

Huffines Discussion 3

[music] Our next presenter is Dr. Bob Sallis. Dr. Sallis was the president of the ACSM when I was on the board at ACSM, when I went on the board. It was so impressive because he started an initiative back in, I believe, it was 2007 called Exercise is Medicine that has literally swept the world. We're quite pleased to have Bob here to talk about that initiative, but we're really pleased because Bob is class of '87 at A & M, and we're so glad to welcome him back home. Please join me in welcoming Dr. Bob Sallis. [applause]

S2 00:55 Hey Tim. Appreciate it. Howdy, folks. As a graduate of the College of Medicine, it's really an honor for me to come back and speak to you all about something I feel very passionate about. My training has been as a family physician, and I've practiced now close to 25 years. In that time, I've just come to appreciate so acutely the power that exercise has on the health of my patients - that exercise really is a medication that I need to be prescribing in my practice like I would in any other medication. As a family physician, it's a bit depressing to me to think about what really contributes to a person's overall health status. When you break it down, it's about 20% genetics. If you're smart enough to pick the correct set of parents, you give yourself a big leg up. 20%'s your environment. If you live in an environment that exposes you to toxins, to poor food, water sources, infectious diseases, obviously that can impact your health. Only about 10% is access to healthcare.

S2 02:01 I come in day in and day out, we spend all this money on these massive healthcare systems - accounts about 10% of what makes a person healthy. Fully 50% is your behavior, and if you break it down more granular, there are really three main behaviors that you have the biggest impact. The first is exercise, smoking and diet. Now I think we've done a great job with smoking. Almost everybody around the world knows that smoking is dangerous to your health. We talk a lot about the diet issue. It's a very difficult one to get our hands around. I think we've tried. It's very hard to make progress there, but exercise, to me, is one that's simple. People around the world agree on the solution, and Ed alluded to this in his talk. We've got to do a better job prescribing exercise like a medication so we can affect the health of our patient.

S2 02:51 In fact, the journal Lancet, one of the most prestigious journals in the world, just last summer, devoted an entire issue to the global problem of inactivity. The concluding statement of this Lancet series of articles was, "That in view of the prevalence, global reach, and health effect of physical inactivity, the issue should be appropriately described as pandemic, with far reaching health, economic, environmental, and social consequences." How much stronger could a medical journal word its concern about something that's going on in society today? How could we have a journal this prestigious, the very journal that I rely on every day to make treatment decisions about my patients, describes the problem of physical inactivity as being pandemic and it barely gets a ripple. How can that be? It just doesn't make sense.

S2 03:39 If you start to think about a drug called exercise, that exercise is a medicine, imagine if it were in the PDR. For those of you who are in healthcare fields, you'll

know what the PDR is - the Physician's Desk Reference. It is the largest compendium of drugs that exist. Virtually, every drug that we have in our armamentarium is listed in the PDR. Now, think about a drug called exercise, what it would look like? The generic name would be physical activity, but it would come in a variety of formulations, a variety of other brand names - walking, jogging, rolling - if you're in a wheelchair, hiking. Some formulations might require some devices in order to do it like swimming, aerobics, biking, tennis. Some could be done very effectively in groups - basketball, soccer. Some of the formulations of this drug are just down right fun and relaxing like dancing, gardening. Now, the dosage - Ed very clearly alluded to how we arrived at really the optimal dosage - it's around 150 minutes per week in adults and 60 minutes a day in kids. That has very well proven efficacy. We start this drug in low doses, and then we slowly increase the dose as tolerated to achieve the maximum effect to get us in that range. It's one of the only drugs that I know of, other than perhaps prenatal vitamins, that we should actually recommend to pregnant or lactating women. It is actually good for the baby for the mother to be taking this drug.

S2 05:08

The indications and usage of this drugs are myriad. I can't even begin to list them, but just some of the major ones where efficacy has been clearly proven including preventing and treating heart disease, for reducing the development and improving the management of diabetes, for lowering the risk of a variety of cancers, most notably breast and colon cancer, but data continues to emerge on the efficacy of this drug for reducing other types of cancers. It's very effective in lowering blood pressure, for treating hypertension, for managing anxiety and depression. It's as powerful as any of the antidepressants we use. It reduces the risk of dementia. The effect of this drug on the brain is more powerful than any medicine we have. It reduces osteoporosis and, more importantly, helps reduce fracture risk, particularly hip fracture risk in elderly patients who take it. It can help prevent and mitigate the harmful effects of obesity, and what's amazing is a lot of people use this as a recreational drug. In fact, it's the only recreational drug that I would recommend to you.

S2 06:13

Now I haven't experienced, but some runner of my runners even report to me they actually get high when they take a lot of this drug. They call it a runner's high. I've never run hard enough to experience that, but I would sure love to. Now think about the side effect profile of this drug. Almost immediately within starting it, your blood pressure, your pulse, your blood sugar, are decreased. Your muscles strengthen. Your bones strengthen. You lose some weight. More importantly, your mood gets better. Your confidence, your self esteem, your concentration levels - all seem to improve when you're taking this drug on a regular basis. You actually look and feel better, and your bowel habits gets better, and your sleep habits gets better.

S1 06:58

Now there are some adverse reactions. If you take a high dose of this drug in a short amount of time, you often began sweating profusely. That is one of the adverse reactions. There is a chance of injury, mainly when you take excessive doses. You overdose on this drug, sometimes you can pull a muscle or strain a tendon. There is a chance of sudden death, but that's extremely rare and what's interesting is, the more of this drug you take, the chances of dying suddenly while taking it are dramatically reduced. It actually induces a protective effect by taking this drug. Now the administration, as I alluded to earlier-- we want to do it either alone or with others. We want to start off slowly at a low dose,

gradually increase the minutes and the intensity, as needed, to get to the level of a 150 minutes a week. It's very useful to change formulations of this drug because they all work the same. It doesn't matter which formulation you take. If you take the right optimal dose, you get the same benefits. It's good to change up those formulations to decrease boredom, and you can take it outdoors or indoors. You can do it alone or with others any time of the day.

S2 08:09

Ed alluded also to this dose response curve we see with this drug. It's very interesting that the biggest effect of the drug is found in somebody who's naive to it, who's not taking any of this drug, and they do just take moderate amounts of it. They get a significant effect. Now to be sure, if you go from just taking a moderate amount of this drug to higher levels, higher dosages of the drugs, you get more benefit, but the curve starts to flatten out. The real bang for the buck is getting the couch potatoes to just take a little bit of this medication. It's very clear to me that exercise is a wonder drug. If it were listed in the PDR, it would be the most powerful drug that we have available today, and it would be malpractice not to prescribe it. This is a vaccine that can both treat and prevent chronic disease, and studies consistently show that people who take it live longer. What more can you say about a medication? Why would physicians not prescribe this? Why would all patients not want to take it? Could you imagine if we had a pill or a procedure that had even a fraction of the proven benefits of exercise? This would be the most widely prescribed drug in the world. It wouldn't matter what it cost, people would be breaking down the door of pharmacies to get their hands on a drug that was even a fraction this powerful.

S2 09:31

So why has the medical community neglected this information? As a family physician, being a member of the American College of Sports Medicine, I got the feeling like a lot of the scientists were looking at me like, 'Do you read a journal? Do you listen to any of this evidence?' I think at the end of the day, it's just become easier for physicians to just pull out a prescription pad, pull out the computer nowadays, write a prescription to control blood pressure, cholesterol, lower sugar, even to lower a person's BMI. I think a lot of physicians are more comfortable prescribing a pill or bariatric surgery than we are talking to patients about getting more active and eating a proper diet. There's a real fallacy there because there's emerging evidence that medication adherence is woefully low. I hear this complaint from physicians, "Well, it doesn't do me any good to prescribe exercise because my patients don't do it." Well, let me tell you. I got a news flash. They're not taking your medicines either. As few as one in six patients take medicines like physicians prescribe.

S2 10:29

There's also evidence that this reliance on pills actually transfers responsibility of the disease off of the patient and onto the physician. That is, patients who are put on Lipitor for their high cholesterol have actually been shown to not eat less healthy. They're more likely to say, 'Let me have the cheeseburger. The doctors got my cholesterol. He's got my blood pressure. I can have the extra salt because I'm on the medication.' There's also been this widespread belief that we can't change the physical activity habits of our patients, and that's frustrating because there is evidence that even brief counselling or doing things as simple as having the patients wear a pedometer actually does make them exercise more. But, think about it. If we are able to convince patients to take insulin shots, to go on blood thinners like Coumadin, to go on chemotherapy which almost kills you - we're able to convince them to do that - we've got to be able to believe we could convince them to get more active to improve their health.

S2 11:30 Just to illustrate that in a funny way, does anybody know what this medical device is? Luckily by the time I got to A&M we had stopped using this at Scott and White a few years before I got there. This is a medical device that was used in the 1700s. It's a tobacco smoke enema. This was routinely used in medical practice, and imagine what they did. They took a rectal tube, attached it to a fumigator and a bellows, and they first used it to treat drowning. Now I've never drowned before, but I'll submit to you there are things worse than drowning, and I would gladly stop drowning if you just take that tube out of my butt. But, they actually got patients who had constipation, who had cholera, who had convulsions, to undergo a tobacco smoke enema. You know the term 'blowing smoke up your ass?' It's a medical term. We have been blowing smoke up patients' asses for hundreds of years, and they buy it. How could you tell me I couldn't convince-- If I could convince them to do this, I've got to be able to convince them you've got to get out and walk everyday.

S2 12:27 So what can we do? I believe that we need to include an exercise prescription in every treatment plan. Every visit, every patient, every plan you make, we've got to use exercise as a treatment. It should be looked at as a vital sign and all patients should be advised to get 30 minutes of moderate exercise five or more days a week. The message should be the same from every provider. This isn't just for primary care. We've got to merge the fitness industry with the healthcare industry. Why can I as a family physician refer my obese patient to a bariatric surgeon and we pay for them to staple their stomach, but I can't send them to a fitness professional who can help them get more active? That just makes no sense, and I hope those of you students in the audience will go after this in a big way. We got to change the way we're approaching healthcare.

S2 13:12 My practice has been at Kaiser Permanente. We use a computerized medical record, and every patient now gets asked at every visit, how much they're exercising. This is what our medical record looks like. The medical assistant, after she records the traditional vital signs, asks the patient two questions. The first is, "On average, how many days a week do you do just like moderate exercise, like a brisk walk?" They click zero through seven, based on the patient's response. The follow on question is then, "On average, on those days, how many minutes do you exercise at this level?" The computer then multiplies those two numbers together to give us a minutes per week of self-reported exercise and then, if adults are doing less than 150 minutes a week, they're flagged for a best practice alert - flagging them as inactive - and advising the physician to simply counsel them, to just give one sentence like, 'Hey, good job. You're doing 150 minutes a week.' Or, "I noticed today your blood pressure is high. You're doing zero exercise. There's a connection there. We got to get you walking before we start you on a medication."

S2 14:10 We actually encourage physicians to write a walking prescription for the patients, and I like walking as a default exercise prescription because it's accessible. Any age, fitness level, almost anyone can do it. It's low cost. You don't need a gym or special equipment. I love the fact that it's measurable. I can put a pedometer on a patient and say, "Give me 8,000 to 10,000 steps." I can use a stopwatch. Give me 30 minutes or let me have you walk five miles a day. I've got lots of ways to measure. We know that it has good long-term adherence. Multiple studies have proven the value of walking, and it's cost savings. It's a green activity. While there are multiple formulations, I love to prescribe walking

as my primary treatment.

- S2 14:52 I also want to let my adult patients know they got to keep walking to stay ahead of the Grim Reaper. Have you seen this study by these Australian researchers? Very clever. We know that gait speed correlates with mortality rates, so they asked the question, "How fast does the Grim Reaper walk?" What they found-- they had 1,700 men over the age of 70, had them walk at a good brisk pace for them for 20 feet. They found that the Grim Reaper walks about two miles an hour. They then correlated that walking speed with mortality and found that nobody who walked three miles an hour or faster died. I tell my elderly patients, "You're over 70." You need to tell this to your parents, your grandparents. "Once you get over 70, as long as you walk faster than three miles an hour, you're not going to get caught by the Grim Reaper." In fact, we publicize it to our patients. This is one of our commercials at Kaiser Permanente. That's got sound if we can turn it up. [music]
- S2 16:07 We just got to get patients to find their thing, the thing that they can do to get their exercise, and we've been using this in the hospital. We've been harnessing the power of walking in the hospital. We found a little activity device that can measure how much patients walk because study after study shows that hospital patients who get up and walk lower the risk of virtually every hospital- related complication, from bed sores to blood clots to pneumonia. Patients who walk have lower complication rates and they get discharged sooner. So we've been putting this monitor on the ankles of our patients. We measure the number of steps they take. You can see a patient wearing it here - it's very comfortable. The bottom line is, is that this activity sensor via USB stick communicates by Bluetooth to the in-room computer. When you come in to round in the morning as a physician, that note is put on the message board of the patient's room. 'Your patient walked 20 minutes, took 1,235 steps.' I just want to see my patients each day increasing their walking. It's a powerful medication, inside the hospital or outside.
- S2 17:06 So let me summarize, the benefits of exercise in the prevention and treatment of chronic disease is absolutely irrefutable. We don't need any more studies proving the benefit. What we do need is studies to show us how to administer it. The evidence is also overwhelming on the cost and health burden of being sedentary. Exercise as a vaccine - it's a powerful medication, we've got to get people to take it, and for that reason, exercise should be assessed and prescribed at every visit. It should be looked at as a vital sign that physicians communicate to their patient and make a proper exercise prescription every time they see them. This is a drug we need to prescribe. We need to take it to ourselves and we need to prescribe it to our patients. Thank you very much. I'm going to end with just a funny clip. Sometimes you get home at the end of the day. It's tough to get off the couch. This is the kind of effort as a physician that I'm expecting you to make. [inaudible] Thank you very much. [applause]
- S1 18:47 Great. Great job, Bob.
- S2 18:47 Thank you.
- S1 18:48 It took me a while because I was back there watching the clip. [laughter] Good job. We've got a bunch of questions. Briana L. "For every drug there is a limit. Would you say that there is a point where too much exercise is more harmful than helpful?"

- S2 19:00 Yeah, that's a great question, What's the toxic range of this drug? And it differs in every patient. So obviously, somebody who has other injuries or problems, health problems perhaps, it's going to be at a lower dose, but most of the studies show beyond a couple hundred minutes a day don't have much added benefit, and certainly this curve-- as the benefits start to flatten out, but the number of injuries as we raise the dose-- the number of injuries start to climb. So I think as a public health message, the 150 minutes a week makes a lot of sense. That's the rarity. I wish I had more problems with people taking too much of the drug. I'm much more likely dealing with people who aren't taking enough.
- S1 19:38 We've had several people that have emailed or that have texted us and taken you to task on this point. How potent is resistant training as a drug? Which patients would most benefit from this drug?
- S2 19:48 Yeah, that's a great question. Resistance training is amazing. This data has sort of lagged behind the cardiovascular training, but we're finding amazingly the same benefits. Those curves that show the benefits with cardiovascular training look the same as with resistance training, and in fact, what is often negated is as we age, we lose lean muscle mass, we lose bone density, and resistance training dramatically helps that. I get frustrated because we have a drug for osteoporosis, so they've done a great job of pushing bone density, but nobody seems to mention the sarcopenia that's probably a bigger risk factor. This loss of lean muscle mass is probably responsible for infinitely more hip fractures than the low bone density, as yet we totally focus on the bone density.
- S1 20:34 We had a couple of questions in this vein. "Dr. Sallis, howdy from Ryan D. and the Physical Therapy Department at the University of Tennessee. I believe that as technology advances, we continue to see physical activity levels decrease drastically. What are your ideas on merging exercise with the technology eras that are more effective than the Wii?"
- S2 20:54 Yeah, that's a great question. We sort of engineered physical activity out of our kid's life. We've engineered it out of our own lives. 50 years ago, we didn't have to promote exercise because most people got exercise on the job. Now, the vast majority of occupations are sedentary. You can really trace the obesity epidemic with the decrease in physical activity in occupations. We've got to figure out how to get around that. I don't think we're going to bring back those really physically demanding occupations, so we're stuck where we've got to promote exercise. I think the way we're going to promote it is by making it fun, making it social. It's funny to me that the highlight of my day when I was in grade school was recess and PE. How did that suddenly go from being the best part of your day to suddenly being the thing I can't convince people to do? It just doesn't make sense. I think we got to make it social and fun, and I think the smart mind out here is going to figure how to tie this into social media where people can meet up for exercise rather than meet up for coffee or beers or whatever it is. We've got to build that around that.
- S1 21:58 It's almost like we need to say, "Go have fun."
- S2 22:00 Absolutely. Isn't that amazing that that's where we are today?
- S1 22:03 We have one vote for the best line of the whole event, and this is from Reuben H. and he says, "Blowing smoke up your arse has got to be the best line of the whole event." So, thank you for the medical term.

S2 22:12 We can do this. Thank you, Tim.
S1 22:14 Thank you, then, Bob.
S2 22:15 Appreciate it.
S1 22:15 Thank you. [music]