

J09 Anatomy of Addiction

March 2009

Intro: Cigarettes are highly addicting. But why is it that some people who try cigarettes can put them down and never get addicted while others get hooked right away? The answer lies in how your brain responds to nicotine. More on the anatomy of addiction from Mayo Clinic.

Video

Total running time 2:04

**CG :08 to :39
Richard Hurt, M.D.
Mayo Clinic**

Audio

A FEW PUFFS IS ALL IT TAKES FOR SOME PEOPLE TO BECOME ADDICTED TO CIGARETTES. AND THEN THERE ARE PEOPLE LIKE UNCLE CHARLIE.

“EVERYONE KNOWS AN UNCLE CHARLIE. UNCLE CHARLIE WAS BASICALLY NOT A VERY PRODUCTIVE PERSON. HE COULDN'T HOLD A JOB, WAS MARRIED SIX TIMES, SMOKED A PACK OF CIGARETTES A DAY FOR 25 YEARS, AND ONE DAY DECIDED TO STOP SMOKING AND HE DID. HE DIDN'T HAVE WITHDRAWAL

SYMPTOMS, DIDN'T USE ANY
MEDICATIONS. SO FOR THE
ADDICTED SMOKER, THEY LOOK
AT UNCLE CHARLIE AND SAY, IF HE
COULD DO THAT AND I CAN'T
THERE MUST BE SOMETHING
WRONG WITH ME. AND THE
REALITY IS, THERE'S NOT
SOMETHING WRONG WITH THE
PERSON, IT'S THAT THEIR BRAIN
HAS BEEN ALTERED BECAUSE OF
SMOKING CIGARETTES."

DR. RICHARD HURT HEADS THE
CENTER FOR TOBACCO FREE
LIVING. HE SAYS YOUR CHANCES
OF BECOMING ADDICTED TO
CIGARETTES HINGE ON GENETICS,
ON HOW YOUR BRAIN RESPONDS
TO NICOTINE. IT ONLY TAKES
ABOUT FIVE HEARTBEATS FOR
NICOTINE TO GO FROM THE
CIGARETTE TO YOUR BRAIN. FOR
MANY PEOPLE IT STIMULATES

Standup

CG:53 to :57

Vivien Williams

Reporting

RECEPTORS THAT RELEASE
DOPAMINE AND CAUSE THE
PLEASURE RESPONSE. OVER TIME,
THE RECEPTORS INCREASE IN
NUMBER AND CHANGE THE
ANATOMY OF THE BRAIN. SO
WHEN YOU TRY TO QUIT SMOKING
YOU CUT OFF THE PLEASURE
RESPONSE BECAUSE YOU ARE
DEPRIVING THE RECEPTORS OF
NICOTINE.

Richard Hurt, M.D.
Mayo Clinic

“AND THEY OBJECT TO THAT WITH
WITHDRAWAL SYMPTOMS.”

IRRITABILITY, ANXIETY, THE
INABILITY TO CONCENTRATE.

IF YOU MAKE IT THROUGH
WITHDRAWAL AND QUIT SMOKING,
THE NUMBER OF NICOTINE
RECEPTORS REDUCES TO
NORMAL.

Richard Hurt, M.D.
Mayo Clinic

“BUT THEY DON'T FORGET WHAT
ALL THAT FELT LIKE. SO A SMOKER
MAY HAVE STOPPED SMOKING

FOR SIX MONTHS AND THEN BE IN
A SITUATION WHERE THEY
NORMALLY WOULD SMOKE AGAIN,
AND THE RECEPTORS SAY, 'YOU
KNOW, IT USED TO BE WHEN I WAS
IN THAT SITUATION I'D HAVE A
CIGARETTE, SO I WANT A
CIGARETTE RIGHT THIS MINUTE.'"
SUCH URGES CAN LAST FOR
YEARS AFTER QUITTING. BUT DR.
HURT SAYS MEDICATIONS SUCH
AS THE NICOTINE PATCH OR
OTHER NON-NICOTINE
PRESCRIPTION MEDICATIONS
PLUS COUNSELING CAN HELP
SMOKERS GAIN CONTROL OVER
THEIR ADDICTION AND MOVE
FORWARD INTO A HEALTHIER,
SMOKE-FREE LIFE. FOR MEDICAL
EDGE, I'M VIVIEN WILLIAMS.

Anchor tag:

If you want to quit, call 1-800-QUITNOW for help. For more information about quitting smoking or Mayo Clinic's Center for Tobacco Free Living, visit our website at...[STATIONS: Per the licensing agreement, please provide a link from your station's website to <http://www.mayoclinic.org> or voice tag "mayoclinic.org" for more information.]