

NEAEB NEXSUS CAFÉ

TABLE 6

QUESTION: HOW CAN WE EFFECTIVELY MANAGE DISCHARGES FROM PERSONAL HEALTH CARE PRODUCTS AND PRESCRIPTION DRUGS?

MODERATOR: ROSEMARY GATTER-EVARTS

Participants Round 1:

Kris Jopper-Mercure, Lake Champlain Basin Program

Meghan Ruta, UConn

Nicole Wright, NEIWPC

Tom Farber, EPA

Rick Levy, VTDEC

Public Responsibility:

The group discussed two major points concerning pharmaceuticals in the environment. The group decided as a whole, that the most effective way to control pharmaceuticals in the environment or discharges is to remove as much as possible from the waste stream. Current labeling actually requires excess prescription drugs to be disposed of down the sewer. An anti-flush campaign needs to be initiated. The strategy would be a drug recycling type program where excess medications would be mailed back to the manufacturer. It was felt that a media blitz to educate the general public on the impact of pharmaceuticals in the municipal sanitary effluent would be beneficial to counter acting the flush it down the drain mentality. Bring to the public the feminization of fish problem and the implications of this to the health of our streams. It was felt that this step would be best handled by marketing, Madison Avenue types which have proven they can convince the American public of anything.

Government or Scientific Challenge:

The second problem discussed was the monitoring of the effects of this in the environment. The current endocrine disruptor tests do not necessarily translate easily to community level effects and the current short term seven day chronic tests were not considered sensitive enough to accurately reflect the continual exposure of animals in the stream for a daily continuous exposure. Tests need to be developed with a longer exposure period with new end points that can be translated to community effects. A later life stage for an endocrine disruptor type impact may be more appropriate when looking for feminization effects and its impact on community structures.

The other monitoring problem is the ability to detect these substances in the stream environment with any amount of confidence. Currently these substances are tested in laboratories and are based on nominal amounts. The detection limits and the methods for analyzing these substances need to be developed and refined to obtain a much lower detection limit. The current QA/QC reproducible levels are in the ppb range and the effects of this substance are most likely in the part per trillion range.

Round 2:

Participants:

Beth Connors, MEDEP

Christine Manuck, VT DEC

Betsy Colburn, Harvard Forest

Don Mason, Normandeau

This session focused more on the effects of personal care products or choices that people make. Participants felt that the media or at least NPR and The New Yorker was covering issues such as increased fish feminization, increased reproductive problems and increased childhood asthma. It was surmised that these increases can be linked in part to our increase in chemicals for our cleaning mania germophobic society. So many products on the shelf are labeled anti-bacterial. This is responsible for developing resistant strains of bacteria, it was also felt that this contributed to increased autoimmune disorders. Our immune system no longer had a myriad of normal bacteria which would normally be killed or controlled by our immune system have been eliminated or greatly reduced by these products, so that the immune system turns on itself. The other major catch phrase for advertising is aromatherapy. Several aromatherapy scents are estrogen receptors. It was also discussed that the public perception for people who are concerned with these kinds of impacts are the concern over crunchy granola type and not a mainstream problem. There was also a consensus that Americans on a whole may be over medicated. There appears to be a pill for every condition and of course we should maximize our use of these products for the betterment of ourselves and the human condition. It was felt that a major social change was needed. Once again a media marketing problem, which is best, solved by people that market, products and ideas for a living.

However a population that is well educated about the impacts of our personal choices on both ourselves and the planet will make personal choices, not to buy the antimicrobial soaps, not to jump at every new pill for every new problem and an awareness to properly dispose of extra medication. It was felt that the Community of Burlington Vermont was a mesocosm for cities which are strongly influenced by the student population. It was felt that UVM is integral in bringing about changes in buying habits and drug recycling programs. This team felt that our schools and education system need to breach and tackle issues to reduce the uses of pharmaceuticals and 'bactericides' in products and their possible consequences.

Government Responsibility:

The Government should come up with more robust requirements to address possible side effects of new drugs or compounds not only on human health issues, but should be required to do an "Ecological risk assessment" on these products before they are allowed to enter the commercial market. Government should not be afraid to fulfill its role to protect public health and the environment. Government has a responsibility to require big business to demonstrate their new compounds will not cause or contribute to harm.

Round 3:

Nicole Hoyceanyls, Bridgewater\State College

Laurie Neronha, Bridgewater\State College

Heather Pembroke, VT DEC

Bob Lizotte, The Sound School

Diana Heitzman, NYSDEC

Graham Boardman, UConn

Paul Piszczek, NHDES

The problem discussed was the use or discharge of estrogens and estrogen mimics in many personal care products and pharmaceuticals. It was agreed that the problem needs to be addressed on two fronts at once.

Public Responsibility and Awareness:

It was the opinion of this group that education at all levels from elementary school to college was imperative to change the public perception on the use, abuse and disposal of these compounds the consequences of our choices in these matters needs to be a part of the early elementary education. That environmental awareness in recycling program was listed as a key success and model for other environmental concerns. "Catch them early" to develop the skills to make intelligent and beneficial decisions.

Bridgewater State College is currently studying the effects of POTW effluent on fish, first chlorine and next will be doing a study on the effects of estrogen and pseudo estrogens found in sanitary effluent on fish.

Government Responsibility:

EPA should regulate and develop legislation to control estrogen and estrogen mimics compounds. The Legislation should require that manufactures develop alternative chemicals which do not have the estrogen or estrogen mimic compounds. Product substitution should be required by policy and legislation.