0:22 okay today we're going to talk about 0:24 carb cycling 0:25 what it is how it works why it works and 0:28 why you should implement it in your own 0:29 diet strategy and so we're going to 0:31 start with 0:32 is essentially what is a diet 0:35 and that starts with what the human body 0:37 is and basically what we are 0:38 is a closed thermodynamic system meaning 0:42 we have some energy input in 0:47 and some energy input out and they have 0:50 to equal each other and the reason they 0:53 have to equal each other is the law of 0:55 conservation of energy 0:56 and you can disagree with that all you 0:58 want but i can tell you that every 1:00 physicist of the last 150 years 1:02 has devoted a large portion of their 1:04 life to proving that wrong 1:06 because if anyone could ever prove it 1:08 wrong it's an immediately guaranteed 1:10 nobel prize 1:12 and even better you're the world's first 1:13 trillionaire because you solve the world 1:15 energy crisis and you're creating energy 1:17 from nothing 1:18 that's what this means if calories in a 1:20 dozen equal calories out it means you've 1:22 created 1:22 energy from nothing meaning we no longer 1:25 need 1:26 uh coal fuel gasoline oil electric 1:29 energy nothing 1:30 we just snap our fingers and have 1:31 magical energy and so that doesn't 1:33 happen 1:34 and so what's going on that is so 1:37 if we eat thousand calories 1:41 and we burn three thousand calories 1:44 we're in that negative one thousand 1:46 calories where do those calories have to 1:48 come from 1:49 they come from stored energy in the body 1:51 and the body stores energy in three ways 1:55 one is carbs 1:58 which is glycogen the body stores 2:00 carbohydrates glycogen in the muscle in 2:02 the liver 2:03 two is fat obviously we have 2:07 almost essentially unlimited ability to 2:09 store fat for other users 2:11 and three is muscle 2:16 now we want to not use muscle for energy 2:20 and we want to maximize the amount of 2:21 fat we use for energy 2:23 by playing with the way we use 2:26 carbohydrates for energy 2:27 and that's essentially the gist of carb 2:29 cycling 2:32 and so how does it work 2:35 well let's start with the case of a diet 2:37 situation 2:39 and i'll start with uh this is shown in 2:41 studies 2:42 let's take two cases case one is a 2:44 person eats a hypercaloric diet 2:47 with the same amount of calories every 2:49 single day of the week 2:51 say they're in a 500 calorie daily 2:52 deficit that's 3 500 calories for the 2:54 week or about a pound of fat per week 2:56 if all those excess calories come from 2:58 stored fat energy 3:00 now if you take that same person and 3:02 have them eat the same total weekly 3:04 calorie count but on one of those days 3:07 the calories go very high 3:08 and on the rest of the days they're a 3:09 little bit lower that person will 3:12 actually have an improved body 3:13 composition over the first person 3:15 and why that's that's where 3:17 consolidation comes in 3:19 so let's take an example we have a 3:21 person 3:22 let's do a simple a simple carb cycle we 3:25 do very low carbohydrate is one high 3:27 carbohydrate day 3:28 so six days a week we have very low 3:30 carbohydrates we're burning stored 3:32 glycogen we're burning fat for energy 3:34 and hopefully not any muscle for energy 3:37 now we get to the seventh day 3:38 and we're depleted in glycogen uh we've 3:41 been burning some fat but we're so 3:43 depleted glycogen not that now we're on 3:45 the verge 3:46 of running out of muscle glycogen and 3:48 and needing to create 3:49 that carbohydrate energy in cases where 3:51 we need it and the way the body creates 3:53 it is through gluconeogenesis which is 3:55 breaking down protein structures 3:57 to create glucose to create the energy 3:59 source 4:00 and the worst case scenario that's going 4:02 to come from breakdown of muscle tissue 4:04 and so i'll use myself for example 4:06 someone my size 4:08 can probably store about a thousand 4:10

grams of uh glycogen 4:12 and then let's say on a typical diet for 4:15 round numbers let's say 4:16 i can eat 250 grams of protein and 500 4:18 grams of carbohydrates without storing 4:20 any calories that's fat let's say that's 4:21 my baseline metabolism 4:23 now i let's say that i go into that high 4:25 carb day depleted of all thousand grams 4:27 of glycogen 4:28 it's not going to happen when it's easy 4:30 for just for round numbers we'll use 4:31 that 4:32 so i go into the high date already 4:33 depleted a thousand grams of glycogen 4:35 and we know i can eat 500 grams of 4:36 carbohydrates 4:37 without storing as any as fat so what 4:40 that means then 4:41 is i can eat 1500 grams of carbs on that 4:44 day 4:44 which i know is more calories than i 4:47 burn so i know i'm going to store 4:49 those calories as energy in the body but 4:51 because i'm depleted of glycogen 4:54 those calories are going to be 4:55 preferentially stored as glycogen rather 4:57 than fat 4:58 if they come from carbohydrate sources 5:00 and so that's what we do 5:01 so in that case i can eat 1500 grams of 5:04 carbs now imagine yourself 5:06 four weeks out of a contest starving 5:09 carb depleted 5:10 imagine what kind of mental and physical 5:13 energy boost you're going to get from 5:14 eating 1500 grams of carbohydrates in a 5:16 day 5:17 and even better knowing that 5:20 none or very little of those 5:21 carbohydrates can be stored as fat 5:23 they're going to be stored with muscle 5:24 glycogen 5:25 which then powers you through the rest 5:26 of the week for the initial stages of 5:29 any energy deficit where you're using 5:30 stored glycogen 5:32 before stored fat and that and that's 5:34 basically the gist of carb cycling for 5:36 fat loss 5:37 and so let me let me give an example of 5:38 typically how i'll do it we'll have 5:40 three different days 5:43 we'll have your low carb days 5:46 your medium carb days 5:49 and your high carb days now the low carb 5:52 days are going to be on your days off 5:54 and on those days we're going to go very 5:55 low carbohydrate you don't need carbs 5:57 we're not doing anything we're not 5:58 training 5:59 maybe we're doing cardio but we don't 6:00 want to use carb energy for cardio 6:03 anyways we want to maximize a lot of fat 6:04 we use 6:05 so on that day let's i'll just give some 6:08 examples let's say this person is eating 6:10 50 grams of protein per meal 6:13 maybe only vegetables for carbs 6:17 and maybe 10 grams of additional fat on 6:20 top of the protein fat 6:22 per meal so it's a hypochloric day very 6:25 low calorie 6:26 they're depleting the body of energy so 6:28 reserves uh 6:30 prefer preferably from fat sources 6:33 hopefully 6:34 uh and because carbohydrates are so low 6:36 and we're not doing any intense activity 6:38 a lot of those calories will come from 6:39 fat and then on the medium carb day will 6:41 be 6:41 basically any day we're training with 6:43 weights and let's say we do the same 6:45 thing 6:46 50 grams of protein and let's say for 6:49 it wouldn't be this way with the way i 6:50 would do it we would vary by the meal 6:52 but let's for round numbers let's say 6:53 the person is having 6:55 50 grams of carbs per meal and 6:58 let's say 7 grams of fat so in this case 7:01 the calories are higher than the low day 7:03 most of the excess calories really all 7:05 of them because everything else either 7:06 equal or lower 7:08 is coming from carbohydrates that 7:09 provides an easy energy source for 7:11 weight training 7:13 uh to make sure they're you know so you 7:15 can actually train how you're not so 7:16 depleted 7:17 but if that net calorie total is less 7:20 than the calories you burn you are still 7:21 going to lose 7:22 that stored energy from the body as a 7:24 mixture of fat and carbohydrates 7:26 now we go into that high day and now i'm 7:29 extremely depleted in glycogen from all 7:31 the low days in the medium days 7:32 throughout the week 7:33 and on this day let's say i do 30 grams 7:36 of protein

7:38 150 grams of carbs per meal 7:41 and 0 grams of added fat now 7:47 imagine being in a in a deep contest 7:49 diet being able to eat 150 grams of 7:51 carbs six times a day 7:53 and not only not lose progress with your 7:56 diet but improve progress from the diet 7:58 and that's basically what this is doing 8:00 and that that's all it is 8:01 it's just it's just it's just playing 8:03 with the way 8:05 the body stores energy everything is 8:08 bound 8:09 by the boundary conditions of calories 8:11 inverse calories out 8:13 but because their calories aren't 8:15 created the same we just work with the 8:17 difference 8:18 to maximize the rate of fat loss and 8:20 minimize the rate of muscle loss that's 8:22 that's all it is 8:23 the high day increases your metabolism 8:26 uh keeps you 8:27 stored filled with glycogen stores so 8:29 you have readily energy 8:31 sources available for your training on 8:33 your medium days 8:34 and then uh it provides a mental boost 8:38 of 8:38 not being so depleted in glycogen where 8:41 you're unable to function essentially 8:43 and so that's really the long and short 8:46 of it 8:46 now this also works in the off-season 8:50 and so in the off season why do you want 8:53 to extremely high carbohydrates 8:54 and so everyone's going to think well 8:56 protein is what builds most of what 8:57 don't i want to extremely protein in the 8:59 off season 9:00 and i'll tell you why you don't i mean 9:01 you want some of that protein and no one 9:03 knows the exact amount you need to 9:04 prevent muscle loss and that's my muscle 9:06 growth 9:07 but i can guarantee you it's not as high 9:08 as what people are eating 9:10 and we'll we'll actually use things 9:12 we'll do numerically what happens 9:14 so let's take someone and say they've 9:16 gained they've been training for 10 9:17 years and they've added 150 pounds of 9:19 muscle 9:19 they started as a 15 year old as a 150 9:22 pound 9:23 15 year old kid and now they're 25 and 9:25 they're 300 pounds 9:27 of mass monster and so that's an 9:29 extremely high rate of growth 9:31 you know 15 pounds a year well if you 9:32 break that down that's only about 25 9:35 grams of protein synthesis per day 9:37 that's it 9:38 so if you're eating 500 grams of protein 9:40 only 25 if only 25 grams of those 9:42 actually go to build new muscle 9:44 you go from 150 pound junior in high 9:46 school to 300 pound 25 year old mass 9:48 monster 9:50 and so it's it's there's more involved 9:52 than just throwing protein 9:53 at the problem and that's what i call 9:56 first level thinking 9:57 and and everyone does this but anytime 9:59 you try something new and you think okay 10:01 protein does muscle 10:02 i'll eat more protein and build more 10:03 muscle that's personal thinking 10:05 meaning that it and 10:08 with anything that has any level of 10:10 difficulty to achieve first level 10:12 thinking is never the solution because 10:13 if it was 10:15 everyone would achieve their goals 10:16 because the first thing you think 10:19 i need more protein to grow i'll eat 10:20 more protein boom i'm bigger 10:22 that's the first thing everyone thinks 10:24 since everyone isn't bigger 10:26 there's more to the problem and that is 10:28 how you actually use that protein 10:30 and in the season the high carbohydrate 10:32 days allow you to maximize the muscle 10:34 growth 10:35 despite eating less protein and the way 10:38 that works is 10:38 insulin now insulin people say insulin 10:41 is the most powerful anabolic it's 10:42 really not and so it's just 10:43 anti-catabolic 10:44 but it creates embolism through a 10:46 secondary mechanism 10:48 uh when insulin binds to a receptor it 10:51 increases the amino acid uptake 10:53 into that cell and now if you weight 10:55 train and create a stimulus for protein 10:57 synthesis 10:58 at that cell that's how it's going to 10:59 take any amino acids it has and 11:01 synthesize new muscle proteins from them 11:03 well if you have the high insulin level 11:06 and have

more of those cells bound with 11:07 insulin 11:08 driving more amino acids into them 11:10 you're increasing the potential for 11:11 muscle growth 11:12 from the protein you eat so that's 11:14 second level thinking the first level of 11:15 thinking we said 11:16 we just need more protein but we don't 11:19 we have nothing to force that protein to 11:21 actually synthesize new muscle 11:23 with this approach we do now what we do 11:25 is we create the protein synthesis 11:26 through weight training 11:28 and rather than just throw protein into 11:29 the problem and hope it works we take 11:31 the protein we're already eating and we 11:33 maximize its efficiency or effectiveness 11:35 through the increased carbohydrate 11:36 intake and so that's what we do in the 11:38 off season 11:39 where the pre-contest will have one high 11:42 carbohydrate day which is just to 11:44 restore glycogen 11:45 keep uh metabolism relatively high uh 11:48 provide some sanity 11:49 to the diet and some energy reserves to 11:51 power you through the low carbohydrate 11:52 days 11:53 and that's it in the off season the high 11:56 carbohydrate days are different because 11:58 we're not going without carbohydrate 11:59 days depleted 12:01 we're going into them with the idea if 12:02 we could just maximize 12:04 the amount of protein synthesis we can 12:05 create from the from the protein we eat 12:07 on a select number of days of the week 12:10 and so you might say well why don't we 12:11 just do it every day of the week 12:13 and the problem is is because these are 12:14 hypercaloric days you're eating more 12:16 calories than you burn 12:18 now when done correctly we're maximizing 12:20 the number of those calories that are 12:22 both stored as glycogen 12:23 and synthesizes new protein but you can 12:25 never guarantee that you every single 12:28 calorie you eat above what you burn 12:30 is going to be stored the way you want 12:31 it to some of it's always going to be 12:32 stored as fat 12:33 and so that's why you can't do it every 12:35 day because if you did it every day you 12:36 would 12:36 essentially just i mean and that goes 12:38 right back to first level thinking 12:40 if you did it every day you would just 12:42 be too hyper caloric every single day of 12:44 the week 12:44 you'll never be depleted enough for 12:46 glycogen to create this 12:48 need for more glycogen storage and you 12:50 would know just getting fat 12:52 so what we do is the ultimate goal is to 12:54 move to three high carbohydrate days a 12:56 week 12:57 and off season so we'll have the same 12:58 thing 13:00 we'll have our low days on our off days 13:04 we'll have our medium days as our base 13:06 training day 13:07 and then two to three days a week we'll 13:09 have our high day 13:11 where we take advantage of all those 13:13 things i was talking about but typically 13:15 that would start out as like a leg and a 13:16 back day 13:17 and maybe the third day would be on a 13:18 week body part day and 13:20 the other thing that's kind of 13:22 counter-intuitive is the high 13:23 carbohydrate days and the off-season 13:25 will tend to be lower in carbohydrate 13:27 than in the compost diet or in any fat 13:29 loss diet 13:30 and the reason is is because in the in 13:32 the fat loss diet we're going into those 13:34 hot days 13:35 extremely glycogen depleted and so we 13:37 have more room 13:38 to force glycogen in to tap off the lost 13:41 glycogen reserves 13:43 before we start getting into that 13:44 hyperchloric intake in the off season 13:46 we're not entering these high days very 13:48 depleted 13:48 we have lots of car from this day quite 13:50 a bit of cars on this day 13:52 so we're ending that day a few hundred 13:55 grams depleted at best 13:56 where as opposed to like in the case of 13:58 a thousand grams depletion in the in the 14:00 contest diet 14:01 and so we can't force it quite as high 14:03 and so 14:04 but but you're taking it high enough to

14:06 take advantage of those mechanisms that 14:08 that kind of facilitate a faster rate of 14:10 growth 14:11 and and that's really it that's that's 14:14 that's the whole gist of it 14:16 is you're always bound you have to 14:17 understand you're bound by that 14:20 calories in calories out this cycle 14:24 and they always have to be equal and 14:26 within that mix you have 14:27 three energy sources 14:30 protein carbs and fat now at all times 14:33 of the year we want to 14:35 minimize the amount of protein we're 14:37 using for energy we want to use no 14:38 protein for energy if possible 14:40 and we want to maximize the amount of an 14:42 off season we are maximize the amount of 14:44 carbohydrates we're using for energy 14:46 because that's the easiest energy source 14:48 that provides the most 14:49 effective energy for four weight 14:51 training and the context eye we want to 14:53 maximize the amount of fat 14:55 we're using for energy and all those 14:57 things can be done by manipulating 14:59 those three macronutrients under under 15:01 the boundary conditions that calories in 15:03 have to be equal to calories out one way 15:06 or the other and if they're not 15:07 the body is going to pull those calories 15:10 from the energy research in the body 15:12 or store those excess calories and 15:14 energy research in the body 15:15 and carbohydrate cycling is just a way 15:17 to maximize the effectiveness 15:19 of how those energy reserves are stored 15:20 or lost both in contest prep 15:22 and in the offseason 15:30 you ترجم بالعربي

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