It Takes Guts

December 1, 2000 By Lark Lands, PhD

For a burglar trying to break into your house, the presence of many doors and windows boosts the chances for success. Based on new UCLA research, it appears that HIV's likelihood of gaining access to the body is similarly enhanced by an increased number of entryways—called co-receptors—in the gut, which contains 50 to 70 percent of the body's T cells (by contrast, just 2 percent are found in the blood; see "From the Gut," POZ, November 1999). Using samples taken from HIV negative volunteers, researchers compared T cells found in the blood with those taken from gut (gastrointestinal tract) biopsies. They found seven times the number of the CCR5 coreceptors that HIV must use along with CD4 receptors in order to infect a cell. Chief researcher Peter Anton, MD, says: "That goes a long way toward explaining why HIV prefers to stake out its home base in the gut. Since the virus can only infect T cells that have the right combination of coreceptors, the much higher number in the gut literally unlocks the door so HIV can get in."

Adding insult to injury, when the researchers exposed the T cells taken from the two different sources to HIV, they found that while viral replication in the blood-derived T cells was relatively low level, the gut-derived cells made for a happy viral petri dish. And, Anton warns, since the lining of the GI tract is only a single cell thick, even slight abrasions that occur during anal or oral sex can expose those plentifully receptored gut T cells to HIV. Consider it another encouragement to place that warning sticker on the premises: This Body Protected by Latex Security Services.