

WARREN COUNTY COMBINED HEALTH DISTRICT WEIGHT MANAGEMENT CLASS

MARCH 18, 2019

THE HUNGER HORMONES...LEPTIN VS. GHRELIN!

OUR BODIES ARE AMAZING! BELIEVE IT OR NOT, WE HAVE CERTAIN MECHANISMS THAT REGULATE FOOD INTAKE. TO BE SURE, THOSE COMPLEX SYSTEMS CAN BE IGNORED AND BYPASSED – AND UNFORTUNATELY, ON A REGULAR BASIS, THEY ARE! SPEAKING FROM A PHYSIOLOGICAL STANDPOINT, THE TWO MAIN HORMONES THAT DICTATE HUNGER AND SATIETY LEVELS ARE *GHRELIN* AND *LEPTIN*.

WE LIKE LEPTIN!

BELIEVE IT OR NOT, OUR FAT CELLS PRODUCE A CHEMICAL SIGNAL WHICH IS DEPOSITED IN OUR BLOOD THAT SAYS, “STOP EATING!” (LEPTIN IS THE SATIETY HORMONE, ACTUALLY MADE BY THE ADIPOSE, OR FAT CELLS, THAT HELPS REGULATE ENERGY BALANCE BY INHIBITING HUNGER.) LEFT TO ITS OWN DEVICES, FAT IS ACTUALLY SELF-REGULATING! THE PROBLEM OCCURS WHEN WE OVERRIDE OUR INTERNAL MONITORING SYSTEMS AND CONTINUE TO EAT WHEN WE’RE ALREADY FULL. IN OTHER WORDS – YOUR BODY KNOWS WHEN IT’S HAD ENOUGH! SO HOW DOES THIS WORK? HOW DOES *FAT* CURB THE APPETITE? LIKE I SAID BEFORE, THROUGH ONE OF THE MOST IMPORTANT CHEMICALS IN THE WEIGHT REDUCTION PROCESS: *LEPTIN*. IT’S A PROTEIN SECRETED BY STORED FAT. IN FACT, ACCORDING TO THE LITERATURE I READ, IF LEPTIN IS WORKING THE WAY IT SHOULD, IT GIVES YOU A DOUBLE WHAMMY! THE STIMULATION OF LEPTIN SHUTS OFF YOUR HUNGER *AND* ENABLES YOU TO BURN MORE CALORIES!

HERE’S THE (DARN!) FLY IN THE OINTMENT: “LEPTIN RESISTANCE” IS A “THING.” LEPTIN DOESN’T ALWAYS WORK THE WAY IT’S SUPPOSED TO. (YOU PROBABLY ALREADY FIGURED THAT ONE OUT!) IN A STUDY, WHEN LEPTIN WAS GIVEN TO FOLKS, THEY INITIALLY GOT THIN...THEN SOMETHING STRANGE HAPPENED: *THEIR BODIES OVERCAME THE SURGE OF LEPTIN AND STOPPED LOSING WEIGHT!*

IT'S PRETTY TRICKY. OUR BODIES HAVE THE ABILITY TO OVERRIDE LEPTIN'S VERY CRUCIAL MESSAGE THAT OUR "TANK IS FULL." HOW DOES THIS HAPPEN? WHEN LEPTIN TELLS YOUR SATIETY HORMONES TO KICK IN AND PREVENT YOU FROM TAKING ANOTHER BROWNIE, YOUR BRAIN BEGS TO DIFFER! (SOUNDS FAMILIAR, RIGHT?!) THAT FLOOD FROM THE PLEASURE CENTER IN YOUR BRAIN (REMEMBER WHEN WE'VE TALKED ABOUT "ELECTRIC" FOODS?) CAN TURN A DEAF EAR ON LEPTIN'S MESSAGE. A SECOND FORM OF LEPTIN RESISTANCE HAPPENS WHEN CELLS STOP ACCEPTING LEPTIN'S INFORMATION. MOST OBESE PEOPLE DO HAVE HIGH LEPTIN LEVELS; IT'S JUST THAT THEIR BODIES DON'T RECEIVE NOR RESPOND TO THE SIGNALS. SO, AGAIN: A DECREASED SENSITIVITY TO LEPTIN OCCURS, RESULTING IN AN INABILITY TO DETECT SATIETY DESPITE HIGH ENERGY STORES.

TRY GIVING LEPTIN A CHANCE! THE CHALLENGE IS TO LET LEPTIN DO ITS MAIN JOB SO THAT THE BRAIN DEMANDS LESS FOOD. ONE SIMPLE WAY TO DO THIS IS TO WALK 30 MINUTES A DAY, THEREBY BUILDING A LITTLE MUSCLE. WHEN YOU LOSE WEIGHT, YOUR CELLS BECOME MORE SENSITIVE AND RESPONSIVE TO LEPTIN. LET ME MENTION ANOTHER WAY TO PROTECT AND PROMOTE GOOD LEPTIN LEVELS: AVOID AND / OR LIMIT HIGH SUGAR TREATS. BY DOING THIS, WE CAN PREVENT INSULIN SPIKES, WHICH THEMSELVES RAISE LEPTIN PRODUCTION. THIS CAN CREATE THAT VICIOUS CYCLE WHICH CAN LEAD TO LEPTIN RESISTANCE.

GROWLIN' GHRELIN!

WE'VE TALKED A LITTLE ABOUT THIS FEISTY CHEMICAL IN THE PAST. WHEN YOUR STOMACH IS GROWLING, IT'S DUE TO THIS HORMONE THAT'S CONTROLLING YOUR BODY'S HUNGER SIGNS. IT SENDS DESPERATE "MAYDAY" LIKE SIGNALS THAT YOUR BODY NEEDS FOOD IMMEDIATELY! IT'S AN APPETITE INCREASER RELEASED BY THE STOMACH; IT TELLS THE BRAIN, "LET'S EAT!" GHRELIN MAKES YOU WANT TO EAT BY STIMULATING NPY. (IN CASE YOU'RE CURIOUS, NEUROPEPTIDE Y IS A STRESS HORMONE THAT INCREASES WITH SEVERE OR PROLONGED STRESS. THIS MAY BE WHY SOME FOLKS IN CHRONICALLY STRESSFUL SITUATIONS TEND TO GAIN WEIGHT!)

LET'S ADD INSULT TO INJURY: WHEN YOU DIET THROUGH DEPRIVATION, THE INCREASED GHRELIN SECRETION SENDS EVEN MORE SIGNALS TO EAT, THUS CANCELLING OUT YOUR WILLPOWER AND CAUSING CHEMICAL

REACTIONS THAT GIVE YOU LITTLE CHOICE BUT TO CHECK YOUR POCKETS FOR SPARE CHANGE SO YOU CAN PAY A VISIT TO THE VENDING MACHINE!

GHRELIN IS NAUGHTY...IT PROMOTES EATING (AND OVER EATING!) IN YET ANOTHER WAY. IT INCREASES THE SECRETION OF GROWTH HORMONE. SO - WHEN YOU INCREASE GHRELIN LEVELS, YOU STIMULATE THAT GROWTH HORMONE TO KICK IN - AND GROWTH HORMONE BUILDS YOU NOT ONLY UP, BUT OUT, AS WELL!

WHAT TO DO? WHAT, BESIDES THE METHODS WE DISCUSS ALL THE TIME: BEHAVIORAL MODIFICATION, EXERCISE, ETC. ETC.!? WELL, THERE IS EVIDENCE THAT EATING A DIET LOWER IN FAT WITH ADEQUATE PROTEIN AND “GOOD” CARBS WILL DECREASE GHRELIN LEVELS AND KEEP THEM AT A NORMAL LEVEL FOR A LONGER PERIOD OF TIME. (IN OTHER WORDS, BETTER SATIETY LEVELS!) I’M SURE THIS IS ALL STRONGLY RELATED. THE FOOD PATTERN I JUST DESCRIBED IS PERFECT FOR BLOOD SUGAR MAINTENANCE. EATING A DIET HIGH IN FAT, AS USUAL, THROWS A WRENCH INTO THE WORKS.

OUR GOAL (AFTER WE LOSE UNWANTED WEIGHT!) IS TO ACHIEVE *CALORIE HOMEOSTASIS*, ALSO KNOWN AS ENERGY BALANCE. THE CLOSER WE GET TO OUR BODY’S NATURAL STATE, THE BETTER OUR BODY IS ALLOWED TO WORK. EXTRA FAT REALLY DOES MESS EVERYTHING UP! REMEMBER, IF YOU CAN LOSE AND (MOST IMPORTANTLY!) MAINTAIN 10 OR 15% OF YOUR BODY WEIGHT, THINGS WILL IMPROVE! AND BY “THINGS” I MEAN BLOOD PRESSURE, BLOOD SUGAR, CHOLESTEROL, ETC.! YOU MAY NOT BE ABLE TO GET OFF THE MEDICATIONS YOU’RE CURRENTLY TAKING, BUT IT’S POSSIBLE THAT THE THOSE MEDS WILL WORK BETTER.

HOW DID YOU DO WITH “NO FRIED FOODS” THIS WEEK?

OUR “NO!” FOOD FOR THIS WEEK: **COOKIES!!!**

HAVE A GREAT WEEK! SEE YOU MONDAY!

