

IMMUNIZATION AGAINST MEASLES

In recent decades the mortality from measles (morbilli) has very greatly decreased in many 'Western' countries, though it is still relatively high in some 'unprivileged' communities, of which the Cape Coloured people are an example. Nevertheless, it still remains a fact that almost everybody suffers an attack of measles, generally in childhood, and the disease leaves behind it a great amount of debility.

No success has yet been obtained in the prevention of measles epidemics, and hopes have naturally been raised by the results of active immunization in other viral diseases, particularly smallpox, yellow fever, and poliomyelitis. Attempts have been made by different workers to produce an attenuated measles virus that could safely be used as a vaccine to induce immunity.

Enders,¹ of Harvard, and his co-workers succeeded in infecting cynomolgus monkeys by injecting human measles virus from early passage on human kidney cells. The monkeys presented a condition resembling mild measles in man, with the development of viraemia and specific antibodies at titres that equalled or exceeded those found in convalescent human measles patients. The same workers elaborated a measles virus (Edmonston strain) adapted to chick embryos, and tested it by injection in susceptible monkeys. In these animals no overt disease or constantly recognizable viraemia was produced, but the specific antibodies appeared, of similar titre to those found in the monkeys inoculated with human measles virus. Subsequently the monkeys that had been inoculated with the chick-adapted virus were found to be immune to human measles virus.

Enders *et al.*¹ then proceeded to test the chick-embryo virus as an immunizing agent in children. It was injected subcutaneously or intradermally in 272 children, both in institutions and at home. In none of them was there any local reaction at the site of injection. In 101 of them, in whom measles antibodies were already present, no clinical or serological response was detected. In the other 171, with no history of measles and no pre-existing antibody, a clinical reaction was noted, manifested by fever in 83 per cent and a modified measles rash in 48 per cent. Koplik spots were detected in 16 per cent of the 111 reactors in whom they were looked for. The rise in temperature usually began on the seventh or eighth day and persisted nearly 3 days. The mean maximum was 102.4°F (*per rectum*) and in 21 per cent the maximum reached or exceeded 103.5° at one reading or more. All the children remained up and about and apparently well, except 10 in whom the fever and malaise were similar to those seen in mild natural measles. There was a noteworthy absence of catarrhal signs in the reactors, catarrhal involvement being minimal except in a few children in contact with unvaccinated controls affected with coryza and cough. Associated with this was an entire absence of bacterial complications such as bronchopneumonia and otitis media.

An important fact is that the condition in the reactors was not found to be communicable. In intimate contact with them there were 143 controls known to be susceptible from their history, confirmed by the absence of serum antibodies, and not a single case of transmission occurred. Repeated attempts were made in 31 of the reactors to recover the virus from the blood and the throat secretions, with negative results throughout.

Of the 171 reactors (in all of whom there had been no pre-existing measles antibodies), 165 (96 per cent) developed antibodies, of a titre comparable to that attained after natural measles. In the 101 initially immune subjects, who did not react to the vaccine, no rise in antibody titre was demonstrated. The actual prophylactic value of the vaccine was shown in an epidemic of virulent measles in an institution. In one ward, where 17 out of 19 unvaccinated controls (initially without antibodies) developed measles, not one of the 18 children who had received the vaccine 7 weeks earlier (at which time they were also without antibodies) contracted the disease.

Similar results have been obtained by other workers, and it is evident that in the chick-adapted measles virus we have an 'acceptable vaccine'.¹ The Lederle Laboratories,² of Pearl River, NY, a biological producing firm, prepared and processed attenuated measles vaccines from chick-adapted virus (Edmonston strain) supplied by Enders. These vaccines were tested on 103 children (of whom 88 were initially non-immune) and subsequently on 24 more children. The results were broadly the same as those obtained by Enders *et al.*

We appear, then, to be on the eve of large-scale production of an attenuated live vaccine against measles. This will at once be useful in preventing measles outbreaks in hospitals and residential institutions for children and will be available for parents (and others *in loco parentis*) who decide that an immediate non-infectious and practically harmless reaction is better for a child — and its contacts — than the discomfort and danger of a future unmodified attack of measles. The vaccine will be far more useful than gamma globulin or convalescent serum, which are only effective if given to the susceptible child during the few days following exposure to measles infection.

Mass immunization of the child community is a problem that will call for careful approach. The general public mistakenly regards measles as a trivial disease; and the fact that some reactors may get what resembles a mild attack of measles may be a stumbling-block. Researchers are at work in the hope of finding a way to minimize the clinical reaction. Moreover, it cannot yet be known how long the immunity induced by the vaccine will last. In the meantime, when the vaccine is available, limited pilot schemes of communal child immunization are to be encouraged, especially in poorer population groups.

1. Enders, J. F. *et al.* (1960): *New Engl. J. Med.*, 263, 153.
2. Karelitz, S. *et al.* (1961): *J. Amer. Med. Assoc.*, 177, 537.

DIE BEHOUDENDE WAARDE VAN 'N SIN VIR HUMOR

Dit is onvermydelik dat 'n mens daaglik blootgestel word aan baie voorvalle en gebeurtenisse van 'n onaangename en onplesierige aard. Sommige van hierdie dinge wat so met 'n mens gebeur — as gevolg van omstandighede buite jou beheer, maar soms wel ook deur jou eie toedoen — is egter nie net onplesierig van aard nie; dikwels is die gebeure self, of die gevolge daarvan, so ernstig dat dit 'n ongunstige neerslag het op ons geestesgesondheid en liggaamlike gesondheid.

Tensy 'n mens dus die nodige geesteskrag het om die onberekenbaarheid van die lewe die hoof te bied, kan klein en minder belangrike gebeurtenisse sulke abnormale afmetinge begin aanneem dat ons ontreddende en ongelukkige mense word. Die belangrike vraag in hierdie verband is dus: waaruit bestaan daardie krag en vermoë wat 'n mens in staat stel om altyd op 'n behoudende en geslaagde manier te reageer op die wisselvallighede van die lewe? En verder: is dit 'n krag of vermoë wat aangekweek en doelbewus beoefen kan word?

Die antwoord op hierdie vrae is gelukkig nie te ongunstig nie. Ons kan sonder twyfel verklaar dat 'n sin vir humor eintlik op 'n gesonde graad van emosionele volwassenheid berus — en dit kan wel nagestreef en aangekweek word, selfs al is dit nie altyd 'n maklike taak nie.

In die werklikheid is emosionele volwassenheid 'n eienskap wat nie te algemeen voorkom nie. Daar kan geen twyfel bestaan aan die feit dat die mens oneindig veel vooruitgang gemaak het wat sy *verstandelike* vooruitgang betref nie. Daarvan getuig al die verbasende tegniese uitvindings van die moderne tyd. Maar die maniere waarop die mens toepassing gevind het vir hierdie uitvindings en ontdekkings — die gevoelloosheid en wreedheid van mens teenoor mens, die voortdurende bedreiging van oorlog en die nimmereindigende gewedywer om bewapening, die misbruik van atoomenergie vir doeleindes van vernietiging in plaas van vir die planmatige bestending van die lewe op 'n meer blywende en beskaafde vlak — die toepassing wat die mens langs die bogenoemde weë gevind het vir die produkte van sy verstandsarbeid, toon vir ons aan in hoe 'n onrusbarende mate daar nog behoefte bestaan aan emosionele volwassenheid.

Die eienskap van emosionele volwassenheid veronderstel eintlik daardie nodige mate van insig en helderheid van oordeel wat noodsaaklik is by suksesvolle aanpassing. En dit is ook hierdie eienskappe — insig en oordeel — wat aan die grond van 'n gesonde sin vir humor lê.

Maar wat word daar alles ingesluit onder die begrip: 'n sin vir humor? In die eerste plaas veronderstel 'n sin vir humor die vermoë om te kan lag, en veral die vermoë om te kan lag vir 'n mens self. Hierdie vermoë om vir jousef te kan lag, is nie iets wat in die ware sin van die woord by 'n kind voorkom nie. Om hierdie rede kan 'n sin vir humor in verband gebring word met emosionele volwassenheid. So baie mense groei op na die liggaam en na die gees, maar hulle word nooit volwasse wat hul emosionele reaksies betref nie. As daar dan iets met hulle gebeur wat onaangenaam is of wat hulle nie aanstaan nie, verloor hulle hul selfbeheer. Hulle word kwaad en voer dan enige van daardie onbesonnenhede uit waaraan mense hulle skuldig maak in oomblikke van woede. Dit skort by hulle aan 'n volwasse reaksiepatroon omdat dit by hulle skort aan 'n sin vir humor.

Iemand met 'n sin vir humor reageer dus nie soos 'n kind nie. Hy sien homself teen die agtergrond van die groter lewe en nie as die middelpunt van die lewe nie. Hy is dus nie oor-belangrik en opgeblase nie. Hy weet wel deeglik wat sy vermoëns is, maar hy is ook bewus van sy tekortkominge. Hy is dus nie die slagoffer van blinde emosies wat opwel uit gevoelens van mislukking en dwarsboming nie. Hy staan aan die roer van sy eie skip. Hy kan die spanning van enige drukte-toestand breek omdat hy daarvoor kan lag. Want die vermoë om te lag veronderstel nie net die moontlikheid van vermaak nie: Dit veronderstel die insigvolle beleving van 'n volwasse gees.

Dit bring ons dan by die tweede grondslag van 'n sin vir humor — die besit van 'n ewewigtige gees. Een van die groot gevare waaraan elke mens elke dag blootgestel is, is die neiging om dogmaties te word — die neiging om 'n mens se denke en oordele volgens 'n vasgelegde patroon te laat verloop, ooreenkomstig oordele wat eintlik vooroordele is.

Om 'n beweeglike gees te hê, wat die waarborg kan wees teen verstarring van 'n mens se lewe en ook die waarborg teen die vervelige, die onplesierige, en die swaartwigtige in die lewe, is dit nodig om 'n sin vir die betreklike van die lewe te hê. En 'n sin vir die betreklike van die lewe beteken dat ons in die eerste en laaste instansie ons eie plek as mens in die breër samelewing kan bepaal; dat ons nie oorloop van ons eie waardigheid nie en dat ons ook nie mank gaan aan gebrek aan eiewaarde nie — dat ons met 'n glimlag die grense van ons eie vermoëns ken en erken: dat ons 'n behoudende sin vir humor het.