

Written Transcript  
On The Line Episode 3.5 “Sack Lunches”

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Grammatical and Spelling Errors are present in this transcript.

Charlie Palmer: Welcome back to On The Line a podcast for today's wild land firefighters. It's been awhile since our last podcast on drones. Longer than I would prefer. Truthfully, our goal during the season is to try and release a new podcast every two weeks and that worked pretty well for season one, but for seasons two and three now that goal is proven to be a little too ambitious between trying to find guests and coordinating studio time and meshing up the schedules of the different individuals involved in the post production editing and all of that. It's kind of proven to be a difficult task to release new content every other Tuesday. So we appreciate your patience with us and we've decided we'd rather try to keep the quality of these podcasts up rather than be driven by some arbitrary timeline. So with that said, we've really enjoyed doing these podcasts. It's a fascinating process. Although it is a little bit strange at times we do one, it gets released and then for the most part we really hear nothing about it. In terms of feedback, did people listen to it? Did they like it? What did we miss? How could we improve it? Those are all the questions you ask when you're trying to get better at something that you're doing. With that said, we have had a little bit of feedback recently. Joey Moore, who's our post production editor keeps track of our download stats. So one month ago on the line was at 30,948 total downloads with listeners from literally around the world. So those aren't Joe Rogan experience or Fresh Air from NPR numbers obviously, but we kind of truthfully are blown away that so many of you decided that what we are doing is worth a listen. We are grateful to you folks who decide to tune in.

Charlie Palmer: After our last podcast on drones, we also gotten one very specific piece of feedback via iTunes from a listener by the name of Clolds71. I hope I have that right. He shared that he listens in the car and that he has to turn the volume all the way up. And even then at times he cannot always hear us and he recommended that we turn the levels up when we post produce and so because of that feedback we did that for all of the episodes that we've done so far. Seasons one through three and that's an invaluable piece of advice. So Clolds71 whoever you are, we owe you a cold one if we should ever cross paths. So that brings us to the current podcast. Our topic today is drum roll. Anybody? No nobody? (drumroll) There we go. All right, sack lunches.

Charlie Palmer: You know those things in a brown or white paper bag that you usually receive in fire camp. The free ones that many folks like to complain about at times. We've talked about nutrition on a couple of different podcasts, but we decided that

focusing specifically on sack lunches would be interesting and worthy of particular focus on its own podcast. And our two guests today are uniquely qualified to talk about sack lunches. One of those folks is our most regular contributor. Dr Brent Ruby., Brent. How's it going?

Brent Ruby: Very good. Good to be here again.

Charlie Palmer: Good. And you always have something going on that's interesting research wise. And that's the case again and I'm sure you will share some of that with us because that research is very much on point with the topic of sack lunches. And then also our other guest is somebody that I've wanted to get on the podcast for some time and we're fortunate that we finally managed to tackle the logistics and all of that and get her on. She and I have worked together in various ways for several years now and I'm just super stoked that we're finally able to execute our plan. All right, so let's review some of your background real quickly. So you started on the great northern fire crew based out of Missoula in 2003. And then went to the Helena hot shots in 2005 okay. And then you jumped out of Missoula when ?

Wanda King: So I rookied in 2007 and then my last fire season was in 2010 and so my name is Wanda.

Brent Ruby: Yeah, you're leaving it hanging there. Everyone's wondering who are you talking about?

Wanda King: Wanda King and, and yeah, I've done fire for good eight years, eight seasons and, and whether it was with federal or with volunteer, I was always hands in at some point. So

Charlie Palmer: I guess that is important to actually tell people your name.

Wanda King: Yeah, I was wondering if you were going to get there.

Charlie Palmer: So Wanda Whildonberg, maiden name now married to Eli King. So Wanda Whildonbirg King is yours. So there I did it. I finally told everybody your your name and so you, you jumped for awhile now you're registered Dietitian. (Yes.) So RD. Okay. And you are currently working for the providence medical centers. They've got a big footprint in Montana.

Wanda King: Yes. And so I work both at St Pat's and also St Joe's in Polson. And so I get a spectrum of people, so from infants all the way to geriatrics and sports nutrition, all the way in between. So it's, it's been a lot of fun, a lot of variety. But this is definitely been one of my passions throughout the years. And this was one of the main reasons why I actually went and got my masters in nutrition to even work with both of you, which has been such a blessing and awesome throughout the years to kind of weave in and out and work with you both.

Charlie Palmer: So there's not many people that say working with us as a blessing.

Brent Ruby: Yeah, I feel fortunate. Where did you do your RD? I can't remember.

Wanda King: So I'm originally from Wisconsin a flat lender and came to the mountains and was doing that back and forth. So undergraduate, UW Steven's point. And then masters, GW Stout.

Brent Ruby: Okay. Okay.

Charlie Palmer: All right. And then we also know each other from the human performance optimization course that we've done for many years. (Yes.) Mostly down at the Academy in Sacramento. (Yes). Yep. So I mentioned then sack lunches is our topic today. So as we kinda did our pre meeting, it made sense to us to kind of start with a little bit of a historical review of basically where have we been, where we're sack lunches before they've gotten to the point where they're at today.

Wanda King: Well, I'm totally going to take the bit on this one because for me the starting was a little bit different from probably where you two are sitting because in 2005 when I was on the shot crew, this is where I first met Brent and I was part of and involved in one of the studies that he was doing, which was with the First Strike Rations. And that was basically doing the fun naked weights, spit tests. And I just remember being on the shot crew either getting 2 MRE's or these First Strike Rations and going, I think I'm gonna die. These two MREs are, are not working for me right now. Cause I remember the switch and it was a long study, and correct me if I'm wrong Brent, but I think it was two weeks and it was just this is what you're getting and this is, that's it.

Wanda King: But I do remember the difference in first strike versus the MREs and the applicability. And so just from the back side of the research stance, I'm sure it was a different ballgame for even collecting all of this information.

Brent Ruby: Of all the studies in terms of logistics. That one was quite complicated because we were trying to coordinate with the army research team that had come out from Boston and they brought staffers that ran some of their portable palm pilots, sort of data collecting systems. There was a dietician who kept track of what was consumed and what wasn't consumed cause all the wrappers came back so that we could quantify the total intake a but each intervention segment was a three day, so 72 hours of controlled diet and then there was an extended one week or whatever washout and then they repeated the other diet. So we could effectively then with the same group of individuals, provide both diets to provide more statistical power to look at differences in the outcome measures like how hard they were working, how did they feel, what were the blood changes, those kinds of things, reaction times and other biometric type samples. But yeah, it was just the logistics of that because you never know where you're going to go. You never know if you're going to be able to access the crews at the

end of the day, which we had to. And uh, it was just, it'd be hard to pull that off nowadays. Maybe cause my patients is not as dramatic, but we had an awesome team from the U S Army Institute of Environmental Medicine. They were the brains behind the development of this First Strike Ration. And we've talked about that in other podcasts. But the first strike is uniquely different from the MRE because it is built around several different food items, liquid, solid, combined, whatever. But it is simply put together or designed to encourage the consumption of multiple small eating episodes throughout the mission in the case of the military or throughout the shift if it were applied to the wild-land teams.

Wanda King: Well and I, I specifically remember during that time because I remember doing in consuming the First Strike Ration initially. And that was the first part that I did. And I was loving the easiness of the different foods that you could pull out whenever and just how easy it was to have those options. Yeah. And then switching to the MREs was a little bit of a blow because that was on some of our harder days for, for that fire that we are on. And I just remember there was one hike specifically that I was literally grabbing trees cause I felt like I was going to pass out on the way out. And I was just like, okay. I mean then that was for me a big trigger to be like, I got to adjust. And so when it came to the lunches, I actually had a big learning lesson there for myself. Looking at just those differences, just like what you just said.

Brent Ruby: Yeah. We do what we can to assist in the, uh, experiential learning that we provide these crews. That's absolutely awesome.

Charlie Palmer: But prior to that, I think we need to lay that groundwork and those folks that are listeners that have been in fire for a while and remember what the old lunch was. We're talking about 2005 2006 2007 as this shift started right before that, the old lunch was,

Wanda King: so it was, gosh, it was two cans of juice. It was piece of fruit, two sandwiches, grandma's cookies, famous Amos cookies bag,

Charlie Palmer: and the salted nut roll, right?

Wanda King: Yup. Yes. Right. Oh yeah. And everything in between. Sometimes trail mix, sometimes not. I mean, and it just varied so much, but it wasn't, oh gosh. I even remember the frozen Burritos at times where I was like, what am I going to do with this? We're mopping up, you know? Yeah.

Charlie Palmer: Heat it on a shovel and eat it. Yeah, yeah, yeah. But that's, that's where we were. That's where we've come from. And then let's talk about that. What was found then through Brent, some of your research and other people's research that that kind of old traditional sack lunch feeding system just wasn't appropriate for a variety of different reasons. For the wild land firefighter. Yeah.

To sit down at noon and mack down that whole lunch. Yup. Just it wasn't the best approach.

Brent Ruby: That has been an amazingly difficult shift in mentality or trying to shift that mentality away from that early sack lunch. Sounds like a typical junior high kid sack lunch only three times the size. Yeah. Basically in terms of the components and so whenever you think about a sack lunch, you think about, okay, I had a decent breakfast, x number of hours has gone by, I've gone to this class or this class or I've done this much work and now it's time for the bell to ring and it's time for me to open up my sack lunch and see what I have in there. Yeah. That's your candy juice.

Charlie Palmer: Exactly. Yeah, and that pineapple, anybody want that?

Brent Ruby: We tried consistently to try to, I haven't tried, well I have a little bit but haven't tried to push to change the food components yet, but mostly just how they are deployed.

Brent Ruby: Instead of sitting down at noon, opening everything, eating everything. The first strike study that we did with and then the other supplemental feeding studies that we have talked about where we manipulated the amount of carbohydrate sources specifically hourly so we could increase, we could get eight or so eating episodes into a given work shift. We saw massive changes positively in blood markers, in movement patterns and total work accumulated in mood states. All of those things shifted towards the positive when there were a large number of eating episodes and we did it in a very controlled way. So that spelled out a nicely with the development of the First Strike Ration study design, which was modeled after some of those early carbohydrate feeding studies, which were modeled after historical carbohydrate feeding studies with endurance and ultra endurance athletes. So we weren't necessarily reinventing the wheel. We were just trying to reinvent how the sack lunch might be opened up, not opening it once, but opening it several times or better yet opening up at the beginning and stockpiling provisions throughout the gear, either in the line gear in the pockets or whatever so that it's accessible and so that you're reminded to remove it every 90 minutes or every hour if you're working harder, whatever. Just to get a consistent trickle of macronutrients into the system.

Speaker 2: So being the nutritional knucklehead in the room. Right. And to summarize that

Brent Ruby: then talking about me?

Charlie Palmer: No me. So the old sack lunch wasn't conducive to that. Right. The research was really that the more frequently you ate every hour to every 90 minutes, right. Your performance was better in multiple different modalities, every cognitive, physical, but the old sack lunch wasn't necessarily set up to allow you to do that.

Brent Ruby: No, it was not designed to do that. And it was never, that was not really a thing. Like it wasn't really thought of is that we designed the sack lunch to be eaten just because it's a sack lunch, so eat it at lunchtime. Right.

Wanda King: It kind of goes back to like that work rest ratio really like you have your half hour slot at lunch so then you eat your lunch. Yeah, but that's not in an essence fire. I mean that's never been fire until it was breaking away from, I think that mold because it's taking a shift like setting and trying to apply it to a very diverse environment that doesn't fit that model and I remember that and experiencing that with that old sack lunch being like, well I can't drink the juice right now. It's warm, it's warm and we're hiking. It just wasn't accessible but I might have needed it.

Brent Ruby: Right. I like that idea of making it synonymous or parallel to the work rest ratio. In fact, you could even call it develop a concept called work fuel ratio and that not all work is the same. Holding the line is not the same as hiking or line construction. That's a different kind of work. So when the work is a, the fuel ratio to that work needs to be this. If the work steps up 25% in intensity, then that's a different fuel demand and frequency and then when it steps up further so it wouldn't be difficult to develop a work fuel relationship or ratio, just like the work rest ratio that sort of prevents hyperthermia or overheating. That's a really neat idea.

Charlie Palmer: So if you're doing this activity, you might want to eat this frequently. If you're doing this activity, maybe you don't need eat quite as frequently, but you still need to eat right every 90 minutes or so

Wanda King: it the next study after the one that you guys did in 2005 2006 after that, it was looking at the carbohydrate ratios. I mean, correct me if I'm wrong Brent, but what was that next study after?

Charlie Palmer: While we, it kind of dovetails in with the first dry because the first drug we just like [inaudible]

Brent Ruby: she's from that we've partnered with UCERIUM. We'll get to UCERIUM is just so folks understand that acronym it is the U S Army Institute of Environmental Medicine. Okay. Tip of the spear as far as military nutrition and a whole host of other things and this belief from those folks that at times is difficult to study their population. Right. And so the firefighter became a surrogate research subject for the war fighter. Yeah, and I've pushed that sort of mindset of thinking

Brent Ruby: Since 1995 that the war fighter is hard to study. But the firefighter, even though they're hard to study, they're more accessible. Yeah. And so that was well received by ucerium historically, but they call me up one day and say, hey, we have this First Strike Ration, can you help us use firefighters as a, as a way to study that. That was the, I can't remember the years get blended, but essentially

we started some of the, the feeding studies with carbohydrates sources hourly. We started with liquid feedings, then we shifted to combined liquid and solid feedings. And then we did the First Strike Ration and then we did another supplemental feeding with carbohydrate scenario. And John Cuddy, who is one of our longtime research center, senior researchers, put those three studies together, those three data collection efforts together. And that came out in 2006 I believe.

Brent Ruby: And it's a supplemental supplemental feeding increases a workout put in wild land firefighters. And shortly after that Scott Montanian finished the First Strike Ration paper. So they do very much compliment each other and the underlying message is not, so it's less about supplemental carbohydrates and more about feeding frequency. If you say increased the number of eating episodes, that's gonna involve consuming more carbohydrates on a regular basis. And that's the, that's the fuel that can get in short supply during some of these long operations. Okay. And then what, what did the first strike look like? Just again, for our listener who might not know what that concept is? The first drag ration is designed to be, it's basically a packaged brick of food items. I don't know how many there are. There's maybe eight and some 10 and some maybe more than others.

Wanda King: Some of the components were in, this is what I remember from actually consuming it. One of them had a Bagel, one of them had applesauce. There was a powdered drink mix. There is a nicotine gum that was a big popular one for a lot of people...

Wanda King: Um, there was Caffeine gum. (Laughing).

Wanda King: Yeah, there we go. Maybe it guy was just sitting here thinking on that. Cause I talk about nicotine a lot (Laughing hard), but my apologies.

Charlie Palmer: Pall Mall with no filter.

Wanda King: My apologies. Um, but yeah, the caffeine gum was a big hit for a lot and there was also different types of power bars. Yeah. But they were all packaged separately, so, so I know a lot of people, we're putting them in pockets and already starting to do those things without even having this type of conversation. Right. Yeah. And so those are just some of the components that I remember and remember using.

Charlie Palmer: And then in contrast to the, the MRE, the meal ready to eat.

Brent Ruby: Right. Which is like got that meal hot item that requires the heating and the specific angle and everything else.

Charlie Palmer: Or you just eat it cold,

Wanda King: which is what most people have to do.

Brent Ruby: Yeah. But it's, it's meant to be more of a sit down meal. It's not a on the go type thing. And on the go nutrition is nothing new. I mean that goes back at like the all these bars and everything. They've just exponentially increased since we started doing this in 90, early nineties. Mid Nineties. Um, but yeah, I remember racing years and years ago before in the 80s and there was nothing like this. There was no cliff bar, there was barely a power bar and there was maybe three flavors and now the market's exploded with all these different convenient things, which is mostly good, but it increases the possibility of sticking these food items into the sack lunches of modern day firefighters and giving them more diversity throughout the days and just creating an opportunity just by simply redesigning the sack lunch to convert their thinking to eating more regularly.

Brent Ruby: I guess if you build it, they will adhere. So if you build it that way, they'll more likely eat it the way that the evidence suggests will enhance their overall workout. I mean we've said lots and lots of times with these studies that our focus is not so much on sweet. If we feed them this way, they'll dig line better, more, get more work done. That's sort of secondary. The more important side of it is they'll be more cognitively compliant and resilient throughout the day so that when decision-making needs to be done at those critical time points late in the afternoon, they'll be at the ready. So it's just a safer way to feed. Yeah.

Wanda King: On your, you're also, you're creating resilient bodies over time. Yeah, I mean that's huge.

Charlie Palmer: Yup. And so then by 2007 Missoula Technology and development center funded the U of M University of Montana. Then to start trying to implement this to see how it would work in an actual fire camp. And so the saw mill complex, the Jocko lakes complex here in Montana with the help of big sky mobile catering. Then because they were the delivery vehicle then to help try and facilitate how this might look. So that was then the first opportunity or the first episode where this change to trying to make a shift. Food lunch happened and then that continued into 2008 and that's unpublished data. But it's, it was information then that we provided to MTDC to say, hey this, this could work. The caterers could pull it off. The firefighters who were consuming the lunches, although it wasn't by any means unanimous that they felt that the shift food lunches were better. They did feel like the change to this approach was better and help them be more effective at their jobs. Right. And so that's kind of the historical review and from that point forward then talk us through that.

Brent Ruby: Well, there's a massive gap here. We are 10 plus years later, right? I mean change is so slow, slow.

Wanda King: So one and I think I can jump in and help with some of those because I know in 2010 the food contract was up for review and I was helping MTDC kind of look at what lunches were, which included what we were just discussing as far as

those components and and looking at the breakdown of the macronutrients, so the carbohydrates, the fats and the proteins to see what are we actually getting and how do we need to adjust this and which then also tied in with what Brent's been talking about as far as like, okay, well if we're adjusting this, then what factors do we have to work on in the current contract? Basically it adjusted. Instead of having two sandwiches, you have a sandwich and another main food item, and I think as it goes, it says like that food item could be a second sandwich or it could be an energy bar of some sort.

Wanda King:

It just has to have a minimum nutritional value of 400 calories and a minimum weight of at least five and a half ounces. And so it started to transition out of that. What we called that in a sense like a traditional sit down lunch to more of what Brent was talking about more let's eat as we go meal and then it was also, we still added the fruit so we have a piece of fruit in there. Dried fruit was getting added in looking at even trail mix and then also like a resealable, some type of 600 calorie wrapped snack, which again that could be a trail mix or a mix of like different dried fruits and then also looking at a higher carbohydrate content because I think some of what we found was that we really had to pay attention to what macronutrients were lacking in what areas we're getting too much in carbohydrate was struggling. Yeah, and I remember that and that's kind of where that shifted to and they definitely took out those canned juices because most people, as I said, like if you're hiking or you're in process of digging line, you're not pulling a juice, you're not pulling the juice out.

Brent Ruby:

It's definitely that 2010 around that time frame. It was definitely a step in the right direction. It wasn't a step in the optimal direction is hard to go from old school sack lunch to completely perfect because completely perfect in the world of fire has probably never anything but it was a great step in the right direction. It created the opportunity for more food components to be included. What it didn't include or what it didn't restrict was the limitations or the inclusion exclusion criteria on why this food item should be in there and why this food item should not be in there. It was kind of a free for all. Well, just put more stuff in there and then unfortunately some of the more stuff that got put in there was not one Uncrustable but two now there's three candy bars and it's just is sort of, there's more food items, but maybe they're not the, there probably are arguably not the best combination of food items and so the new approach, if we want to start to go towards that, the new contract has been generated or it's been initiated.

Brent Ruby:

There's a recent draft of that that our team has helped with and a group at the University of Idaho has helped with, and then the folks at the national technology development center have really spearhead. But the neat thing about, I think this attempt to restructure the catering contract is not just one group talking down to the masses. The conversations have been inclusive between researchers, clinicians, national technologies, development, personnel, caterers, food unit leaders, crew members of all types of crews. So all of that input has been compiled because if you take a dietician may say, we need to have this, a researcher can say, yeah, I love that because it fits here and a

caterer. I was like, that's fine, but we can't get it or it's not available. Or the firefighters saying, I don't, I don't like it. It's going in the food box. Right.

Brent Ruby: And so we started a pro a feeding and not really a, it's not an intervention study like the one we talked about with the First Strike Ration or the others. It was just a free range. What are they getting? How are they eating it? What are they eating and when are they eating? And we initiated that last season and we had oh well over a hundred people in the study where we were following them on a one to one ratio. So one research staff who is a former firefighter, was assigned to each research participant. Everything about the food that they're taking out on the line was inventoried inventory and logged into a tablet. And that tablet was synced to a database. So at the end of the shift it was just dumped into a database. So we knew, okay, here's how many carbohydrates they, the first episode they had, which was at eight 30 in the morning.

Brent Ruby: Then the next one was at 10 30 in the morning and they had this. And so we had all that stuff organized so we could get an idea of how many eating episodes are common, what's the average, and then what is each one of those eating episodes look like? What's the breakdown of carbohydrate, fats and proteins? And these are an incidents just so we're clear. Oh yeah, this is not in the lab, this is on the actual incidents. Over and over and over. And then also we were measuring their activity patterns with the accelerometers that we've used in some of those feeding studies, which is a great objective way to see how much somebody is working or how hard somebody is working consistently throughout the day. And that was done last year and we just submitted that paper for review in a wilderness and environmental medicine.

Brent Ruby: So hopefully the reviews will be favorable for that cause it's the only study of its kind. Normally studies like that lack sensitivity and specificity because you're reliant on dietary recall. I think I ate this at this time or, I did have a three musketeers bar, I think it was somewhere around 11 no, this is semi-supervised of much more sensitive and detailed way to get, it's not food recall its food intake when it happens and live on,

Wanda King: just so people know, like 24 hour recalls are are horrible. You might get maybe 50 to 75% of what somebody's actually consumed. It doesn't even include the portions because right. People's ability to actually look at portions is so distorted that that accuracy, you're right, it's totally gone. That's solid. What are you actually consuming? Really isn't there?

Charlie Palmer: Yeah. I'm excited for this paper to get out there cause it does establish sort of a new field gold standard. I guess the army's not doing this. They'll scan foods, they'll take digital images to try to quantify intake and total calories, but it's such a hard thing unless you give people prepackaged meals and get good compliance. This is essentially as good as a USDA human nutrition labs pre-packaged meal study because essentially they're leaving with a whole host of assembled prepackaged foods and they deploy those when they do. The other nice thing is the sack lunches that were studied during last year and then we're

also doing it again this season. It's ongoing right now. We can assess how much of the sack lunch is consumed throughout the shift. We can also, because we inventory what's remaining on that person or with that crew member at the end, we can also identify what the waste is and what they didn't consume and of the stuff that comes back, some of it can get recirculated and often does, which means it gets thrown into a big box in the rig and maybe they'll eat it the next day or five days later. But some of the food items are semi fresh, like the sandwich, like a pickle, like a hard boiled eggs. If they don't eat them, they're gone. Their waste.

Wanda King: Or the piece of fruit.

Brent Ruby: Yeah, so another reason for this revision is to reduce the waste and reduce the cost.

Charlie Palmer: What are those findings telling you then? Can we talk about that? I mean, is it like, we'll have to kill everybody, You're saying you're, you're documenting each eating episode. Are they having enough eating episodes? Are they choosing the best foods that they possibly could when they do have an episode or are they going for the sugary sweet stuff first and not the healthier things they perhaps should be. I mean what are you finding?

Brent Ruby: It doesn't match up with the other studies in terms of they are not self-selecting a high number of eating episodes like we forced upon them when we provided the carbohydrates in all those different sources, they are not consuming anywhere close to that number of eating episodes. The average number of eating episodes in that data is about four. (Wow) So four per work shift. That's not including the breakfast and the dinner. So it's only on the shift. What are the provisions being consumed and how frequently and the average time is around two hours. There's a wide variety. Some people are just like eat, eat, eat on a very regular basis. Other people, not at all, but the average shakes out to be between four and five eating episodes of work shift. The macronutrient distribution is appropriate. So part of it we think is A education, B building shift provisions that are conducive to allowing people to eat in a way that provides more like eight episodes in a day.

Brent Ruby: So those are sort of the things that jump off the page in that particular study. One of the cool things is this new revision to the catering contract that's being hashed out right now. It includes a primary entree, which is the classic sandwich or wrap. The neat thing that is changed in this draft is the sandwich is supposed to be cut in two portions. Which to me it sounds like such a silly thing, but that's like a massive victory to me because I've always said if we could only cut the sandwich, well originally I really wanted it cut in four pieces because then you could open it up, have a segment of the sandwich, not feel like you have to commit to the whole thing, have a segment of it and then move on, reseal it, put it back and come back to it later.

Brent Ruby: It also specifies that the sandwich should be placed in a resealable package. So like a Ziploc type bag, which is also great because you can use that Ziploc bag for other purposes. You can repurpose it for other things downstream like garbage or whatever. But yeah, that that's a massive change. The new wording suggests that sandwich and the revisions to that sandwich and then it also has a very specific table of seven additional items that have to be in that sack lunch. Another significant change is the term sack lunch is being pushed aside, so the new terminology in this revised catering contract talks about shift provisions, which is a fancy way of saying shift food on the line foods and each one of these, like there's a food bar, a snack bar or candy or cookie or dessert chips, pretzels or crackers. An alternative protein source could be tuna or some sort of Jerky, hard boiled eggs or hummus, something like that. Nuts, seeds, and then a trial item, which gives a little bit more flexibility to the caterer in terms of what they can get. But each one of those categories has specifications attached to them, has to have at least this much of this can't have more than this. So it fine tunes each of the food items and you can't have more than one of an item. So he can't put three Uncrustables in there or two salted nut rolls that is not qualified and there has to be a rotation after three days. They need to change. You need to get more diversity in there.

Charlie Palmer: Well that's interesting. I mean, words matter. So if we're going to not call it a lunch anymore and we're going to call it shift provisions, right? That might seem like a kind of minor or innocuous change, but that actually that's important, isn't it?

Brent Ruby: I think it is. I think it changes the mindset.

Charlie Palmer: Instead of we're gonna, we're going to call it lunch, so we're going to sit down and eat it like lunch. We're going to chow this whole thing down at lunchtime. No, no. We're going to, it's gonna be the provisions that hopefully sustain us from that long period of time between breakfast and dinner.

Brent Ruby: Right. Which could be 12-16 hours.

Wanda King: Well, and just in how, what you're describing, how the foods are going to come. I agree it, it means that people are going to be able to put it in pockets and have it more accessible. Yup. So it isn't going to be that traditional,

Brent Ruby: a lot of the items can be repurposed. So if they're not consumed one day because it's an easy day, well they can be repurposed and reused viably and I hope it will reduce the waste. Yeah.

Wanda King: Which is awesome in the flexibility for, for even an individual's preference for easy day nutrition. Hard Day nutrition.

Charlie Palmer: Absolutely. All right. Curve ball time. We didn't talk about this before, but I'm gonna drop it on both of you. Vegetarian lunches.

Brent Ruby: There's a, there's a specific thing on that. I don't have it printed off from that, but yeah, there is and Wanda can speak more to it, but there's a wording in there for Ovo lacto vegetarians and, and how those changes need to get deployed or built. So it is built into the contract. What's not built into the contract is radical whacked out food trends that are present in everyday life for athletes and whoever else. It's like we can't accommodate all of these goofy food preferences there for those people that are that picky, it's gonna come down to them having to provide some of their own choices.

Wanda King: So well in any firefighter that I have known or talked to, and even including myself, if there is something that I wanted on a fire, I brought it. Yeah. Hands down. There was no question it, it came with me because that was a make or break for me sometimes as far as my performance and in my ability to do what I needed to do. And so I think with the Ovo lacto built in, there is still that ability to make, if you have more dietary preferences, you can still do it. Yeah. But it, it might take some of that maneuvering, like you said, like you just may have to have, you're prepared with something her own.

Charlie Palmer: And again, just for those folks who might not know. And I didn't until I had to read up the, I mean I knew what the vegetarian lunch was, but that the Ovo lacto what does that mean?

Wanda King: So ovo lacto basically you're looking at somebody who is like steering clear of meat but still okay with dairy and eggs, you know, kind of balancing that out and so and being able to add those in. But there, there are those who say nope, not doing either of those, which is what Brent's also alluding to, which you can still maneuver. It's just, again you may have to bring in your own. So right.

Charlie Palmer: So we've kind of reviewed the history, we've reviewed the research that was in place then that was done to help lead to this change to go to the shift food approach. And then Brent you reviewed kind of this upcoming new contract and what it's going to look like and how that's going to translate into changes that the on the ground firefighter might see. What next? What? What do we need to cover? That's still,

Brent Ruby: I just, I, it's, it's like a really exciting time for me cause it seems like, well it doesn't seem, I know I've been doing this a long time and it's, it seems like the stimulus for change has been slow and now all of a sudden there's a lot more momentum behind really doing right. And I, I so, so uh, appreciate the spearhead effort that the national technology development center crew has been able to do to push this towards the forefront. And I really like the all inclusive approach to just not doing this in a box with a dietician and a and a researcher and some national technology development folks, including others all at all levels is so wise. So it's really neat to see this pushing in the right direction. Yeah, it's exciting to me.

Wanda King: You know, on something that, that I'm constantly running into, whether it's day to day or, or even when we've gone and taught it is it's getting some of those

education pieces out that people necessarily aren't getting in traditional settings anymore for, you know, what are your macronutrients? How do we, how do we do the shift provision and do this? And it's getting those education pieces out, which is something that I am truly seeing coming up because I still run into a lot of people that look at me and say, chicken is, a carbohydrate and, and, and I go, okay, well let's review that. What chicken or steak is a carbohydrate? And I'm like, okay, well hold on. Yeah, we're stepping. We're stepping back.

Charlie Palmer: Basic basic nutrition.

Wanda King: Basic. Yeah. And that's all, all levels. And, and I run into it with kids all the way into my older populations and even some of my athletes actually.

Charlie Palmer: Yeah. Cause as I reviewed this, that that's one of the things that stuck out to me. It was, okay, we've got this research, Brent, your research, other people's research that's really supported and advocated for this change to this different approach to feeding that we just as occupational performance athletes need to eat more frequently. That that's one piece of it. And then the other piece is there needs to be a better educational approach to helping folks understand what this is and why it's important. And right. And why they need to do it, why they need to change their eating patterns. Probably when they're fighting fire. And I mean I'll go ahead and say it. I don't, one part's been done. One part is being done. The, I think the other part's been kind of weak. There hasn't been much, if anything for a concentrated, comprehensive, systematic educational approach to helping firefighters realize this. Is that fair?

Wanda King: I would say that's totally fair because and I think Brent, you can say this just as much as me, not only as athletes but even as former firefighter, I learned a lot the hard way even as far as how to pair foods or for different training. Like if you're doing an endurance run for example, like for me I had to learn that I had to match like a kind bar with a gel just so I could get carbohydrate and a good fat source in the same breath or Jerky in there.

Brent Ruby: Yup. And I've always tried desperately to provide educational outcomes or sound bytes that parallel our evidence-based scientific publications and nothing that comes out of my mouth along the lines of how a firefighter should eat is based on anything but the objective data from those publications. I won't banter on about this might be a good idea or that might be a good idea. Has to have some evidence behind it and I think that's very important and when we do say we need to have more education, the education needs to be built on that kind of a foundation. Unfortunately in sources like Facebook and other social media outlets, Dr. Google, anybody in the world can throw out that we've got the latest and greatest hydration tool or or food bar for wildland firefighters, you should buy this.

Brent Ruby: And it's like, where's the data? There is no data behind that product. There might be some basic understanding of something, but that frustrates me that if we're not going to step forward as the clinicians and the scientists and the, and

the teams to put this educational message out there, somebody will, and the other approach is not going to be what we would like. So I feel very strongly that we need to have more education, but it's gotta be the right kind of stuff. It can't just be whimsical and marketing like, so there's too many products that are marketed to athletes and athletes are too damn gullible to stay away from it.

Charlie Palmer: Yeah. Anything else? I mean, I think the government needs to step up then I, I do think on the federal side in particular needs to step up and right. There's s classes for everything. There's L classes across the board there. There needs to be an N class. There needs to be something in a progression ideally of here's basic nutrition, now here's sport nutrition, here's, yeah, and Wanda, you can connect the dots, whatever the other and Brent, whatever the other classes of that might look like. But the fad, the government, the forest service, the BLM, the interior, they collectively need to step up and do a better job of educating their workforce on the importance of nutrition for what they do.

Wanda King: well. cause , when we look at, when we look at firefighting, who are you going to ask about nutrition advice in that setting, it's probably going to be another firefighter. But then you question like, as Brent eloquently said, like what's the research behind what they're saying? And so there has to be, I agree, there has to be that layer added in there because it's not there.

Charlie Palmer: Yeah. There's somebody on the crew who's really interested in nutrition probably.

Brent Ruby: Where are they getting their info where exactly? Magazines or trends online or, or what worked for them or w yeah. With, with that my family member said, and I hear that a lot, well this is what my mom told me to do or this is what my brother told me to do. And it's like, well,

Charlie Palmer: yeah. With that said, and this is anecdotal but wanting to, as you and I have gone out and done some of these courses, my, my general impression is that firefighters are much more educated today about nutrition and the importance of it. And they have specific knowledge and perhaps even educational credentials, exercise science degree.

Wanda King: Even with that said, there's still the different levels because we still get those people who are super knowledgeable to those who haven't ever touched it. And it's finding that balance because we have an, in those teaching moments that we've had with human performance optimization, we've seen all levels.

Charlie Palmer: Yeah, yeah. I'm on a Keto Diet. Yeah. Tell me about the Keto Diet for instance. Yeah, yeah. Oh yeah. Yeah.

Wanda King: I mean, and it, and then it's everything in between. And sometimes it is what is getting pushed hard right now. And as Brent just said, like, well, what's the

research behind it, right. Have athletes ever been using this? Right. And if they have, where's the research to support its efficacy and the evidence of what's the longevity of it? Yes. Sometimes there isn't that isn't there?

Brent Ruby: No. Most of the time it's not. It's just an idea pushed out on Facebook or in some magazine. Yeah, and somebody thinks it's a good idea. And the other thing I think with diet is such a weird, I mentioned this before on other podcasts, but it for a lot of people it's a religion and they hold very true to what they think is what they need and humans are amazingly capable of adapting to a lot of things. But all we can say is this is the data that has been collected on firefighters and this is what works. Until something else comes out that says, well, we just did this new paper and now we're suggesting supplementing with this. Until that comes out, which is not yet available. We have what we know and what we know is being firmly woven through this new revision of the food contract. We're not making this stuff up. It's not people just sitting in a room saying, oh, what do you think we should add? It's all based, which is what makes me so excited about the revision. It's, it's all based on the work that we've done with different groups, which is really exciting. So yeah.

Charlie Palmer: Well let's wrap this thing up. Let's have, what do you got for summarization?

Brent Ruby: I just am so proud that agency is going this path and downstream from this it's just going to enhance safety and the health and wellbeing of these teams throughout the season. Cause we know that there's some seasonal decay that seems to occur and it's not the healthiest. And so perhaps by changing some of the dietary patterns during the actual incidents, we can avoid some of those health decay metrics that we've noticed over the last couple of years,

Charlie Palmer: which you covered. And we covered in the seasonal alterations podcast.

Brent Ruby: Yeah. With Dr. Coker from Fairbanks.

Charlie Palmer: Wanda how about for you? And first off, thanks for joining us. T.

Wanda King: Thank you for having me. This has been fun. So you know, a couple of a couple of things that I definitely want to say for for those listening is that just remember that making changes in life doesn't have to be 180 degree turn because just make it one small step at a time, whether it's the lunch meal or whether it's your afternoon snack.

Wanda King: Just please make slow changes because as Brent is saying, and as you were saying, Charlie, and as I'm saying like not only are we looking at preventing that seasonal decay, but we're also looking at promoting solid life long good habits to support you to sustainable habits. Yeah. To support you and the rest of what you want to do in life and having the body and ability to do it.

Charlie Palmer: It's a great way to end it right on. We appreciate you once again tuning into listen, we are grateful for our listeners and we will catch you next time.

Charlie Palmer: You've been listening to on the line, a podcast for today's wild land firefighter. Our audio engineer is Mike Matthews, production assistant Joey Moore, and I'm your host, Charlie Palmer. Thanks for listening and we hope to connect with you again in the future on the line.

Written Transcript

On The Line Episode 3.5 "Sack Lunches"

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