

Insulin without pain

New device eliminates need for needles

by CHRIS VANDER DOELEN
For Southam News

WINDSOR — Sixty-four years after researchers at the University of Toronto discovered insulin, another Canadian partnership has perfected a device which injects the drug painlessly and without the use of a needle.

After only one month on the Canadian market, the \$750 device has created a big stir among diabetics here and in the United States, where it is not yet available.

Called a Preci-Jet, the sci-fi product could revolutionize the lifestyle of those who need one or more difficult injections of insulin each day, diabetics say.

"Everybody's talking about it," said Lisa LeFrancis, president of the Essex County chapter of the Canadian Diabetes Association.

"It means diabetics will have less painful injection sites," LeFrancis said. "When you inject insulin into your arm or leg for a long time, your flesh gets hard — like a lump — and you have to look for somewhere else to inject."

The Preci-Jet became available at a Windsor pharmacy recently after being released to the Canadian market on Jan. 1 with federal approval. Available only by prescription, about 500 were in use recently.

The injector uses high pressure to fire insulin painlessly into tissue with a sharp hissing noise — much like the fictional device used by Dr. Leonard McCoy on the television show Star Trek.

"Yes, that comparison has been made often," says Graeme LeMare, of Burlington, Ont., who is distributing the product in Ontario and Western Canada.

"It's about the size of a fat marker pen," LeMare said. "A piston pushes into a cylinder and develops a pressure of 2,500 pounds per square inch. It shoots a stream 1-800th of an inch thick — finer than a hair on your head."

"There is no pain — the sensation feels like someone pushing a finger against your arm."

The device could also be a boon to the blind — diabetes is a major cause of blindness, making injections doubly difficult for diabetics with poor sight. The Preci-Jet can be loaded and injected by touch.

Powered by 100 tiny, elliptical metal springs, the device must be wound by hand to cock a firing mechanism. "You release the safety catch, and push the button," LeMare said. "You hear a click, then a 'whoosh' as the thing lets go. There is no recoil."

The technology for injection without the use of needles has been around since the Second World War, when soldiers were inoculated en masse. But the device was crude, and required a large compressor.

A U.S. forerunner of the Preci-Jet has been on the market for

years, but is four times the size and costs \$1,100 U.S.

The Preci-Jet was the brainchild of Istvan Lindmayer, who tried and failed to develop his concept in Hungary. While on a trademission to Canada in 1976, he decided to stay to see his project through. "I guess you could say he defected," LeMare said.

Working with precision machinists and some of Canada's top endocrinologists, the Preci-Jet was approved for use in Canada after seven years of experimentation and field trials.

Development costs topped \$4 million, most of which went to perfect the power pack necessary to boost insulin through the skin at high speed.

Insulin injected by syringe tends to "puddle" painfully under the skin, spreading slowly to the surrounding tissue before being absorbed.

The Preci-Jet can be set to fire insulin up to an inch deep into flesh, although at such a depth — which is not recommended — an injection probably would be painful, LeMare says.

Ron Hakm, owner of Golden Mile Pharmacy in Windsor, the only local outlet for the Preci-Jet, says he has a healthy respect for the power of the device after experimenting with it.

"It could be dangerous in the wrong hands," Hakem said in a recent interview. "It could cause a severe bruise if it isn't used properly" — which is one reason it can only be obtained by prescription.

Clinical studies have shown insulin injected by the Preci-Jet spreads more evenly in tissue. "It tends to rain a series of droplets that are in effect sprayed into the tissue," LeMare said.

"This means the effect of the insulin peaks much faster, so it reduces the intake of required insulin by up to 30 per cent. A diabetic could look at a payback in four to five years."

At \$750 apiece, consumers would argue the Preci-Jet had better of-

fer big savings of some sort. But LeMare argues the Preci-Jet is "a lifetime product — this is not a disposable item." Many private insurance plans will cover the purchase of a Preci-Jet for diabetics, he says.

In any case, the price of the instrument could drop as much as \$150 each as production increases and as manufacturing is refined, he said.

There are an estimated 700,000 diabetics in Canada, up to 300,000 of whom are dependent on insulin for survival. LeMare hopes up to 20,000 of them will buy Preci-Jets in the next five years.

If they don't, diabetics in the U.S. probably will. At Golden Mile Pharmacy, inquiries from diabetics in the U.S. equal those from the Canadian side, Hakem said.

Meanwhile, LeMare hopes continuing research will adapt the Preci-Jet to widespread uses in hospitals, clinics and schools — possibly even dental work. "It could be used on anything that has to be injected."

(Chris Vander Doelen is a medical reporter for the Windsor Star.)



Canadians tend to exaggerate how bad the weather is, says Dave Phillips, a climatologist who has studied weather patterns for 10 years.

Phillips says a "misery index" he has devised shows that even a city with a reputation as chilling as Winnipeg doesn't have more than 15 per cent misery days each winter.

Weather complaints 'exaggerated'

He defines a misery day as one with about 10 centimetres of snow-fall, two hours of blowing snow and a wind chill factor cold enough to freeze the skin in three minutes.

He says Canadians should accept their climate and make the best of it through better planning.

"It's a slow process but I think Canadians are becoming better adjusted to winter."

H Howat Insurance

(Formerly Porter & Howat Insurance)



- EXPERIENCE
- KNOWLEDGE
- EFFICIENCY
- SERVICE

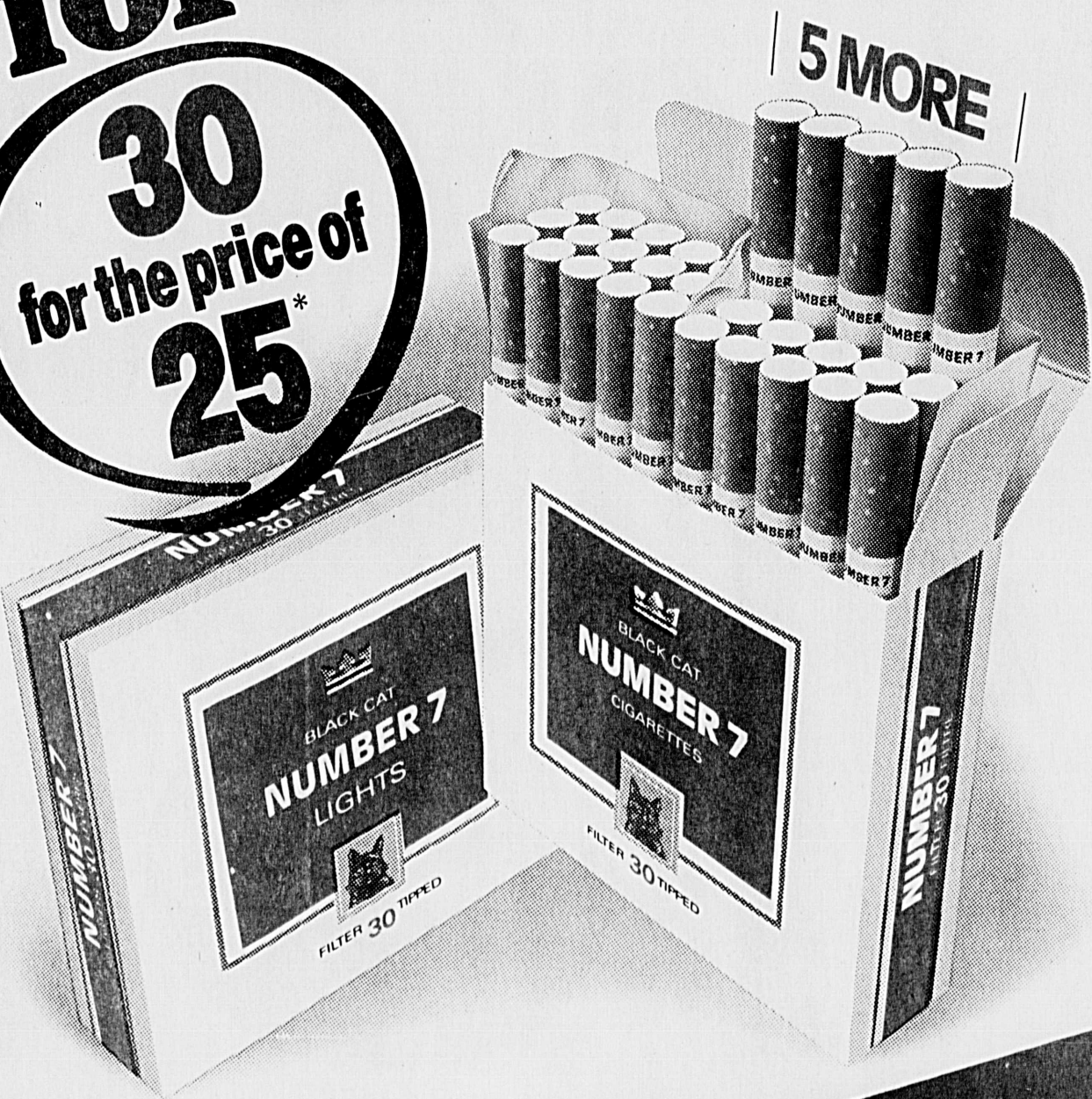
AN AUTOPLAN REMINDER #1

An incorrect rate classification can invalidate your Autoplan insurance. If you drive to or from work or school, your vehicle must be insured in rate class 002 (not 001 — pleasure only). Be sure your vehicle is rated in the right classification for its use.

Howat & Associates Insurance Agency Inc.
901 Victoria Street, Prince George 564-1400

At last! A price break for smokers.

30
for the price of
25*



NEW NUMBER 7 THIRTIES REGULAR LENGTH

Warning: Health and Welfare Canada advises that danger to health increases with amount smoked — avoid inhaling. Average per cigarette — Number 7 King Size: Tar 16mg, Nic. 1.1mg, Regular: Tar 15mg, Nic. 1.2mg. Number 7 Lights King Size: Tar 12mg, Nic. 0.9mg, Regular: Tar 13mg, Nic. 1.1mg.

The University of British Columbia
Faculty of Agricultural Sciences,
College of New Caledonia
and
The B.C. Ministry
of Agriculture and Food
present

TAKING CONTROL OF FARM STRESS

When: March 5, 1986 9:00 a.m. to 5:00 p.m.
Where: College of New Caledonia, Rm 1-306
Fee: (includes lunch) \$25.00, additional family members and students \$15.00

Objectives: To develop an understanding of the nature, causes and effect of farm related stress. To teach specific techniques for managing stress in the farm setting. To assist participants in developing a personal action plan for optimizing stress.

Instructors: Dr. James Beaulieu and Karen F. Caesar, Consulting Psychologists, Hope Systems International, Edmonton

Registration: Please register in advance with Dr. Walter Carlson, UBC Agricultural Sciences Representative at the College of New Caledonia. Phone 562-2131, Local 383.

COLLEGE OF NEW CALEDONIA

3330 22nd Avenue, Prince George, B.C. V2N 1P8
Phone 562-2131

BenTax Fast Cash Refunds For people who want their money now!

BenTax gives you your tax refund money now. At new, lower rates. And our experts often find ways to reduce your taxes. So you get bigger refunds, faster.

BenTax

A Division of Beneficial Canada Inc.
1443 3rd Ave., Prince George

562-6247

Year Round Service Since 1976

Applicants must qualify