukee, Wis.....	Jan., 1907
R. P. Carlton, Wichita, Kans.....	May, 1907
L. H. Walker, Ellensburg, Wash.....	Jan. 1908
Frank Austin Kerr, Provo, Utah.....	May, 1908
C. G. Luft, Fremont, O.....	Jan., 1909
B. H. T. Becker, Kirksville, Mo.....	May, 1909
Paul S. Nichols, Kirksville, Mo.....	Jan., 1910

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**Life Membership.** The list is growing. Still more have seen the advantage of Life Membership and have applied for certificates.

Since the publication of the December number the following members have been granted certificates:

Dr. S. H. Bright, Norfolk, Va.; Dr. G. V. Webster, Carthage, N. Y.; Dr. G. S. Smallwood, New York; Dr. Herbert A. Thayer, Rochester, N. Y.; Dr. O. M. Oswalt, Auburn, Ind.; Dr. F. E. Moore, Enterprise, Ore.; Dr. Franklin Fiske, New York, N. Y.

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A card from Dr. L. H. Walker, ('08) of Ellensburg, Wash., conveys greetings to the Club. Dr. Walker was Noble Skull Jan., '08-May, '08.

Dr. Allen Z. Prescott, ('09) writes the Club from Lorain, Ohio, that his practice is growing, and that he finds the people there very receptive of non-medical measures. "It looks here as if the medical profession desires to absorb osteopathy, while at the same time belittling it and ignoring its adherents" he says.

\* \* \*

Dr. H. A. Price, ('09) writes at the end of his third month of practice at Alexandria, La. He feels that he has done very well so far, and prospects are good. Has treated several of the prominent people of the town who are beginning to talk for him and osteopathy.

\* \* \*

We were pleased to meet during the holidays Doctors Harry Miller and J. E. Derek of the '09 class. The attractiveness of Kirksville so affected Derek that he remained to do some P. G. work, his practice at Harper, Kans., being transferred to Dr. W. V. Smith.

\* \* \*

Dr. Frank L. Martin sends holiday greeting to the Club and announces his removal to better quarters.



At the last business meeting in the old year two candidates were initiated, Ernest R. Humphries of the 1911 class and Charles E. Medaris of the 1912 class.

Mr. Humphries comes from Malden, Mass., and holds A. B. degree from Tufts College, 1908. After two years work on various Boston newspapers he became interested in osteopathy through treatment for heart trouble, and entered the Massachusetts College of Osteopathy.

He is a nephew of Drs. Alfred W. and Effie L. Rogers of Boston.

\* \* \*

Chas. E. Medaris is from Richmond, Ind. Was lately traveling salesman, previous to which time he was engaged as teacher. His interest in osteopathy was excited through intimate friendship with osteopaths, and the results obtained by them upon his mother and brother. The foundation of the science appeared to him to be solid, being based on cause rather than on manifestation of symptoms, hence he decided to take up the study at Kirksville.

\* \* \*

Frank E. Thorn, ('10) of Lincoln, Nebr., is the latest addition to the Atlas family, having been initiated the same evening the new officers were installed.

Mr. Thorn was formerly a school teacher, but became interested in osteopathy through a lady friend to such an extent that he married the lady and took up the study of osteopathy.

He is a high school graduate and had two years of law in the University of Nebraska.

# LOCATIONS AND REMOVALS



Allison, Dr. J. S., from 128 Linn Ave., to Drs. Allison's Osteopathic Institute, 126 W. Linn Ave., Monrovia, Calif.

Derek, Dr. J. E., from Harper, Kans., to Kirksville, Mo.

Miller, Dr. H. T. has located at Cuba, Ill.

Martin, Dr. Frank L., from 992 Page St., to 343 Devisadero St., San Francisco, Calif.

McHolland, Dr. F. N., from Burlington, Wash., to Blaine, Wash.

Most, Dr. L. H., from Kirksville, Mo., to Belle Fourche, S. Dak.

Prescott, A. Z. has located at Lorain, Ohio.

Reesor, Dr. J. A. E., from Toronto, Canada, to Box 643, Redlands, Calif.

Smith, Dr. W. V., from Lamoni, Ia., to Harper, Kans.

Schmidt, Dr. John J., from Vinita, Okla., to Tulsa, Okla.

## CONTEST RESULTS.

The December mis-spelled word contest was very satisfactory judging from the number of replies. Fourteen different states have been heard from. There were two out-of-town prizes as follows: In Mr. Cooper's ad the word book was spelled with an "e." Dr. Mary E. Alspach, Topeka, Kansas, pointed out this error at 3:30 p. m., Dec. 20. For her trouble Mr. Cooper gave her a beautiful osteopath pennant.

Dr. K. T. Vyveberg at 11 p. m., Dec. 21, reported that the word "tabel" in Mr. Janisch's ad was incorrectly spelled. Mr. Janisch presented the Doctor with a serviceable blue print of the nervous system.

There were five local prizes as follows:

Mr. Bamberg of the B. & F. Store gave Master Craig a beautiful tie. The word "clothes" being mis-spelled.

Mr. Calhoun of the A. S. O. Grocery delighted Mr. Hugh Betzner by giving him some delicious candy for correctly spelling the word "grocery" Mr. Betzner is especially anxious that we have another contest.

Bill Nye is a right good speller too. He correctly spelled the word "oysters" for the Palace Bakery. Bill says he wishes we would run the contest three times every day because he would certainly grow fat on oysters. Courtesy forbids that we say what the management of the Palace Bakery thinks.

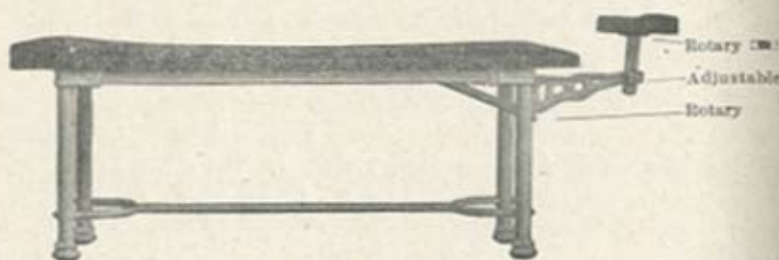
Mr. Gillespie has been enjoying the luxury of polished shoes since our last contest. And he has a right to enjoy them for he has worked and earned one of Mr. Davidson's shine cards. Think of it! Fifteen shines for learning how to spell the word "slippers! !" Mr. Davidson's shine-boy won't talk therefore we can't tell you what he thinks

Mr. Solem, the photographer, offered to take a free picture of the first person who would tell the correct way to spell "photos." We heard that in fulfilling his agreement Mr. Solem had to have his camera repaired and was at considerable expense in getting a negative that would do at all. Was this due to the light, or to the excessive cold, or just to the remarkable lines in the face of our worthy Atlas brother and Editor of Osteoblast No. 5, Mr. P. A. Morse? We cannot say.

In conclusion we wish to thank our friends for supporting the contest, and on account of the work connected with the contest to serve notice that the Business Manager will not run another contest except in response to the request of at least five advertisers.

# HELLO THERE

*Atlas and Axis Club Members, Line Up  
and Buy Root's Common Sense Table*  
WITH HIS LATEST IMPROVED SWING



Patented April 2, 1907.

See how to save your backs while breaking up the spine of that 200 pound patient, at the cost of your own strength.

His table has a neat finish in red, white or green enamel, bronze, nickel plate and oxidized copper.

His swing is the most valuable accessory, no harness, hooks, straps, etc., etc.

We have put in a full line of Surgical Instruments.

We handle the Loomis Folding Table.

We have all the latest Osteopathic and Medical Books and ship

promptly by prepaid express.

We have put in the finest line of wooden tables on the market. Made in both mission and fancy styles. Step in and inspect them before buying. Write for circulars.

## HENRY T. ROOT

Kirksville, - - - - - Missouri