The Ancient Vocabulary of Medical Prescriptions

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Some in practice today will recall the time prior to the 1940s when an active knowledge of the apothecary system of weights and measures was as much a professional requirement as an intimacy with the more simplified metric system. An acquaintance with the minis, drams, scruples, ounces and grains of lore was essential to the daily practice of medicine since prescription writing, now a vanishing art, was a daily chore. Most prescriptions in that era, it must be remembered, required an elaborate formulation of pharmacologically active substances, although the dubious function of those ingredients justified much skepticism. Napoleon is quoted as saying: “Medicine is a collection of uncertain prescriptions, the results of which, taken collectively, are more fatal than useful to mankind.”

The apothecary’s working vocabulary was a bizarre collection of etymologically corrupted Greek, Latin, Arabic and early Romance-language terms such as drams, minims, grains, decoctions, pints, scruples and even ells, stones, sacks, gills, marks, verges and elixirs. This transnational lexicon also served the mercantile needs of jewelers, coinage manufacturers and necromancers.

The history of the word, dram, begins with the Greek word, drachma, meaning ‘that which can be grasped.’ A drachma, initially, was the name of a silver coin of designated weight. As a numismatic criterion, it entered the Greek, Roman, Sassanian and Armenian currency systems – and, belatedly, the apothecary-avoirdupois verbiage where it was standardized to 1/16 ounce or 1.77 grams.

A standard measurement for very small volumes of fluids had been the drop, defined loosely as a set fraction of a teaspoon. The Latin, minimus, meaning the smallest, the least, became the minum, a widely used unit by pharmacists until supplanted by calibrated pipettes.

The Romans called a sharp fragment of bone scrupulus; and then, when seeking a name for 1/24th of an ounce, modified the word to scruple, which since has been variously identified with the smallest amount or, in general conversation, a meticulous care for exactness.

The grain, a measurement of mass equals 64.8 milligrams. Historically it was said to be based upon the weight of a single seed of barley. Few physicians still think in terms of grains as a pharmacological measurement of mass. Yet a 325-milligram aspirin tablet may sometimes be called a 5-grain ASA tab.

Ounce, as a measure of weight and inch as a measure of length, are both derived from the Latin, uncia, meaning one-twelfth. The troy system of weights (where a pound equals 12 ounces) is used still by jewelers. Troy is probably derived from the medieval French trading city, Troyes.
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1950: RI Physicians Prepare for the Atomic Age
‘We will now be on the firing lines’

MARY KORR
RIMJ MANAGING EDITOR

In the fall of 1950, the Rhode Island Medical Journal’s Editor-in-Chief, PETER PINEO CHASE, MD, published an editorial, “Defense,” alerting its readership to the formation of a Civilian Defense Committee by the state and to the need for the medical community to begin preparations “if an atom bomb or some more hideously destructive weapon of warfare lands on Providence.”

Dr. Chase, a World War I veteran who had worked overseas as a surgeon, had spent time in post-war Europe, in 1949, working for the International Relief Organization. He participated in displaced physicians’ training courses in Germany and visited surgical clinics that saw a large amount of amputee patients.

He imagined the worst-case scenario in Providence. The editorial stated: “The local hospital in the immediate vicinity will have no problems. Everything human in that vicinity will cease to exist. The population a little farther away, badly injured but still alive, will have to be succored by relief parties from other medical centers...We will now be on the firing lines...”

In subsequent pages, he noted, “The medical aspects of atomic damages represent a story with which we are only vaguely familiar,” and Dr. Chase stated physicians must become prepared. The Rhode Island Medical Society subsequently invited several speakers to address the issue at its December meeting.

DRS. ERNEST K. LANDSTEINER of Barrington, a Providence surgeon and urologist, and JOSEPH W. HOWLAND of Rochester, NY, would speak on “Radiation syndrome.”

According to declassified documents from the University of Rochester Atomic Energy Project in 1950, Dr. Landsteiner had attended a one-week course sponsored by the Atomic Energy Commission the previous March, entitled “For Physicians Concerned with Civil Defense Against Atomic Warfare.”

DR. JAMES DEERY, deputy director of the RI Dept. of Public Health, also attended.

Dr. Howland, who taught some of the seminars, brought front-line expertise to the RIMS 1950 meeting; he had organized the medical groups that went to Japan to analyze the effects of radiation poisoning, and later was chief internist-pathologist to the Nagasaki group.

According to the Miner Library archives at the University of Rochester, where Dr. Howland was a professor of radiation biology at the University’s School of Medicine & Dentistry from 1947 to 1965, they were the first Americans to investigate the effects of radiation on the casualties at Hiroshima and Nagasaki.

Meanwhile, the civilian population across America began to build fall-out shelters in the event of an attack, and stock up on cans of spam, water, and first aid supplies.

As the 1950s progressed, and the threat of the Cold War emerged, Americans began to install basement or underground fall-out shelters. This photo shows a home shelter with a 14-day supply of provisions, circa 1955.

Japanese youth with second degree flash burns in Hiroshima, 1945.
SURVIVAL UNDER ATOMIC ATTACK

Reprinted from the Official U.S. Government Booklet Issued by the Executive Office of the President, National Security Resources Board, and the Civil Defense Office

KILL THE MYTHS
Atomic Weapons Will Not Destroy the Earth
Atomic bombs hold more death and destruction than man ever before has wrapped up in a single package, but their over-all power still has very definite limits. Not even hydrogen bombs will blow the earth apart or kill us all by radioactivity.

Doubling Bomb Power Does Not Double Destruction
Modern A-bombs can cause heavy damage 2 miles away, but doubling their power would extend that range only to 2 1/2 miles. To stretch the damage range from 2 to 4 miles would require a weapon more than 8 times the rated power of present models.

Radioactivity Is Not the Bomb’s Greatest Threat
In most atom raids, blast and heat are by far the greatest dangers that people must face. Radioactivity alone would account for only a small percentage of all human deaths and injuries, except in underground or underwater explosions.

Radiation Sickness Is Not Always Fatal
In small amounts, radioactivity seldom is harmful. Even when serious radiation sickness follows a heavy dosage, there is still a good chance for recovery.

SIX SURVIVAL SECRETS FOR ATOMIC ATTACKS
Always Put First Things First and Never Lose Your Head and

1. TRY TO GET SHIELDED
If you have time, get down in a basement or subway. Should you unexpectedly be caught out-of-doors, seek shelter alongside a building, or jump in any handy ditch or gutter.

2. DROP FLAT ON GROUND OR FLOOR
To keep from being tossed about and to lessen the chances of being struck by falling and flying objects, flatten out at the base of a wall, or at the bottom of a bank.

3. BURY YOUR FACE IN YOUR ARMS
When you drop flat, hide your eyes in the crook of your elbow. That will protect your face from flash burns, prevent temporary blindness and keep flying objects out of your eyes.

4. DON’T RUSH OUTSIDE RIGHT AFTER A BOMBING
After an air burst, wait a few minutes, then go to help to fight fires. After other kinds of bursts, wait at least 1 hour to give lingering radiation some chance to die down.

5. DON’T TAKE CHANCES WITH FOOD OR WATER IN OPEN CONTAINERS
To prevent radioactive poisoning or disease, select your food and water with care. When there is reason to believe they may be contaminated, stick to canned and bottled things if possible.

6. DON’T START RUMORS
In the confusion that follows a bombing, a single rumor might touch off a panic that could cost your life.

FIVE KEYS TO HOUSEHOLD SAFETY

1. STRIVE FOR “FIREPROOF HOUSEKEEPING”
Don’t let trash pile up, and keep waste paper in covered containers. When an alert sounds, do all you can to eliminate sparks by shutting off the oil burner and covering all open flames.

2. KNOW YOUR OWN HOME
Know which is the safest part of your cellar, learn how to turn off your oil burner and what to do about utilities.

3. HAVE EMERGENCY EQUIPMENT AND SUPPLIES HANDY
Always have a good flashlight, a radio, first-aid equipment and a supply of canned goods in the house.

4. CLOSE ALL WINDOWS AND DOORS AND DRAW THE BLINDS
If you have time when an alert sounds, close the house up tight in order to keep out fire sparks and radioactive dusts and to lessen the chances of being cut by flying glass. Keep the house closed until all danger is past.

5. USE THE TELEPHONE ONLY FOR TRUE EMERGENCIES
Do not use the phone unless absolutely necessary. Leave the lines open for real emergency traffic.

Official U.S. Government booklet, “Survival Under Atomic Attack,” was reprinted in the Rhode Island Medical Journal in late 1950, as well as a directive from President Truman and the Secretary of Defense dated Sept. 7, 1950, on proposed procedures to call reserve medical and dental officers to active duty, in light of the Korean conflict and “Cold War” tensions between the U.S. and the Soviet Union.