

# When it comes to medications, sometimes less may be more

With the aging of the population and the rise in a variety of chronic diseases, polypharmacy – the practice of taking piles of pills daily – often wastes money and endangers health.

Judy Siegel-Itzkovich interviews an expert who has developed his own method to fight it

Most people think that chronically ill and elderly patients at home, in general hospitals and geriatric institutions should thank their lucky stars that so many types of prescription medication are available to treat their maladies. But perhaps, for some people who gulp down as many as 20 pills or even more per day, the pile of medications is too much of a good thing – and causes them harm.

"Polypharmacy" is the objective term for the use of numerous medications, usually five or more daily. But the term usually refers to excessive or superfluous use of medications and potential harm – a worsening of their condition and even death.

Veteran gerontologist Doron Garfinkel, an associate clinical professor of internal medicine and geriatrics who is now retiring from his post as head of the geriatric palliative department at the Shoham Geriatric Center in Pardes Hanna, has devoted many years to assessing the genuine drug needs of the chronically ill, and gradually getting them to stop swallowing many of these medications with no untoward effects. The 65-year-old physician now works as a consultant for Maccabi Health Fund and as deputy head of the Israel Cancer Association's Home Care Hospice, which employs a highly experienced interdisciplinary team of professionals who have treated many terminal patients and educated others in palliative care.

Too little is known by physicians and pharmacologists about the drug interactions and efficacy of many medications, which have been tested on younger people but not among very elderly and institutionalized patients. In this population, polypharmacy can result in high copayments, leaving patients with less income for food and other needs, ultimately causing a lower quality of life and decreased mobility and cognition.

"Medications can be great, but sometimes, less is more," the fourth-generation resident of Rishon LeZion and graduate of Tel Aviv University's Sackler Faculty of Medicine told *The Jerusalem Post*. He recalled the typical case of a 72-year-old man on hemodialysis for kidney failure who was diagnosed with Alzheimer's disease. "With his family's consent and declared preferences, six of his 10 prescribed medications were stopped. Dramatic improvement was evident within two weeks, with sharply increased cognitive and functional improvement."

"On a Mini-Mental cognitive score evaluation given at the beginning, his score was 14/30; following cessation of the medications he attained a score of 30/30 – normal. He was able to return to active community life and underwent a kidney transplant a year later," said Garfinkel.

Another case was an 88-year-old woman who had been taking a drug for 17 years after being diagnosed with breast cancer. But this pill should be taken only for five years, Garfinkel noted. "She also took aspirin, but it caused hemorrhaging and a high dose of diabetes medication, even though her blood sugar level was low. She weighed only 37 kilos and was extremely thin. I told her to stop taking certain drugs, and she gained 15 kilos. She felt great and lived for another two happy years."



PROF. DORON GARFINKEL  
(Judy Siegel-Itzkovich)

If somebody has a heart attack, it's absolutely legitimate during the first year to give him aspirin, an ACE inhibitor, a statin, a beta-blocker, paracetamol and an antidepressant. That is not superfluous medication. But if every time a patient goes to the hospital he is given two or three new medications and continues to take others he doesn't need anymore, that could be polypharmacy, Garfinkel explained.

After assessing a patient's needs, Garfinkel usually eliminates one medication at a time, and examines the patient and sends him for lab tests, to see if his condition has changed for the worse. If there is a decline, he re-prescribes the medication – but this has occurred in only a minority of cases. Garfinkel's research in geriatric nursing departments demonstrated that as many as nine out of every 10 medications prescribed for patients hospitalized in long-term nursing departments were unnecessary.

"I am told that the pharmaceutical companies have created a voodoo doll of me and stick pins in it," Garfinkel joked, referring to the reduction of medication usage in such patients. "Medical students are taught when to start medication, but not when to stop." "Doctors must not fear assessing patient's

medications," he asserted. "With the rise in age, there is more harmful polypharmacy. We continue to give drugs that were proven effective for a single disease and on people in their 50s, not in patients in their 70s, 80s and 90s."

"There are drugs taken with others, and the combination can cause damage," he continued. "Doctors think they are working according to guidelines, but it's important to understand what we don't know. I did research on real patients, not theoretical ones, with follow-up."

He found that after interviewing these patients and their relatives for hours on end, many of them take generic anti-hypertension pills in the morning and the same drug by a commercial brand in the evening. No one has proven that these drugs are necessary or effective at an older age, Garfinkel said. "Very elderly people who get drugs to lower their blood pressure can become weak and confused, and when they get up in the middle of the night to go to the bathroom, they can fall and break a hip. I also recall a 93-year-old's list of drugs. He was getting statins, allegedly for high cholesterol, even though it hasn't been proven that taking it over the age of 70 reduces mortality. It actually weakens the muscles and can debilitate the very old even more."

On the basis of his clinical experience, the gerontologist developed the Garfinkel Method, which includes his Good Palliative-Geriatric Practice (GP-GP) algorithm and other guidelines that can be adopted by other doctors – not only gerontologists but also general practitioners, other specialists and clinical pharmacists.

"I don't have any patent on the method, and I don't profit from it. I really enjoy what I'm doing. The method is not just about stopping drugs. Once they are taking fewer, I also discover some patients suffer from depression, which can be treated. I change drugs and people change for the better; they become more active," said Garfinkel.

After the consultation, Garfinkel typically writes patients and their physicians a lengthy letter, which includes a review of the evidence for their medications and his suggestions of medications to discontinue or reduce. In some cases, he also proposes starting new medications – most often, antidepressants.

"Sometimes I'm the first one to tell the patient's family that their loved one is depressed. I enjoy seeing how the method's use changes the condition of patients," he said, adding that he has set up a nonprofit website, [www.drugstop.co.il](http://www.drugstop.co.il), that provides more information.

GARFINKEL SAID he doesn't understand why some pharmacists fill prescriptions without questioning whether the patient needs all of the medications. "And why don't all the health funds supervise the drug-taking of their members? Eliminating



unnecessary or harmful drugs saves in hospitalization and lowers drug costs," he said. "It should be in the insurers' own interest that they ensure too many pills are not being taken."

Garfinkel has published articles on his method in the American *Archives of Internal Medicine*, the *Israel Medical Association Journal* and others. In recent years, he has become a popular speaker in Turkey, Canada, Germany, Australia, Italy and other countries, where he explains his method to medical administrators who have to cope with growing costs, partly the result of polypharmacy. He just returned from Istanbul, where internal medicine specialists at the local medical school said they want their country to adopt the Garfinkel Method.

"We would like to thank you very much once more for your distinct academic contribution and your huge effort aiming to increase our awareness on inappropriate drug use," wrote Prof. Gulistan Bahat-Ozturk of Istanbul Medical School, who is considering the adoption of the Garfinkel Method in his country.

Dr. Laurie Mallory of Dalhousie University's Center for Health Care of the Elderly in Halifax, Canada, wrote to Garfinkel that her colleagues want to submit a formal proposal for collaborating with him. Garfinkel has also been invited to the World Congress of Gerontology and Geriatrics in Seoul, Korea, to present his method.

"It's frustrating to be ignored here," said the Israeli doctor. "Why is Turkey excited while the Health Ministry in Jerusalem and health funds that pay for superfluous medications are not adopting it here?"

People in the medical establishment have "stratified views. Maybe they are involved in defensive medicine and afraid that if a patient whose medications have been reduced suddenly dies, they will be blamed," he explained. Estimating patients' life expectancy may make doctors feel uncomfortable, but it can bring focus to the issue of what drugs are actually needed, he said.

Family doctors may not dare to stop a certain medication because they know a hospital professor gave it to the patient, he said, adding that "one general practitioner scared his very elderly woman patient out of her mind, when he told her that if she stops taking a statin against cholesterol, 'tomorrow your arteries will clog up and you'll die.'"

Garfinkel notes that he has never been sued by a family for reducing the number of medications. "I recall a very wealthy, elderly lawyer brought in by his wife. I stopped his high blood pressure drugs because he didn't need them, even though he was taking five different pills daily. He had been diagnosed for allegedly having Parkinson's disease, but it turns out he had only Essential tremor and not Parkinson's. I stopped his drugs, which caused severe side effects, and he felt much better without it."

"Every patient needs a case manager," the gerontologist suggested. "Non-prescription medications, vitamins and other supplements must also be assessed, because they have an effect. Israelis enjoy longevity, but what about quality of life? Patients tell me I've changed their lives. And the economic impact is huge."

THE HEALTH Ministry told the *Post* that it is aware of polypharmacy and has issued statements about it and trained more clinical pharmacists, but officials conceded that not enough has been done. Dr. Eyal Schwartzberg, the ministry's new head of the pharmacology division and an experienced clinical pharmacist himself, commented that "awareness of the problem has increased. As people live longer, they collect more chronic diseases and are given more drugs. Patients also are examined and treated by a larger number of specialists who may not know what the other has done. There are new indications for existing drugs. This doesn't mean that everybody who get a lot of pills don't really need them. But order has to be made out of all this."

"There are clinical pharmacists at Clalit Health Services and the Maccabi Health Fund who deal with polypharmacy, but the subject must become more developed. I don't claim that the current situation is ideal. I started to deal with it when I joined the division. My vision is that every pharmacy will have a specialist who can give customers pharmaceutical counselling. There are a variety of ways to deal with the problem. But I would like to hear more from Garfinkel," Schwartzberg said.

He offered this suggestion: "There is a National Council for Geriatric Medicine. It would be helpful to invite him to speak at a session."

## Natural flu killers could offset mutation of virus

### HEALTH SCAN

By JUDY SIEGEL-ITZKOVICH

A known difficulty in fighting influenza is the ability of flu viruses to mutate and thus evade medications previously found to be effective against them. But Hebrew University researchers have shown recently that another, more promising, approach is to focus on improving drugs that boost the body's natural flu-killer system.

Emergence of new influenza strains, such as the recent avian influenza (H5N1) and swine influenza (H1N1 2009), can lead to the emergence of severe pandemics that pose a major global threat. The concern regarding the emergence of such a pandemic arose when a new and deadly avian influenza strain (H7N9) was discovered in China not long ago, causing the death of six people in only a month.

The body's immune system can fight influenza infection. Natural killer (NK) cells, which are an essential component of this system, can recognize and eliminate influenza

virus-infected cells and inhibit the spread of the virus in the respiratory system. But, as doctoral student Yotam Bar-On and Prof. Ofer Mandelboim of the HU Medical Faculty's Institute for Medical Research Israel Canada (IMRIC) have revealed in a paper published in *Cell Reports*, the influenza virus is able to escape from the NK cells' activity, allowing it to spread in the respiratory system.

They show that this is accomplished by the influenza virus utilizing the enzymatic activity of the neuraminidase protein to neutralize the NK cells' receptors that are responsible for detecting the infected cells. This, in effect, neutralizes the NK cells' ability to accomplish their designated flu-killing duty.

With the aid of the neuraminidase protein, the influenza virus is free to exit the infected cell, enabling it to infect new neighbor cells and spread in the respiratory system. Anti-flu drugs were developed to inhibit this spread of the virus by inhibiting the neuraminidase enzymatic activity. But, as with other, earlier anti-influenza drugs, the flu viruses are able to gain the upper

hand. The extensive use of neuraminidase inhibitors has caused the emergence of new, drug-resistant influenza strains.

For example, during the spread of the swine influenza pandemic about four years ago, the UK Health Protection Agency reported that 99 percent of the viruses analyzed were resistant to these inhibitors. It was shown that the virus was able to change the neuraminidase structure so the drug can no longer bind this protein, and therefore the desired inhibitory effect is lost.

Despite this, Bar-On and Mandelboim have shown that this type of widely used drug has the effect of boosting the activity of the NK cells, enabling them to better eliminate the influenza virus. They stress, therefore, that efforts should be focused on developing effective new drugs that would maintain and enhance this NK cell activity, thereby leading to more effective elimination of the influenza virus and better recovery from flu infection without the susceptibility to the changes in the neuraminidase protein structure currently brought about by mutating flu viruses.

### CAESAREANS DO NOT MAKE BETTER SEX

A growing number of young women mistakenly believe that having a normal vaginal birth – with or without a surgical episiotomy – harms their sexual relations after delivery, and they therefore demand that their doctors perform a Caesarean section, according to Prof. Shmuel Luria, a senior obstetrician/gynecologist at Holon's Wolfson Medical Center. Luria said this is not so, and that a Caesarean offers no sexual benefits over vaginal delivery.

He and his team handed out questionnaires to women six, 12 and 24 weeks after delivery. According to the responses, sexual function improved the more time passed after delivery, and there were no differences in sexual function and enjoyment when the delivery was normal or via surgery.

Luria said that at Wolfson, Caesareans constitute 5.5% of all types of surgery, and that too many of them are not medically justified. This study is unique, Luria said, concluding that "we can now calm mothers down, and explain that

vaginal births don't have a bad effect on sexual relations in any way after delivery."

### NAVEL WAY TO REMOVE APPENDIX

If you need to have an inflamed appendix taken out some day in the not-too-distant future, surgeons will probably be able to use a pinhole incision through the navel to get it out. Published in the *British Journal of Surgery*, the findings indicate that larger studies to test the potential of the procedure are still needed.

The experimental, minimally invasive and scarless surgical procedure for appendicitis, called transgastric appendectomy, avoids the use of external incisions and causes less pain than traditional appendectomies, the German researchers said. Through the insertion of a needle, an endoscope is passed through the stomach into the abdominal cavity.

"Surgeons and their patients had good experiences with surgery by pinholes beginning in the 1990s, and there is interest in continuing this development to avoid incisions in the abdominal wall completely

and to obviate wound infections and incisional hernias," said Dr. Georg Kaehler of the University of Heidelberg's University Medical Center Mannheim. "Therefore, we used flexible tubes called gastroscopes to get through the stomach into the abdominal cavity and to perform surgical operations there."

They performed transgastric appendectomy in a group of 14 patients with uncomplicated appendicitis. Two patients with abdominal inflammation required cleansing treatments four days after the procedure. Hospital stays and postoperative complications were similar to those of classical surgical methods for appendicitis.

These preliminary results demonstrate the potential of this innovative procedure, particularly for appendicitis not accompanied by an infection called generalized peritonitis; however, more information is needed on the specific advantages and disadvantages of the approach. Kaehler and his coauthors noted that a multicenter study is now being planned, which will – it is hoped – prove the feasibility and safety of transgastric appendectomy.