

BIOCHEMISTRY

Speed Broken Bone Healing

► **BROKEN BONES** can be set faster, the period of pain and discomfort for the patient is shorter and recovery comes sooner when a chemical called hyaluronidase is injected.

The chemical, an enzyme known also as the "spreading factor," permits rapid diffusion of liquids through the body because of its ability to break down hyaluronic acid, an important component in the jelly-like mass which holds cells together in tissue.

In the case of broken bones, it acts to reduce pain and swelling quickly by causing wide dispersion of the edema fluid and the accumulations of blood, seen by the patient as black and blue spots. As a result, a snug fitting cast can be put on at once, instead of after a period of waiting for the swelling to go down.

This and four other medical uses of hyaluronidase are shown in a new medical motion picture produced under the direction of Columbia University College of Physicians and Surgeons, New York, by

Wyeth Incorporated, Philadelphia drug manufacturing house.

Medical studies with patients recounted in the motion picture also show:

1. That hyaluronidase added to irritating drugs such as liver extract, steroids and concentrated vitamin preparations, usually injected intra-muscularly, decreases discomfort and local tissue damage in patients.

2. That hyaluronidase, combined with local anesthetic agents, markedly shortens the time of onset of anesthesia and produces an area of anesthesia roughly three times larger than with the agents alone.

3. That hyaluronidase added to procaine for purposes of blocking the mandibular nerve in oral surgery and dentistry causes the fluid to be diffused almost immediately to the complete circumference of the nerve, thereby shortening the waiting period for complete anesthetic effect.

4. That a ring which acts as a tourniquet about an injured finger may be removed without cutting.

Science News Letter, October 27, 1951

BIOLOGY

Control Turkey Feathers

► **TURKEYS WITH** fewer or no troublesome pin feathers to fuss with will be on the market if turkey growers follow the advice of poultry specialists.

Drs. C. D. Mueller, L. F. Payne and Fred Moultrie, of the Kansas Agricultural Experiment Station, Manhattan, Kans., have found that the light-hours received by turkeys affect the rate of feather growth and moulting. Previously poultry men have considered the temperature as the most important factor affecting feather growth.

The Kansas poultry specialists recommend that turkeys be raised by providing the same length of day during the summer and early fall as prevails naturally during October and November.

They compared 17- to 28-week old turkeys that had been exposed to natural conditions to those that had been raised at the same temperature but with 10 and 15 hours of light per day and to those that had received a 10-hour light-day at a temperature of 60 degrees Fahrenheit.

The turkeys were later killed and plucked, then graded as to the number of pin feathers. Less than 30% of those that had received a natural amount of light and temperature were in the upper four grades for pin feathering.

Of the turkeys that received light limited to 10 hours with natural temperatures, 85% were in the upper four grades. Turkeys exposed to the low temperature showed no improvement over those given natural temperature and shortened days. Light for 15 hours per day put the turkeys in the lower 25% class.

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