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HOW TO VACCINATE.

*"Cito, Tute, et Jucunde."**

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BY HENRY A. MARTIN, M.D.

THE operation of vaccination is not of such gravity as that of amputation at the hip-joint, but the modes of performing it are fully as numerous, and I am inclined to think that the aggregate of terror and pain to the patient, and disappointment to the surgeon, are annually fully as great from the improper performance of the slight as of the severe operation, while a great many who, I doubt not, *think* that they could execute the latter with all the brilliancy of a Larrey, do the former quite awkwardly and unsuccessfully. The following is warmly recommended as the most expeditious, economical, surest and least painful method of performing this little operation, so trifling, and yet so vastly important:—Make, with the point of a clean lancet, some groups of transverse scratches, or, rather, very delicate incisions. The number of these will vary according as few or many vesicles are considered necessary. The length of the individual scratches will determine, of course, the size of the resulting vesicle, and, to some degree, the soreness of the arm.

The incisions should be so slight as barely to result in the faintest possible exudation of blood, and *that* only after the lapse of a second or two; but, if a greater flow of blood *does* ensue, the operation will be no less certain in its results, although a little neatness will have been needlessly sacrificed. To that group of scratches from which blood first exudes, the charged point of a quill is to be applied; the lymph thereon will be immediately absorbed; the par-

* The opinions expressed in this communication, whatever may be thought to be their value, have not been formed precipitately, but are the result of long-continued, extensive, and, perhaps I may be permitted to say, not unimproved experience. I have fully and faithfully tried every method of vaccinating, with the exception of a few absurdities, such as the plan of removing a patch of epidermis by blistering, and applying the virus to the exposed rete mucosum, which belong to the infancy of the subject, and have, of course, been long ago universally consigned to oblivion.

ticle of blood with the lymph in solution is to be then taken up on the point of the quill, applied to, smeared over, and pressed into the other scratches, in succession, two or three times. The usual precautions as to allowing the blood to dry on the scratches, &c., are unnecessary; indeed, as a matter of neatness, I usually wipe it away with the moist corner of a napkin or rag, before leaving the patient. The advantages of this method of vaccination are, that, so far from being *painful*, it is, if properly performed, absolutely pleasurable, producing a slightly tickling sensation. It is very *certain*, on account of the great number of points at which the virus is brought into contact with the abraded cutis, and it can be performed with the utmost celerity, a consideration sometimes of no small importance. It may serve to illustrate this last point to state that I have made sixty-three re-vaccinations of three groups of scratches each; dictated a record of the age of the patient, number and date of previous vaccinations and appearance of scar, all within forty-two minutes, and this including several short interruptions. I never vaccinate *now* in any other way; never use more than one quill for each vaccination; make at least four groups of scratches, and not only do not fail once in seventy cases, but hardly ever am disappointed in producing every vesicle which I desire.

When the dissolved scab or fluid lymph is employed, it is to be applied on the point of the lancet, precisely as the dissolved lymph on the point of the quill. It is earnestly recommended that quills be used as soon as practicable after their being charged, and during the time between their being taken and their use that they be kept from the light, and, above all things, in a cool, dry place. I am sure that a warm, moist waistcoat pocket has frustrated the hopes of many a vaccinator. Charged quills *may* be successfully used after being kept months in a dry atmosphere at 40° , and as certainly *may* be *constantly* rendered useless in a moist one of 80° . It is also very earnestly recommended that quills be never charged, except from a *perfect* vesicle, before the expiration of the eighth day. Vaccination with matter taken from a good "arm" after that time *may* produce the perfect disease, but it is apt to fail in doing so, and very likely to result in one of those imperfect forms which are not at all, or only partially protective, and which have thrown a discredit on vaccination which should only have fallen on those who have ignorantly or carelessly neglected the express and frequently-repeated directions of its immortal discoverer.

The trifling points which might be considered original in the method above suggested are hardly worth mention, and no such claim is made for them. Vaccinating on slight scratches or incisions was, I believe, first suggested, in 1802, by Bryce, in his excellent work on the Cowpox, and an apology may perhaps seem to be demanded for saying anything at all on a subject which was so long ago written upon so well, but letters almost daily re-

ceived by me from every part of the country, requesting information, convince me that vaccination is one of those numerous subjects about which everybody is supposed to know everything, but in regard to which *really* a good many still need instruction.

Roxbury, March 2d, 1860.

RESEARCHES UPON THE ERECTILE ORGANS OF THE FEMALE.

[Translated for the Bos. Med. and Surg. Journal, by WM. REED, M.D.—Continued from p. 17.]

IN the other mammiferæ, the erectile formations which I have just shown to be so developed in the human female, are in a rudimentary state or entirely wanting. In the slut, the body of the ovary is well developed and almost equal the size of that gland; but, except, however, that its arteries curl themselves into very perfect spirals, and that an injection of the veins almost completely colors its walls, the uterus presents no vascular mass relatively of sufficient size to make it a true erectile organ. In its highest degree of development, it scarcely corresponds to anything except the rudimentary state of the corpus spongiosum of the uterus of a human foetus at birth. Among the ruminantia it is at the cotyledons only that we observe, during pregnancy, little nuclei of vascular formations, which are, as it were, the diminutives of the corpus spongiosum of the uterus in the woman; these, however, during pregnancy, perform an important part in the formation of the uterine placenta.

There are, in the internal generative system of the human female, no other erectile organs than those the existence of which I have demonstrated. It is entirely without reason that an erectile property has been assigned to the Fallopian tube; its arteries, perhaps, describe curves, and even form circles here and there, but the capillaries and veins are exceedingly minute, though very closely reticulated, and the whole, identical with the cornua of the uterus in mammiferæ, is only a faint imitation of the neighboring erectile formations. I have never, in the most complete injections, seen the Fallopian tube change either in form or volume, or execute any movements; far different in this, as I will now show, are the true erectile organs.

Neither do the walls of the vagina show any more evidence, in their structure, of that which characterizes true erectile organs. Their arteries are not even convoluted, and as to their other vessels, I know not by what strange exaggeration Kobelt, in every other respect so exact, could have seen in the very fine sub-mucous network, the thick vascular bed which he has figured *a little large*, as he himself avows, however; there is nothing in the walls of the vagina which we can consider as erectile, unless it is the plexus of large veins which run along its lateral portions, and the plexus sometimes annular, which surrounds the anterior portion only of