it constitutes a mighty fortress against the invasion of disease. The chemical basis of immunity lies here. The biochemistry of the human body is the sharp and ready tool in the hands of the osteopathic physician.

"The blood is the life." "The rule of the artery is supreme."

From this general summary of the various bactericidal and other protective powers residing in the human body, it may be concluded readily that the body is so constituted as to resist the invasion of pathogenic agents.

We have endeavored to make a thorough review of what the human body possesses as a basis for immunity, natural or acquired. Reviewing these facts, considering all the evidence, we must conclude that the human body does possess the basis for natural immunity. Well and truly did Still say: "The body has its own drug store inside it. It is your business to see that this drug store is well run."

Osteopathy's power to rally all the natural defenses of the body against disease, for either protection or cure, is the very core of its greatness. To construct or insure natural immunity, or, this lacking, to construct or insure acquired immunity constitutes osteopathy's great contribution to human well-being.

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Osteopathic Treatment of the Common Cold*
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The common cold is defined by Kerr as, "An acute disorder presenting its most obvious symptoms in the nasal passages, occurring most frequently in the fall and early spring in temperate climates and attacking great numbers of the population almost simultaneously."

Regarding statistical frequency, it is estimated, as a result of careful investigation by many observers, that adults in business and professional life average three colds each year with measurable loss in efficiency as well as actual loss of time. The common cold creates one of the serious problems among large employers of labor. The common cold, with its many possible complications, constitutes a real problem in economics. Colds among children are equally serious and frequently serve as the initial factor in the onset of many of the diseases of childhood.

The tendency to seasonal epidemics has long been recognized. In the fall, when people begin to live more indoors, there is a marked increase in the number of colds. In the middle of the winter with severe weather conditions, and possibly associated with dietary irregularities of the holiday season, there is another marked increase in incidence. In the early spring, with the many sudden and marked changes in the weather and with the opportunity for exposure and wetting of feet, the chart line of incidence again rises sharply.

OSTEOPATHIC TREATMENT OF THE COMMON COLD—BECKER

Journal A.O.A. November, 1937

The causative factors of the common cold may well be divided into two classes, primary and contributory. The contributing factors in etiology are numerous and varied. This fact has led to great confusion and has done much to make it difficult to arrive at definite and valuable conclusions in the field of sound prophylaxis and efficient treatment.

It is wise, at this juncture, to remember the highly vascular erectile tissues which are found as covering for the turbinate bones. The function of these tissues is to warm and humidify the inspired air in passage. Improperly prepared air is irritating and injurious to the mucous membrane of the trachea and bronchial tree and to the delicate tissues of the lungs. The blood supply and consequently the turgescence of these erectile tissues is under the control of the autonomic nervous system. The vasodilator nerves come from the parasympathetic system with the seventh cranial nerve and by way of the sphenopalatine ganglion. The vasoconstrictor nerves come from the sympathetics. The preganglionic origin of the latter is in the upper thoracic segments of the spinal cord and these fibers run to the superior cervical ganglion. From the superior cervical ganglion, postganglionic fibers are distributed to the mucous membranes of the nose and throat as well as to other structures of the head, face, and neck.

The primary etiologic factor in the common cold is the loss of physiological and anatomical integrity resulting in vasomotor imbalance and lack of ability instantly and efficiently to make adaptive changes necessitated by environmental requirements. This loss of physiological and anatomical integrity is due to osteopathic lesion pathology in the upper thoracic and upper cervical spine, which lesion pathology impairs functional capacity of the autonomic nervous system and produces consequent vasomotor instability and incapacity. It is a fact of great clinical interest that there is a very intimate physiological relation between the vasomotor innervation of the nasal mucous membrane and the vasomotor nerve control of the circulation in the skin of the entire body.

It will be possible to mention only a few of the contributory causative factors in this brief survey. The somewhat general conception of a cold is that it is an infectious disease and that it is highly contagious as the result of its being passed from one individual to another by intimate contact and by droplet infection. While this may well be true in some cases, there is much evidence that this is true only in the occasional case rather than being of common occurrence. Many research investigators disclose the fact that there is a basal flora of the nasal mucous membranes of normal and well individuals in which both pathogenic and nonpathogenic organisms are found, and that included among these organisms are various types of staphylococci, streptococci and pneumococci, as well as many others. More recent researches have shown that there is also a filtrable virus present in the nose and throat more or less constantly throughout the year. It is finally beginning to be appreciated, however, that these visible organisms and filter passing viruses are not the true primary "cause of colds, but that they act as secondary invaders in the production of such complications as sinusitis, otitis media, pharyngitis, tonsillitis, laryngitis, tracheobronchitis and bronchopneumonia.

Another contributing causative factor of great importance is lack of adequate humidity in artificially heated homes, offices, and places of business. Such dehydrated air will absorb moisture where it finds it and thus dries out the mucous membranes of the nose, throat, and bronchi, leaving them irritable and in a condition of lowered resistance, thereby opening the way to secondary infection. Organisms do not thrive in normal tissues.

Modern air conditioning is apparently bringing an added causative factor into play in the problem of adaptation to environmental changes.

It is the common experience of many who work in air-conditioned stores or offices that the sudden change to outside air of marked difference in temperature leads to the onset of colds.

Anything that will cause definite lowering of general resistance may well be included as an etiological factor. Prominent among such causes are fatigue, overeating with its attendant toxic phenomena, poor elimination, excessive worry and stress, and other debilitating influences.

Pathology and symptomatology may well be discussed together because the one explains the other. Again, quoting Kerr: At the onset the nasal mucous membranes are drier than usual, and there is a sensation of irritation in the upper air passages. There may be headache and malaise. The subject complains of a general sensation of coldness or chilliness, the skin is cold and blanched and 'goose flesh' appears readily on exposure. The dryness of the nose gives way in a few hours to a copious secretion of irritating, watery discharge, accompanied by paroxysms of sneezing. At this stage, the mucous membrane of the nose, especially on the turbinates, is swollen and injected . . . for the first 24 and 48 hours fever rarely occurs, in uncomplicated cases . . . . After two or three days the irritating secretions become thicker and more cloudy because of the exfoliation of cells from the injured mucous membrane . . . . When recovery takes place, the general sensations of chilliness and lack of perspiration associated with a constriction of the peripheral vascular system give way to feelings of warmth and returning moisture to the skin. . . . The lack of lasting protection against subsequent attacks of the disorder is characteristic and unique.

I think the symptoms of a cold are sufficiently familiar to all and that we can afford to be brief in this phase of the discussion.

We are now prepared to discuss treatment in the light of our present knowledge. It will be well to subdivide our discussion and to consider the matter of treatment under three headings, as follows: Specific treatment, Adjunctive treatment, Prophylactic treatment.

The specific treatment of the common cold of primary importance is osteopathic corrective manipulative treatment. To be of greatest value, such treatment should be instituted early, that is, in the first 12 to 24 hours following the onset of initial symptoms.
November, 1937  
Volume 37

OSTEOPATHIC TREATMENT OF THE COMMON COLD—BECKER

Careful and painstaking examination should be made of the cervical and upper thoracic spine and associated upper ribs to detect the presence of lesions both of the skeletal structures and of the soft tissues. All such lesions should be carefully evaluated and normalized. The ribs should be raised and the intercostal muscles thoroughly relaxed.

A careful examination should be made of the upper cervical and occipitoatlantal structures. It is important to free the temporomandibular articulations by springing the jaw, to be followed by gentle but insistent freeing of the anterior cervical muscles and fasciae. The clavicles should be raised and carefully articulated at both sternal and acromial ends. Such treatment restores vasmotor tonicity to the mucous membranes of the nasal cavity and paranasal sinuses and favors venous and lymphatic drainage from the head and neck. The tissues at points of emergence of the fifth nerve on the face (supra and infraorbital and mental foramina and in the substance of the temporal and masseter muscles) should be thoroughly relaxed for reflex toxic effects and for the relief of incidental discomfort.

Thorough relaxation and normalization of the lower thoracic spine, the thoraco-lumbar junction, and the entire lumbar spine with deep and gently insistent springing of the lower thoracic region promotes elimination and is of profound importance in restoration of vasmotor tonicity to the abdominal and pelvic blood vessels, and in bringing the blood volume into the superficial blood vessels in the skin.

Such indicated osteopathic treatment, if instituted early, will abort a cold in many cases. If the patient comes under treatment after the first 24 hours, the treatment should be repeated daily for at least three days or longer, depending upon the response of the patient and the extent and severity of the involvement.

Adjunctive measures offer much of value. Rest, taken by itself, is a valuable treatment. Economically it may not be possible to put every patient to bed for 24 hours, but long nights in bed and abstaining from all avoidable effort is next best. The following measures are recommended:

Free fluid intake. (Ten full glasses of water during the first twelve hours.)

Light diet. (Composed of foods which leave an alkaline ash, as citrus fruit juices, baked apple, vegetables which are 95 per cent water, watermelons or muskmelons in season, whole milk, baked white potato, etc.)

Hot tub bath on going to bed, keeping the body immersed for ten to fifteen minutes, followed by brisk toweling.

A two-quart enema, for adults, especially where elimination is slowed.

With babies and little children, the membrana tympani should be inspected daily for any evidence of otitis media.

Osteopathic lymphatic pumping treatment to activate lymphatic circulation and to relieve stasis and congestion.

Hot mustard foot bath. (This acts as a revulsive agent and tends to relieve congestion in the head.)

DONTs TO BE OBSERVED IN THE TREATMENT OF Colds

Don't take a physic. There is no better way to lower general resistance.

Don't take the chlorine treatment. It has not proved to be the effective agent the early enthusiasts anticipated.

Don't depend upon vaccines. Kerr¹ says, "There is nothing specific in their action."

Don't use sprays or other applications in the nose. Carter² says, "Sprays and local applications have little or no curative value and there is no internal medication that can be relied upon to cure or even limit the duration of a bad cold once it is fully developed. As regards sprays . . . regardless of the medicament therein contained, they spread infection into the sinuses, the trachea, and bronchii." He further says in the same article, "So far as known there is no drug or medication of any kind that will cure a cold."

Don't forcibly blow the nose at the same time stopping up the nares with a handkerchief or tissues. There is such a thing as handkerchief deafness. If you must blow your nose, blow gently and leave the nostrils freely open.

PROPHYLAXIS

Osteopathic manipulative treatment to maintain normal blood supply to the upper respiratory tract. (Such treatment increases local resistance against secondary infection and improves the trophy of the tissues. One cold does not protect against succeeding colds, but rather seems to predispose to succeeding ones.)

Maintenance of normal relative humidity in artificially heated rooms. (Many people labor under the mistaken impression that by having fresh air coming into the house through windows and ventilators, they will increase the humidity of heated rooms. This is not so. There is only one way to restore moisture to heated air and that is by re-evaporating water into the air. Relative humidity should be 50 to 55 per cent. In many homes it is only 15 to 25 per cent. The only moisture in many of these homes is the steam from the tea kettle and evaporations from the bodies of persons in the home.)

Moderate exercise in the open air.

Avoidance of excesses in eating, exercise, or other activities.

Adapted sleep in well-ventilated rooms. (The only bad night air is last night's air.)

Adequate water intake. (At least five full glasses a day independent of fluid taken at meals.)

Avoidance of dressing too warmly as well as wearing insufficient clothing.

Relaxation between periods of stress and tension.

Activation of skin by daily rough toweling.

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