

# STITCH IN TIME SAVES NINE, SURGEONS WARN

Modern Skill Makes Removal of Appendix Safe and Simple Operation if the Patient Doesn't Delay Seeing the Doctor

By Joseph U. Dugan

MILLIONS of persons who visited A Century of Progress last summer showed an avid interest in those exhibits in the Hall of Science depicting the progress of man's fight against disease. The visual display of movies, pictures, charts and wax figures, revealing with clinical starkness the ailments of the human body and the modern methods of curing them, aroused intense curiosity. The Fair visitors were impressed by the obvious lesson of the exhibits: that medical science today stresses prevention rather than cure.

The illustrations on this page are pen drawings of wax models showing the successive steps of the operation for removal of the appendix. The wax models were made by Dr. Arthur H. Bulbulian for a World's Fair exhibit.

Appendicitis may be cited as a disease, capable of killing its victim within a few days, which has been robbed of its terror by medical science. Yet, in spite of the fact that this disease has been conquered, scores of persons who become afflicted die from it because of delay in starting proper treatment.

The disease is an inflammation of that part of the intestine known as the appendix. Appendicitis is of bacterial origin. The mechanism of infection is obscure, excepting that the appendix is a vestigial organ and probably has a low resistance to the bacteria which constantly flow over its inner surface. The gravity of the ailment arises from the fact that the infection may easily cause perforation of the appendix and a spread of the inflammation to the peritoneum, the serous membrane lining of the abdominal cavity. This often causes the condition known as peritonitis, which frequently causes death.

The symptoms of appendicitis usually are characterized by pains, low on the right side of the abdomen. These pains vary in intensity. They may subside partly, or completely. The dangerous stage of the disease may be reached quickly, or not at all. It is impossible, however, for a physician to tell, in most cases, whether an attack will subside or proceed with great rapidity to a critical stage. That is why immediate removal of an inflamed appendix usually is considered the wisest course. The risk of an immediate operation is negligible, but the success of a delayed operation is proved by medical records to be dubious.

The layman too often considers abdominal pain to be merely a "stomach-ache." If such pain is caused by an inflamed appendix, the administration of a purgative is very dangerous. Laxatives hasten the spread of infection and aggravate the condition. Abdominal pain which continues for twelve hours is quite likely to be inflammatory in nature and requires immediate investigation by a physician.

Records show the mortality rate for cases operated on for peritonitis to be approximately 25 per cent. The mortality rate for cases in which the disease has spread to the peritoneum is about 15 per cent. There have been almost no fatalities in cases operated on within twelve to twenty-four hours from the start of an attack.

Dr. John B. Murphy of the Northwestern university medical school was the first surgeon to operate for appendicitis as such. In the early nineties peritonitis following appendicitis was known as "bowel complaint." A causative diagnosis for this condition was not made until a serious or fatal complication was present.

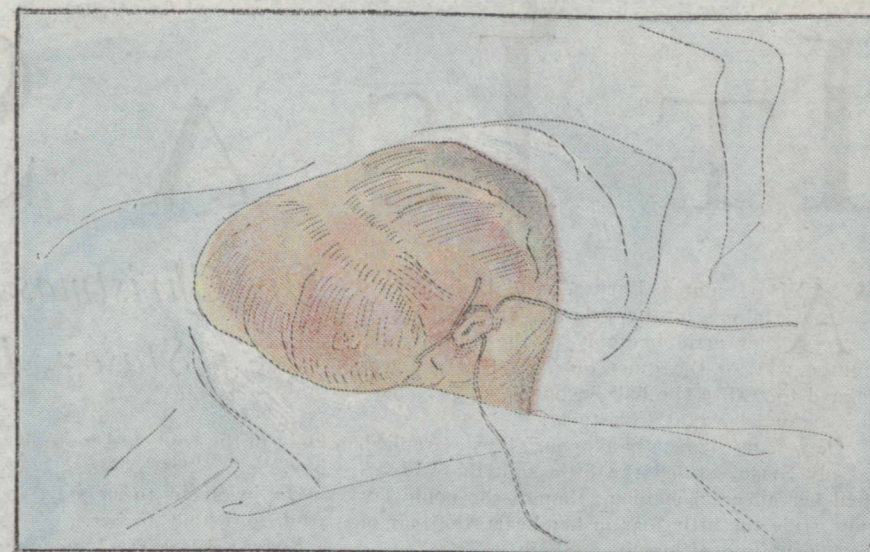
The accompanying pictures of the appendectomy illustrate the operation for simple removal of the appendix. Where the condition is complicated by infection of the peritoneum, the surgeon must leave the wound open to allow for drainage, and the recovery of the patient is delayed.

There are twelve principal steps in performing an appendectomy. The original incision is made down to the muscle, directly over the location of the appendix in the abdomen. The external oblique layer of muscle is split in the direction of its fibers. The internal oblique muscle then is split. Sterile towels are clipped to the edges of the wound to protect it from infection. The thin lining of the abdominal cavity is brought into view. Now the cecum, or first part of the large bowel, from which the appendix springs, is brought into the wound. The blood supply is tied off, and the appendix is cut away between two clamps. The stump of the appendix is inverted, and a purse string suture is drawn taut about it and tied. As the tying is completed a smooth surface is left which precludes the formation of adhesions. The bowel is dropped back and the lining of the abdominal cavity is closed. The muscle fibers again are brought together. The outer part of the wound is brought together and closed.

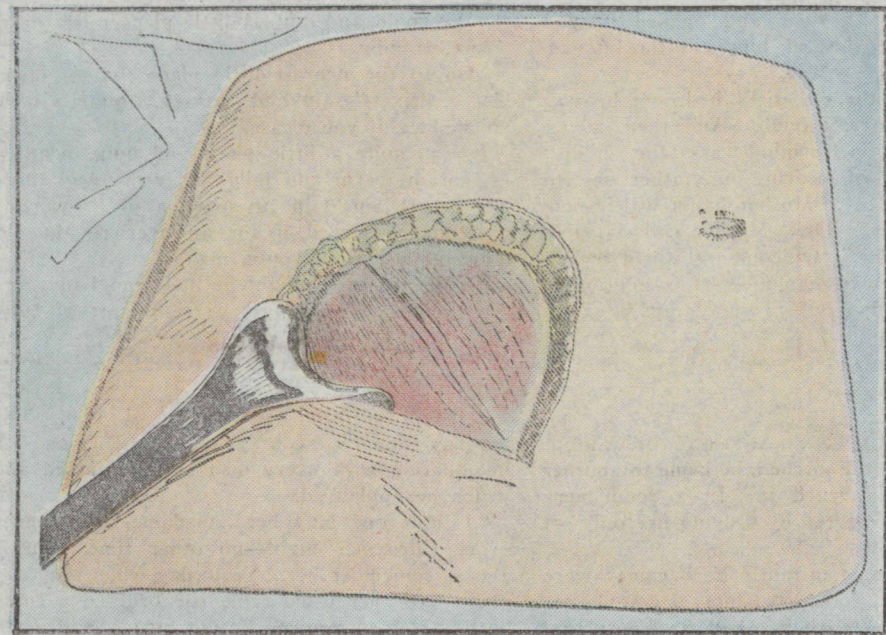
Appendicitis is cited as only one disease which need never be deadly if proper preventive measures are taken in time. Physicians today are trying harder than ever before to din into public consciousness the vital truth of the old cliché "An ounce of prevention is worth a pound of cure." As one result of this campaign, hundreds of persons who until recently considered going to a hospital as patients only as a last resort, on account of a grave illness, now spend a few days in such institutions periodically. The sole purpose of such visits is to have a general physical check-up. Physical conditions which might lead to the development of serious ailments thus are discovered frequently. It is obvious that a physician can eradicate an incipient malady more efficiently than one which has had time to develop.

One hears considerable discussion, and not a little criticism, of the failure of medical scientists to find an easy, quick cure for cancer, tuberculosis, and other scourges which, as yet, the doctors have not completely conquered. There is no infallible cure for many of the diseases which afflict mankind. Yet most of them including cancer and tuberculosis, can be cured if proper treatment is begun soon enough. In spite of these facts, proved daily by doctors everywhere, praise for the achievements of medical science is not so willingly given as is blame for its failures. The miracles of modern surgery and the other branches of the science seemingly are commonplace to the public. The layman is disposed to take the benefits of medical knowledge and skill for granted. It is probable that many persons are careless of health partly because they believe, blindly, that if anything hampers or cripples their physical well being, a good doctor soon can repair the damage.

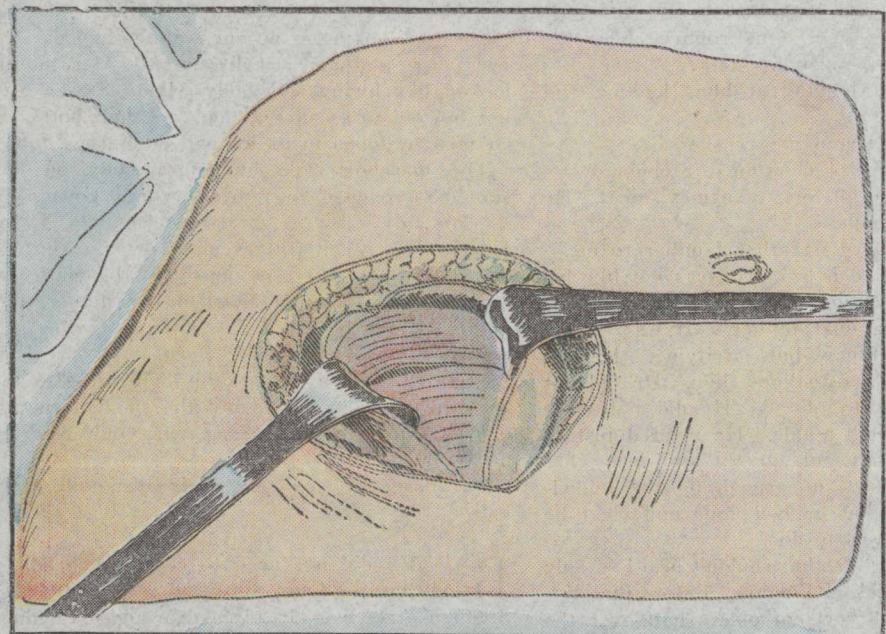
The physicians are emphatic in disavowing this mistaken confidence. By personal preaching and through such splendid mediums as that afforded in the exhibits at A Century of Progress, they are calling attention to the fact that the individual is primarily responsible for his own health. Medical science can aid in preserving it only in so far as competent medical advice is sought and followed.



1 The original incision is made down to the muscle. Preliminary to the operation, the skin is given an application of iodine. Some surgeons, however, use other antiseptics.



2 The external oblique layer of muscle is exposed and split in the direction of its fibers. These first steps in the operation are completed quickly by the deft surgeon and his assistants.



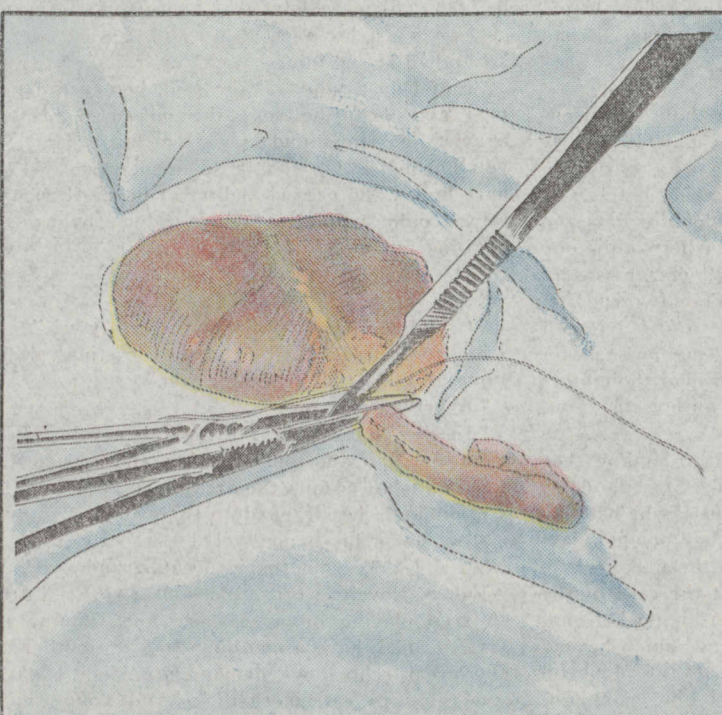
3 The opening of the external oblique layer of muscle is spread, revealing the internal oblique muscle, which is split, also in the direction of the fibers.



4 Sterile towels are clipped to the edges of the wound to protect it from infection. The thin lining of the abdomen now is brought into view.

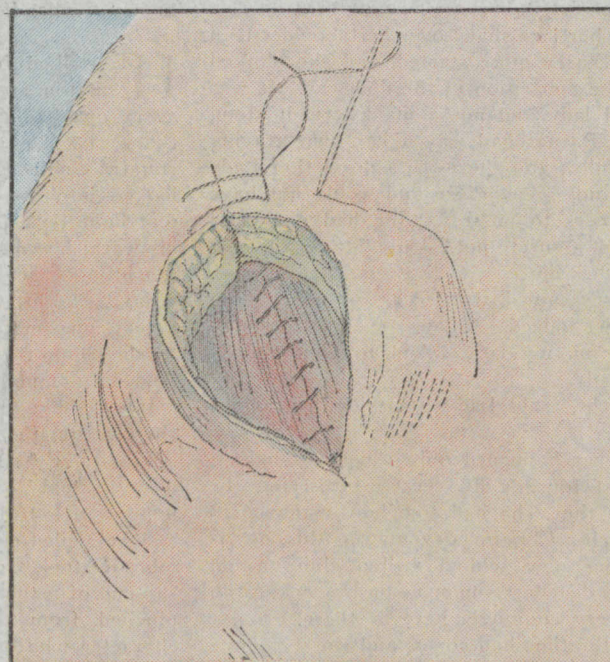


5 The surgeon now brings into the wound the cecum, or first part of the large bowel. The appendix is attached to this part of the intestine. Next the blood supply is tied off.

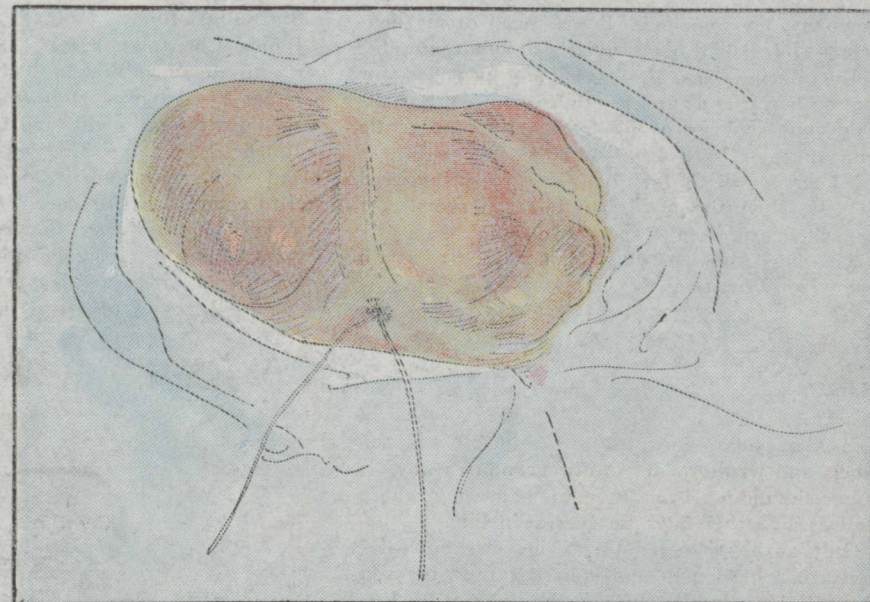


6 The blood supply has been tied off and the appendix, now exposed, is held firmly between two clamps and is cut away. The purpose of the operation has been accomplished, but several important steps remain before the surgeon's work is complete.

(Drawings from wax models by Dr. A. H. Bulbulian.)



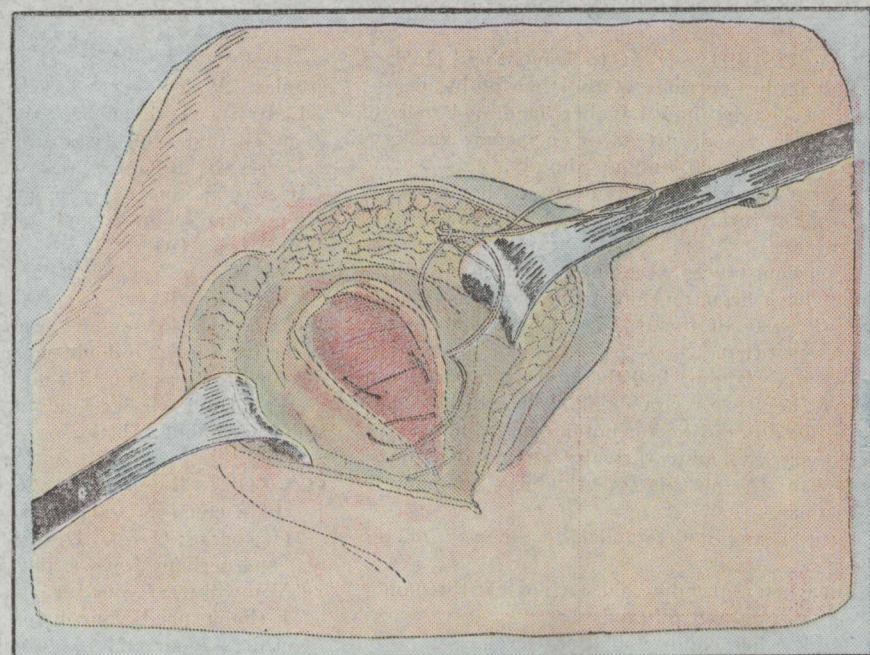
7 The stump of the appendix is about to be inverted. A purse-string suture has been inserted and will be drawn taut and tied.



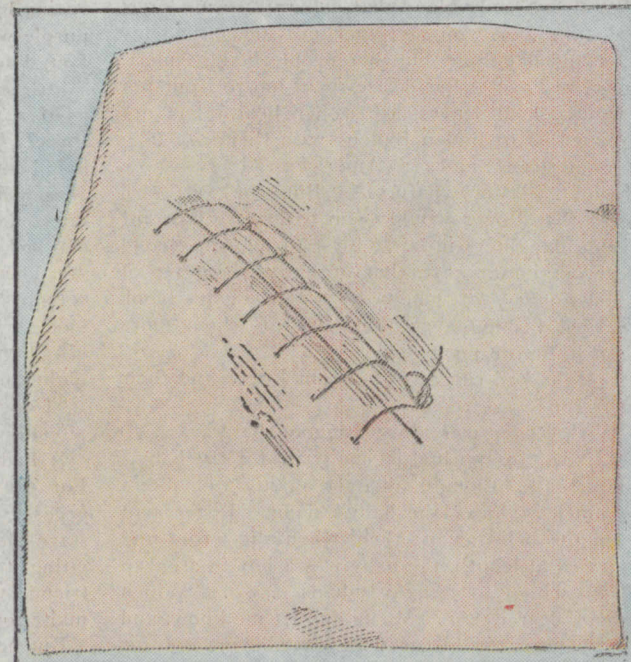
8 A dimple shows where the stump of the appendix has been inverted. The surgeon is careful to leave a smooth surface, which precludes the formation of adhesions.



9 The operation at this stage is nearing its conclusion. The bowel has been dropped back to normal position and the lining of the abdominal cavity is closed.



10 Fibers of the internal and external oblique muscle layers are brought together and the incisions closed with stitches.



11 The outer part of the wound now is brought over the closed inner incision and final closing of the wound is begun. At this point the surgeon has successfully completed all but the final step of the operation.

12 The outer wound is completely closed. The patient now is removed from the operating room. The operation does not involve a prolonged and painful period of convalescence. In normal cases the wound heals quickly.