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NORMAL VACCINATION.

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In presenting this paper on Vaccination I must ask you to pardon my digression in places from the order of the programme and to accept my apologies for what, from the nature of the subject, must be largely a

simple refreshing of our memories.

When we come to discuss the question of "Normal Vaccination" however, we find that the literature of a few years ago needs some revision. It was then the inoculation of the human subject with the virus of cowpox, plus any other virus, micro organism or contaminating influence that might happen to be present in the beast or subject from which the lymph was taken, followed by a train of symptoms due to any one or many of these influences. To-day when we speak of "Normal Vaccination" we mean the inoculation of the human subject with the "isolated" virus of cowpox, freed from all contaminating influences, and followed by a definite reaction peculiar to the disease. Under favorable circumstances the inoculation of the virus is followed by a period of incubation during which the patient has no experiences other than those attendant upon scarification. At the conclusion of this period we have the appearance of a papular eruption surrounded by a reddish zone; this papule merges into a vesicle, at first fully distended with a clear fluid. In a short time however the centre becomes depressed, and as we see the fluid in the vesicle assume the more opaque appearance of the pustule we find the umbilication more marked, the centre becomes dry, forms a scab which gradually approaches the periphery, until finally it covers the entire pock. As the eruption is passing through these different stages we find the surrounding parts swollen, indurated and painful; the skin displays a well-marked areola of redness and the surrounding glands become swollen and tender to the touch. On the desquamation of the scab we have at first a dusky red scar, which after some months becomes white and pitted. These local manifestations are accompanied by constitutional symptoms of a more or less regular type depending for their degrees of severity upon the constitutional susceptibility of the patient, and the dose and virulence of the lymph. Ordinarily on the appearance of the eruption there is some slight rise in temperature with