

parently reach their full structural development early in life (this is more particularly true of the ovum) this does not mean that they remain absolutely inert for long years. For continued existence they, like all the other cells of the body, need nourishment, and that nourishment they, like the other cells, must obtain from the circulating blood. Hence diffusible substances circulating in the blood, or present in the lymph which bathes these cells, may pass into and be absorbed by the germ cells as by other body cells, and so it follows that disturbances of a chemical order affecting the tissues in general may also affect the germ cells.

Now we have positive evidence that this is the case. It may be familiar to you that workers in lead, and more especially in some of the more soluble salts of lead, painters using white lead, workers in potteries, more especially those having to deal with the glazing of porcelain and earthenware, are peculiarly liable to suffer from what is known as lead colic, lead palsy, saturnine poisoning or plumbism, the salts of lead absorbed into the system acting especially on the nervous system and certain of the glandular organs. So serious is the condition that, as you will have observed, for now several years past there has been a serious agitation about this matter in the English "Potteries." For long years also it has been observed that there is a terrible mortality among the children of such workers—where these are not still-born they tend to be puny and poorly developed, and when they do not easily succumb to one or other childish ailment they are liable to show nervous disturbances and various forms of mental instability and derangement. When it is the mother who suffers from plumbism, it is difficult to make sure of the exact cause of this weakness of the children. It may be urged that the lead salts absorbed by the maternal organism have diffused through the placenta during uterine life, and so, entering the foetal circulation, have poisoned the offspring and led to its premature death or imperfect development.

A study of cases in which the father alone has suffered from lead poisoning shows that this is far from being everything. Constantin Paul investigated a series of such cases, and his results are very remarkable.

Studying the history of 32 pregnancies in which the father suffered from lead poisoning (the mother was free from that condition), he obtained the following statistics:—

12 resulted in the death of the infants before term,

20 children born alive, and of these

8 died during the first year,