was performed on Feb. 14th, 1896. The abdomen was r
opened by an incision through the substance of the left
same condition and was removed. It also burst and
fcetid pus into the sponges placed in the pelvis. After the
 discharged similar foetid pus. As contamination of
with 1 in 10,000 sublimate solution, and carefully cleansed,
afterwards three ounces of blood were drawn off through the
points. The patient bore the operation well. An hour
afterwards three ounces of blood were drawn off from
the tubes, but after that nothing of consequence came away.
Next morning she was apparently going on well, but twenty-
four hours after the operation she suddenly collapsed, with
death. Two drachms of an almost colourless fluid were
shrunken, and there was every appearance of impending
operation she suddenly collapsed, with

The collapse on the following day seems to have been due
to loss of vaso-motor influence following on the abdominal
the vessels of her own abdominal viscera. The saline injec-
tion has been resorted to rather
injection of saline solution, which ha(

The injection of saline solution has been resorted to rather
case 2 — A woman was admitted with a large collection of
injection was made, and recovery followed. The patient
began to lose ground. Amputation
high in the thigh was performed, when she nearly died on
the table; but injection of the saline solution, which had been
got ready in anticipation, brought her round, and she
fully recovered.
case 3 — A man aged fifty years had his hand caught in
machinery and was carried five times round a revolving shaft.
was admitted with fracture of several ribs on the left side,
arm, and dislocations of the sternum and clavicle, with
ribs on the right side, so that the right side of the
chest sank in with each inspiration. There was ex-
tensive subcutaneous emphysema on the right side, and the
whole arm was subjected to much further movement through the humerus. There was extreme pallor and
depression, but the pulse was fairly good, so we
vented to amputate; but we had saline solution ready,
and it was injected forty times into the open end of one of the veins, with instant good effect.

It is worth noting that the loss of blood at the operation
was excessive, and did not continue long afterwards.

The respiratory movements have wide-reaching effects.
Not only do they lead to the flow of air to and from the lungs,
but they profoundly influence the circulation of the blood and
lymph; they also affect the functions of the abdominal
and pelvic viscera by rhythmically compressing and dis-
locating them. Now, these movements are liable to constant
modification in the physiological acts of talking, shouting,
singing, laughing, crying, sighing, and yawning (as also in
the occasional and semi-pathological acts of sneezing,
coughing, vomiting, and hiccuping), and it therefore
follows that these acts are more far-reaching in their effects
than would at first sight appear, and hence are worthy of
our careful study. This will the more readily be granted
when it is added that they affect the body, not only by
modifying the respiratory movements and thus producing the
effects already mentioned, but by influencing the expenditure
of a considerable amount of neuro-muscular energy, and by
inducing definite psychic phenomena which themselves have
their physical accompaniments. In brief, any one of these
acts — e.g., singing — causes (a) a modification in the circula-
tion of blood and lymph; (b) an alteration in the functions
of the abdominal and pelvic viscera; and further leads to
(c) a considerable discharge of nervous and muscular energy;
and to (d) numerous changes (muscular, glandular, and other)
throughout the body in consequence of the attendant
psychic changes.

Seeing, then, how far-reaching are the effects of these
several acts, and remembering how large a part they play in
normal life, we may safely conclude that they influence
the functions of the body both physiologically and

THE THERAPEUTICAL ASPECTS OF TALK-
NING, SHOUTING, SINGING, LAUGHING,
CRYING, SIGHING, AND YAWNING.

By Harry Campbell, M.D., F.R.C.P. Lond.,
Physician, North-West London Hospital.

At the time of writing this paper, I had but recently had
charge of the case of a man who was brought into the
hospital suffering from a very severe injury of the chest
and left arm, due to an accident which occurred while he
was working in a cotton mill. The man was brought into
the hospital in a state of shock, with a pulse rate of 160
and a blood pressure of 60. The left arm was badly
injured, and the left side of the chest was extensively
injured. The man was taken to the operating room, where
an operation was performed. The operation consisted of
removing a large quantity of clotted blood from the
chest, and repairing a large tear in the lung. The man
survived the operation, and made a good recovery.

The physical effects of thought are more pronounced in
writing than in speaking. The cortical nerve centres
are more active in writing than in speaking, and

this respect is in a measure proportional to the gesture accompanying it. Few things are more calculated to

IN THE LANCET, April 4th, 1891, p. 796.

3 A famous quack extracts his patient's teeth to the bare of trumpets and the bones of the big drum.

brake on, to rouse it from lethargy, than "animated" conversation. In talking, as in laughing, shouting, singing, in fact, during the singing itself. When expiration is prolonged, the exit of air being checked partly by obstruction in the glottis and partly, perhaps, by the action of the inspiratory muscles. The actual amount of work done in talking is far more than might at first sight be supposed, but is more than is generally supposed. The ammonium of the exercise takes place during the succeeding deep inspiration. The amount of talking done by barristers, politicians, and others enables them to dispense largely with exercise as others enable them to dispense largely with exercise as they know themselves. Talking involves a considerable expenditure of energy is frequently the flow of blood to and from the right heart is considerably impeded, as shown by the rise in blood-pressure within the cranium; the voluminous

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4 The splendid chest-development of public singers is, of course, not entirely attributable to the constant exercise of the voice, since no one can attain a high excellence without having a good chest development in the first instance. It must also be observed that every singer who attains to fame is careful to lead a healthy life.
How pronounced are the dynamic effects induced by completely abandoning oneself to a fit of crying is shown by the phenomenon. The tendency of women to cry should, of course, be kept within proper bounds, but certainly harm may result from its complete suppression, as Tennyson recognizes in the lines: "She dies, or she will die.

It is said that women who are able to find relief in tears keep their youth longer than those who repress them. The internal cankering action like a worm in the bud of pent-up emotion is not only a beautiful poetic conceit, but a profound physiological truth. In short, strong emotion should receive expression—"give sorrow words."

Sighing.—"A sigh is a deep thoracic inspiration, with retraction of the abdomen." The retraction of the abdominal muscles leads to a compression of the splanchnic veins. This compression is probably increased by slight descent of the diaphragm. The blood is thus pressed out of those veins into the right heart, and the flow into this chamber is further favoured by the deep inspiration which also opens the chest through the intercostal muscles. The blood is, therefore, pointed out that the blood accumulates in the splanchnic veins in syncope, and that "a deep sigh is the first obvious sign of improvement." That the act of sighing in syncope has the effect maintained is shown by the observation of Stephen Hales. He noticed that the splanchnic veins in horses rises considerably on deep sighing and that the same effect is produced in dogs by firmly pressing the abdomen. The sigh of syncope is comparatively rare. A mere "breathless attention" when the attention, i.e., is dilated. The opening of the mouth is effected by a strong tonic contraction of the muscle system. This continues and indeed reaches its climax during the expiratory portion of the act, the mouth being widely opened and the nares raised high above the head. She could not "walk a line" at all, nor could she "walk a line" at all, and any effort to hold on or to grasp anything evidently increased the difficulty of the process, which seemed to indicate that visual effort was—in part at least—the cause of the deficiency. The visual disturbance appeared to be difficult to define as it tended in no very special direction but resulted, somehow, in confusion (the patient had never noticed that she saw objects double until, by the usual methods, it was pointed out to her). It was manifest, on examination, that there was a nearly complete paralysis of the external rectus muscle of the right eye, this muscle being unable to turn the eye outwards further than the middle line, there being, however, no convergent strabismus at this date. Diplopia was, of course, homonymous and was present even when an object was held 15" to the left of the middle line at 10 ft. distance. There was no loss of visual acuteness, and no error of refraction nor change in any degree of the fundus of either eye, and there was no evidence of internal ophthalmoplegia. The fields were normal both for colour and white light. The knee and other reflexes were examined, but no evidence of nervous affection was found in any part. Examination of the general organs was entirely negative, and inquiry failed to elicit evidence of any functional incapacity or disorder; indeed, there was evidence that the patient was perfectly healthy. All the signs of an abdominal affection were absent, and there was no mention of any dyscrasia, and the use for a prolonged period recommended of a mixture containing the iodide and bromide of potassium with nux vomica. As regards the course of the disease it was found to be moderately rapid, for on Nov. 14th the paralysis was complete, there being followed by a long-drawn out expiration with probably closed glottis and a groan.

THE OCULAR MUSCLES.

By L. Buchanan, M.B. Glasc.,
Pathologist and Clinical Assistant, Glasgow Eye Infirmary.

The patient who was the subject of this unusual train of symptoms came to me first on Oct. 31st, 1894, complaining of headache, giddiness, and difficulty of vision, and was accompanied by her sister whose support was necessary to enable her to walk at all correctly. The history of her condition was that headache was the first evidence of any disorder and appeared just thirteen days before, being closely followed by giddiness, and that difficulty of vision was the last symptom to appear. The past history of the patient was practically without blemish, she not having had at any time either a protracted illness or an accident.

There was no evidence of gout, rheumatism, syphilis tuberculosis, or, indeed, of any dyscrasia, and the patient was not at any time either neurotic or hysterical. There was no history of any injury at all likely to give rise to such symptoms as the patient complained of. The family history of the patient was of the very soundest description, no bodily habit or tendency in any way prejudicial being transmitted, so far as could be found. There had not been any nervous disease in the family. Then first seen, the patient, who was about thirty years of age, was, apart from the aforementioned symptoms, in perfect health, neither anemic nor plethoric, although well nourished; and further she was of sober manner and quiet demeanour. She related that her health had always been good, and that her tendency to one side more than the other, and that they generally began with pain in the eyes. They were, further, distinctly worse after using the eyes for a time, ceasing at night, but often being present in waking in the morning more especially if she had been working at her employment—i.e., dressmaking—the previous night. The vertigo was of a general nature, and there was no inclination to fall to one side more than the other. The patient could stand well while the eyes were open, but had difficulty in walking with the hands raised high above the head. She could not "walk a line" at all well, and any effort to hold on or to grasp anything evidently increased the difficulty of the process, which seemed to indicate that visual effort was—in part at least—the cause of the deficiency. The visual disturbance appeared to be difficult to define as it tended in no very special direction but resulted, somehow, in confusion (the patient had never noticed that she saw objects double until, by the usual methods, it was pointed out to her). It was manifest, on examination, that there was a nearly complete paralysis of the external rectus muscle of the right eye, this muscle being unable to turn the eye outwards further than the middle line, there being, however, no convergent strabismus at this date. Diplopia was, of course, homonymous and was present even when an object was held 15" to the left of the middle line at 10 ft. distance. There was no loss of visual acuteness, and no error of refraction nor change in any degree of the fundus of either eye, and there was no evidence of internal ophthalmoplegia. The fields were normal both for colour and white light. The knee and other reflexes were examined, but no evidence of nervous affection was found in any part. Examination of the general organs was entirely negative, and inquiry failed to elicit evidence of any functional incapacity or disorder; indeed, there was evidence that the patient was perfectly healthy. All the signs of an abdominal affection were absent, and there was no mention of any dyscrasia, and the use for a prolonged period recommended of a mixture containing the iodide and bromide of potassium with nux vomica.