

Advancement in human achievements often brought about efficiency and expediency, but many times not without the “side effects” of additional uncovered problems. For instance, biological research into immunology in the twentieth century revolutionized our understanding of the natural defenses of the human body. With the development of penicillin in the early twentieth century, the floodgates of antibacterial research opened and many antibiotics were discovered. Soon, soldiers on battlefields were no longer dying from infections with open wounds, and even household diseases such as pneumonia were being effectively combated. At the height of the “antibiotics craze,” doctors were handing out these wonder pills by the handful, prescribing these drugs for anything from severe bronchitis to skin infections. Soon, however, doctors were noticing an unexpected result – many patients were starting to develop a curious case of immunity to the administered drugs, as if the bacteria had evolved to be no longer sensitive to the treatment. Antibiotic resistance quickly garnered attention, as patients who had “overdosed” on antibiotics earlier were now, ironically, more susceptible to succumbing to bacterial infections. It is true that progress in biological research brought about antibiotics, which significantly lowered the mortality rates of patients suffering under bacterial infections, but at the same time, it also introduced the new immunology problem of antibiotics resistance, which was a barrier to treatment that doctors now had to overcome. In this instance, complications came hand-in-hand with expediency caused by progress and advancement.

However, on another pharmaceutical front, we see that the statement is not necessarily always true. Polio vaccine was a pioneer vaccine developed to be administered orally, which was met with great critical success. With the development of the vaccine, millions of children were spared of the crippling ailment, allowing these young individuals to grow up to become healthy adults and thrive in society. Remarkably, the oral polio vaccine was quickly demonstrated to be safe, effective, and a departure from prototype vaccines tested in the past. There were no side effects to speak of (some earlier vaccines caused significant unwanted symptoms and sometimes triggered a full-blown attack on the patient’s immune system), and the polio vaccine was widely regarded as a “miracle drug” to millions and millions of children. In this instance, we see an example of how technological progress caused effective treatment without coupling with side effects or complications.

In many instances, human progress is a work in progress. Each day, advancements are being made in many fields, and professionals are working to better our society in empowerment through knowledge. However, we need to be cognizant of the fact that just like any adventure into uncharted territory, we do not necessarily always know what lies beyond the next bend in the road. Our books and experiences serve as our valuable guides, but there will almost certainly be unexpected occurrences and random happenstances that we will have to surmount and triumph over. In this case, it then turns into a test of our human potential and wisdom. Certainly, progress often simplifies our lives by introducing new methods of doing things, but sometimes it will also complicate our lives with newly-discovered problems. It is important to recognize, then, that additional negative results merely serve as an additional challenge to address, and it is not so much of a “complication” – but rather, an “opportunity.” By turning the undesirable fruits of progress into positive results, progress will always serve to simplify, rather than to complicate.