are apparently exceedingly sensitive to the presence or secretions of microorganisms, for they come out of the blood capillaries shortly after the bacteria have invaded the neighboring tissues. Their mode of attack is frontal; they literally fall upon the intruders and, swallowing them bodily, digest them, so rendering them powerless for any further activity.

If the bacteria do not prove very poisonous, the phagocytes are not killed; if however, the poison (toxin) of the bacteria is a virulent one, the leucocytes are killed and their dead bodies constitute "pus," as surgeons call it, or "matter" as other people call it. In suitable preparations for the microscope it is possible to see large numbers of microbes in a semi-dissolved state inside the white cells.

One kind of leucocyte paralyzes or kills the microbes without engulfing them.

Of course leucocytes will do their work well or ill according as they are themselves in good or bad health, vigorous or enfeebled. All exhilarating conditions tend to invigorate the leucocytes, all depressing conditions to enfeeble them.

The leucocytes are, then, the second l of defence—the rank and file of the defending army. When once the outermost physical barriers have been penetrated by the enemy, these living agents take up the defence by active, offensive measures.

The third mode of defence which we possess is the p of our body-cells to manufacture certain chemical substances ving the property of neutralizing the poisons of the bacteria which have invaded us. All the body-cells cooperate more or less vigorously in this the most subtle method of dealing with the soluble toxins manufactured by the bacteria now multiplying in the blood and body-fluids of the unwilling host.

These soluble toxins affect, stimulate, the tissues of the victim, which, being living cells, react, and the expression of their reaction is the outpouring of a chemical something, appropriately called an antitoxin which, uniting with the bacterial toxin, neutralizes it and prevents it exercising its injurious powers. The infected organism thus works out its own chemical salvation by a vital, but no less chemical, response to the poison of the infection. To do this efficiently is to recover, to fail to do so is to remain infected, to be injured chemically, possibly to die.

This production of antitoxin on the part of the infected body is a vital, protective mechanism of a chemical order; it is the chemical reply to a chemical insult. If the attacked body-cells can provide sufficient of this antitoxin to neutralize *all* the toxin made by the bacteria, the individual will not merely get well, but will remain immune from that particular infection for a long time, because, when once