

# CONDO LIVING

Saturday, September 11, 1999 Section P

"Sound control requires attention to detail along with a high standard of workmanship."

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## Ask an Expert

# Knock, knock. Who's there? The neighbour

## Chalet-style condo lets sound travel through

**Q** I never imagined that five years and five months after leaving a noisy apartment I would be in the same situation in our chalet-style condo.

After being home from work with the flu for four days, I realized that our privacy in our living room is being invaded by our new neighbour(s):

- Her constant opening and closing of every cupboard in her kitchen vibrates throughout our living space. (I was thinking of smashing a hole in our living room and installing a "Take-out" window for our meals.)

- We can hear all of her meals being chopped on the kitchen countertop.

- We hear and know exactly where the precise locations of her kitchen taps and drain and dishwasher.

- We hear both her dog barking and jumping in the kitchen and the thumping of the stereo through the wall.

- We hear her upstairs washroom toilet flush and drain through our living room wall.

Our unit is chalet-style with a slanting cedar ceiling which extends from our front windows to the second floor. This creates a large open-air concept living room with a very large wall surface that we share with our new neighbour(s).

While our subdivision was built some 15 to 20 years ago, it is obvious in talking with numerous original owners and board directors, that there was much attention paid to detail and a lot of expense was incurred in building these condos. When you come in the driveway you feel like you're "Up North."

I believe the common privacy wall is not a privacy one and is lacking the proper insulation and pipe wrap. I gutted and rebuilt the basement and replaced the original tiled shower with a fiberglass one, and found that the insulation behind the walls was of the minimum thickness. (I teach building construction.)

I realize that there are everyday noises that one has to deal with. But the ones I have outlined are becoming increasingly stress-producing. We are trying to find refuge in other parts of the house, which makes us prisoners in our own home.

We made and upgraded many features to our home. I'm hoping that some kind of solution to my problem can be worked out.

**A** Condo Living sent the question to Martin Gerskup, the principal of Best Consultants Inc. and an investigative architect and building science specialist. He is an adjunct assistant professor in the Faculty of Architecture, Landscape, and Design at the University of Toronto.

Noise, simply defined, is unwanted sound. Building codes mandate certain types of airborne sound control but do not address impact noise and vibration control. Noise control is dictated by the building's space plan and type of construction.

The reader has indicated that the condominium is a "chalet style" building, but did not provide any information on the structure of the building. The everyday sound of a neighbour's barking dog, stereo, plumbing and meal preparation would seem to indicate problems in the design and/or construction of the condominium.

Condominiums are designed to handle impact noise and vibration control in addition to airborne sound. Designers usually try to avoid placing noise sensitive spaces (i.e. bedrooms) above, below, or beside noisy spaces such as kitchens, living rooms, etc. The reader's unit should have been separated from the adjacent unit with a sound-rated party wall. The Reader has commented that the insulation in the walls "was of the minimum thickness" but has not described the construction of the party wall.

The building code dictates specific types of construction for sound-rated wall assemblies. Interior sound isolation is based on the Sound Transmission Class (STC) rating system referenced in the Building Code. The Building Code requires a STC rating of

50 or higher for partition walls between adjacent dwelling units.

Noise level guidelines for residential condominiums also consider noise-criteria (NC) curves to rate the background noise level within suites.

For most condominiums, a range of NC25 to NC35 would be considered acceptable. Noise in excess of NC35 would be objectionable to most people.

One explanation for the reader's problems could be excessive noise transmission across poorly constructed sound-rated party walls. Another explanation could be that the reader is ultra-sensitive to every day sounds and that while home with the flu became disturbed by the sounds produced by the neighbours.

Many buildings are designed with sound-rated party walls of STC 55 or more to compensate for anticipated sound leaks due to poor workmanship or flanking (indirect) transmission paths. The degree of sound control provided at the time of construction may not have been adequate in isolating neighbouring noises from the reader's unit.

Any attempt to address the reader's concerns will most likely involve changes to the existing party wall construction. Changes should not be made without consultation with someone experienced and competent in the field of acoustical design.

Sound control requires attention to detail along with a high standard of workmanship.

The corporation may consider engaging the services of an experienced acoustical engineer to determine if and where sound control measures should be implemented.

Do you have a question about condos? Send it to Condo Living, The Toronto Star, One Yonge St., Toronto M5E 1E6, fax it to Ask an Expert, (416) 865-3635 or by E-mail (condos@thestar.ca).