Effects of caffeine, alcohol and nicotine on fetal development

The culturally condoned cup of coffee, cigarette or shot of scotch: In health circles their status is questionable. And when the person consuming them happens to be pregnant, cultural sanction is definitely on the wane. With the recent discovery of the phenomenon Fetal Alcohol Syndrome (FAS) in babies born to alcoholic mothers, research to determine the deleterious effects of harmful substances such as caffeine and nicotine is particularly relevant. However, it is scarce.

Dr. K. Paul Satinder, professor of Psychology at Lakehead University says that the campus lab is one of the few engaged in a field of research known as Behavioral Teratology, or the scientific study of congenital defects. The time consuming nature of the research, the cost and the laborious nature of the tasks involved make it unpopular in the field. Dr. Satinder's laboratory at Lakehead University is actually the first to initiate systematic research relating to the role of genetically defined organisms in Behavioral Teratology.

Working with lab rats, the pregnant animals must be closely monitored and the administering of the substances, meticulous. Any human error renders the findings meaningless, says Dr. Satinder.

While not definitively proven, there is consensus among the medical profession that the babies of heavy smokers tend to have smaller birth weights. Dr. Satinder is convinced that the effects of exposure to nicotine during pregnancy are universal and also result in cognitive disability and perhaps, hyperactivity. He has proposed that these effects be designated "Smoker's Baby Syndrome" (SBS).

To relate some of their findings, Dr. Satinder, and four graduate students, Stella Kowalski, Brenda Perrson, Cheryl Berklund and Karl Szugalew presented a symposium entitled "Behavioral Teratogenic Effects of Alcohol, Caffeine and Nicotine" in early July to the Conference on Psychopharmacology in Toronto.

From July 31 to August 5, Dr. Satinder attended the International Conference on Laboratory Animal Science in Vancouver. There he made know the There he made known the research discipline he has planned under the name: "Experimental Behavioral Tertological Genetics."

While Dr. Satinder has evidence of the harmful effects of alcohol and caffeine on the pups born to rats administered the substances in the second and third trimester of their pregnancy, he is only just embarking on similar studies relating to the effects created when the substances are administered in the first trimester. He is also investigating ways to condition the rats to inhale actual cigarette smoke and drink coffee as opposed to being administered the substances in pure drug form.

Potential effects of caffeine, says Dr. Satinder, have not been fully investigated as yet. He

plans to do detailed research in this area and to explore such variables as the difference between brewed and instant coffee etc.

The research goes on step further. Dr. Satinder and his students will study genetically defined animal models to investigate changes in behavior attributable to the effects of alcohol, nicotine and various combinations of these drugs when administered at various stages of pregnancy.

Some of the effects encountered so far have been grossly reduced

birth weight, hydrocephalic rats, and different facial appearance in the rat pups born to rats who have been administered the substances. The doses, Dr. Satinder says, are often much smaller than normal human intake. He likens the difference in facial make-up to that observed in Fetal Alcohol Syndrome children.

Dr. Satinder says the public's reaction to these findings is ambivalent. "We often don't want to look closely at the effects of things that, are dear to us."

Vision and school achievement

Today's child learns more through his eyes than all his other senses combined. The child performs in the classroom and explores his or her world using vision as the primary tool.

"Numerous requirements are necessary to provide efficient vision and these must be considered in a complete vision analysis, especially for the school child," said the President of the Ontario Association of Optometrists, Dr. Joseph Mittelman.

The most basic needs for adequate vision are near vision, distance vision, binocular coordination and adequate field of vision.

Near Vision means the ability to focus and see clearly and comfortably with both eyes and each eye separately at a distance of about 15 inches. This is the distance at which most school work is done.

Distance vision refers to the same ability as needed for near vision, but for a distance of 6 meters or 20 feet or more. This is necessary to see the chalkboard, to enjoy motion pictures and T.V. and to engage in sports.

Binocular co-ordination refers to the ability to make the two eyes work together. This is necessary for art work, handicrafts and play activies as well as to read

efficiently.

Adequate field of vision refers to the ability to see both sides up and down while focusing on a small target. This saves unnecessary eye and head movements and is essential for participation in sports and for personal safety.

Eighty percent of school work depends on vision. Knowing this, it is easy to understand why good vision is so important to achievement in school. "It is of utmost importance to the care, growth and healthy development of your child to insure that he or she is free of the symptoms of a possible vision problem," Dr. Mittleman stresses.

How should children behave around school buses?

While any school authority may have instructions geared to the needs of a particular area or condition, the Canada Safety Council makes the following guidelines available to parents for their consideration:

(1) If the bus stops at a driveway (most likely

in a rural area) use a sheltered area to watch for the approaching bus.

(2) Watch for traffic before crossing any street.

(3) Never push anyone getting on or off the bus.

(4) Always hold the handrail when getting on or off the bus.

(5) Sit quietly when

riding on the bus. (6) Watch for traffic when leaving the bus.

(7) Tell the driver before stopping to pick up anything you drop.

(8) Do not put arms out a bus window.

(9) Use emergency exits only when directed to do so by someone in authority, or in an emergency.



WINNERS OF THE ANNUAL FISH DERBY

LAKE TROUT: Jack Moore **RAINBOW TROUT:** Lionel Waghorn **SPECKLED TROUT:**

Steve Falzetta **PICKEREL** howard Cook

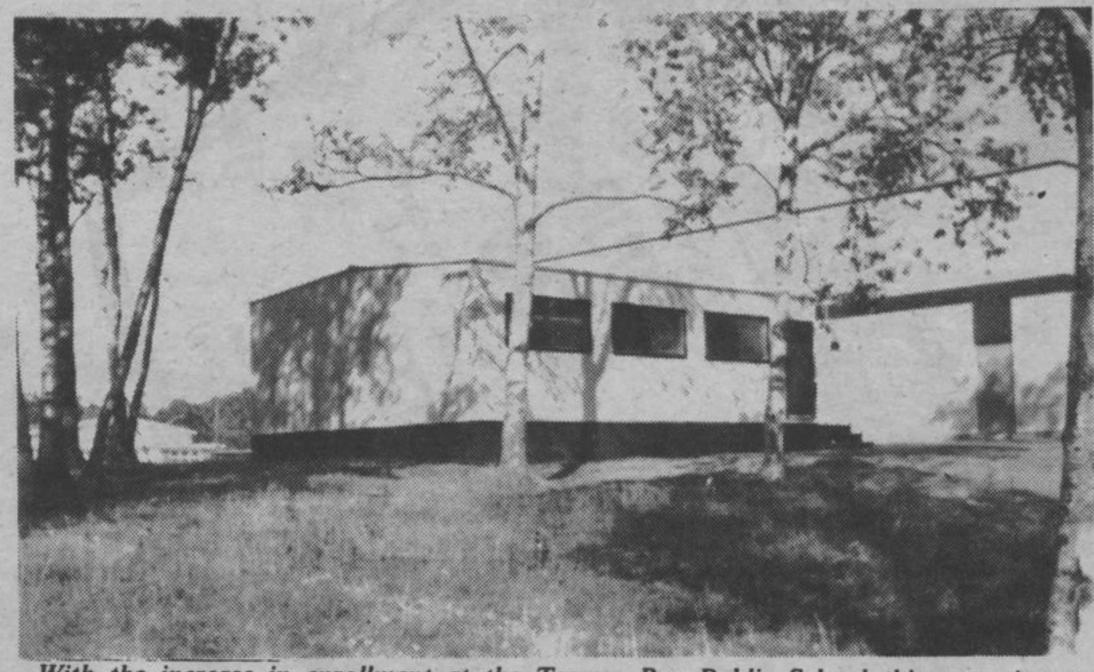
PIKE: Joan Clark ? ? MYSTERY ? ?

George Caron



New Portable

for Terrace Bay



With the increase in enrollment at the Terrace Bay Public School this year, it was necessary to bring in a new portable unit. The unit arrived a couple of weeks ago and is currently being used by the Grade Six students. Total enrollment this year at the school has increased to 242 and next year's projections look at have even more.

School Safety Week -Remember these messages!

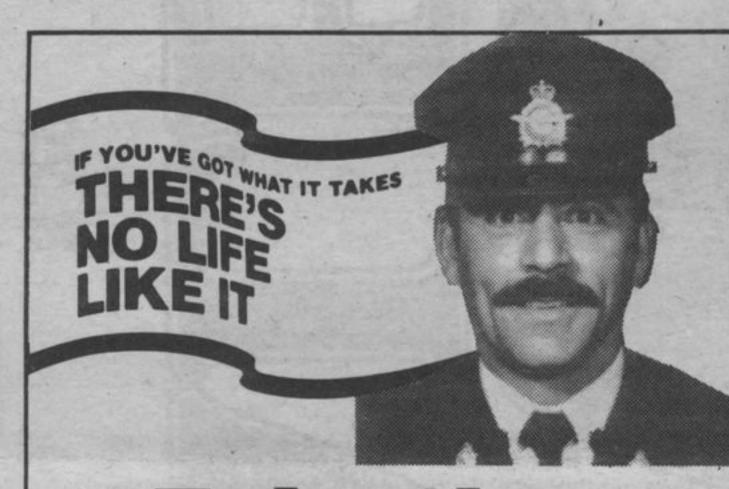
The Canada Safety Council reminds all drivers to keep alert for school buses and their flashing red stop signals. Provincial law requires all approaching, as well as following, drivers to stop their vehicles when a school bus is loading or unloading passengers and the overhead lights are on.

Children may be unpredictable, but your responsibilities as a driver are clear.

School bus collisions are rare, however, children who ride school buses must do their part to make every trip a safe one. The Canada Safety Council asks you to be sure that your children respects the directions of the school bus driver. Children may be exuberant, but, the school bus is no place for games. ******

Ever stop to think that good driving takes more than skill? The Canada Safety Council calls that extra something, "Highway Citizenship." It's knowing how to promote a good sense of moral and social responsibility in traffic. It's take the time to be careful around School Zones and playing children. "Highway Citizenship", is the know-how

that tells you to use good judgement, understanding and courtesy in traf-



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THE CANADIAN **ARMED FORCES**

WRZ 46

TERRACE BAY CURLING CLUB REGISTRATION

ROUND ROBIN AND DIVISION CURLING



Deadline for entries:

SATURDAY, OCTOBER 15 Curlings starts Wednesday, October 19

Please enter complete teams or, if you wish, enter as a single

and we will try and organize a team for you. For more information please contact:

Men's Curling: Al Legall 825-9310 M. Phillion 825-9369 D. Stewart 825-9151 Ken Johnson 825-3603 **Mixed Curling:** R. Roberts 825-3860 R. Duquette 825-9001 Ken Johnson 825-3603