CENTRIC HEALTH Research & Education Foundation

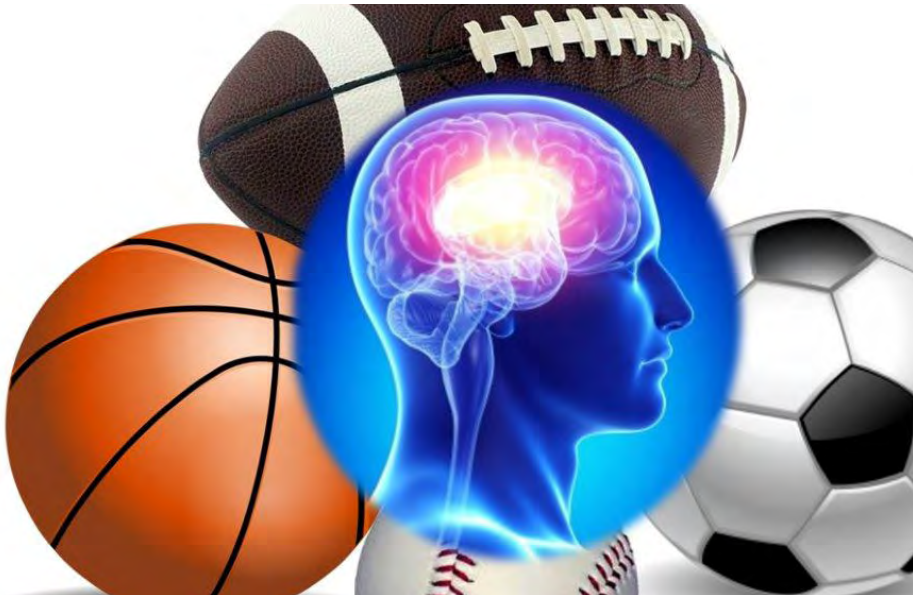
NEWSLETTER

IN THIS ISSUE

CENTRIC HEALTH Research & Education Foundation

MEDICINE TODAY - DR. BAKER

Concussion - What it is, What to do and When to worry



Fall sports brings to us the highs and lows, thrills and spills of football, volleyball and soccer. Football has emerged as "America's Pastime". Girls and young women head to the court for volleyball and youth soccer dots every available playing field with children not chasing the ball and cheering parents and fans on the sideline. There is possibly no greater slice of "Americana" than a Friday night high school football game with excited players, fans and parents, the bands playing and the social engagement of teenagers in full display.

As exciting as all of this is and as much as we enjoy it all, in the last 10 years we have become increasingly aware of a hidden menace – CONCUSSION. The news media has informed us of the potential long term risks of repeated concussions as a cause of CTE (Chronic Traumatic Encephalopathy), and we learned of tragic consequences for former NFL players, professional soccer players, hockey players and others. Recent studies have highlighted the risk for long term consequences from repeated concussion in children and young adults as well. As much as we enjoy watching our children play, enjoy themselves and compete, it is important to understand this frequently hidden risk. As well, the more we know, the better we can understand the potential short and long term risks for more experienced athletes. The same phenomenon underlies many acute and chronic problems suffered by our combat military men and women. In high school athletes, from 2000 statistics, there are an estimated 3.8 million sport-related concussions in the US every year. In high school athletes there is a 3-fold risk of 2nd concussion in the same season. This typically follows a blow to the head.

First is a definition. Concussion is a mild traumatic brain injury (mTBI). This is typically a blow to the head or a sudden deceleration of the

head in a collision. The sudden jolt to the head disturbs the normal neurochemical function of brain cells. No injury is seen on tests such as a CT scan which look for structural damage to the brain. The injury is to brain cell function (especially axons – like insulated wires between cells). Loss of consciousness (knocked out) may occur but usually does not. Symptoms occur immediately and with rest the brain cells recover normal function. It is the lack of rest to allow recovery, or repeated injury which causes potentially serious short and long term consequences.

Signs and symptoms of a concussion include; headache, nausea with or without vomiting, seeing stars of other changes in vision, vacant stare (looks "out of it"), slow to talk or move, confusion and inattention, disorientation, slurred or incoherent speech, loss of coordination, emotions out of proportion to the setting, memory loss (amnesia) and any period of unconsciousness. Symptoms occur immediately after the injury and then evolve over a period of time. Any one or combination of these changes from normal are enough to suspect a concussion.

There is a very specific set of rules which trained coaches, athletic trainers and trained physicians must follow concerning the diagnosis and management of concussion. Since concussion also occurs in children from accidents at home and at school and in adults from a variety of injuries, it is wise for us all to know how to respond when confronted with symptoms of concussion in someone who has experienced a head injury. The "4R's of Sports Concussion" are simply stated: Recognize; Remove; Recover; Return. High School coaches, trainers, officials and physicians are governed by California law (AB 23) which requires that athletes must be immediately *Removed* from play if a concussion is even suspected (Recognize). This step is governed by the mantra: "When in Doubt… Sit it Out". There is then a very specific set of steps mandated by California law requiring that athletes be medically evaluated and when symptoms have resolved and M.D clearance has been given, they may begin a gradual "Return-to-Play" protocol. This is summarized as: "Bike, Run, Agility drills, In the red zone (contact practice), No restrictions (return to competition) - BRAIN. Following the steps mandated by law requires that this process take a minimum of 7 days, thus requiring that an athlete concussed on a Friday night will miss at least one game after the one from which he or she was removed. The Kern High School District (KHSD) has detailed forms covering this process which all athletes and parents are provided and counseled to become familiar with. All KHSD coaches and athletic directors are also trained in this process. It is noteworthy that research has determined that the brain heals fastest with this gradual "Return to Play" and "Return to Learn" program rather than with total rest. 90-95% of young athletes get better within 7-10 days.

If concussion is recognized and reported, there is the opportunity to intervene and follow the process of recovery outlined above. So when should we worry and why? Over 3 decades before CTE was recognized, it became apparent that rapid if not immediate death from head injury in athletes was not simply due to the seriousness of the observed injury but the fact that another blow to the head had occurred within a week of a prior concussion. This became known as Second Impact Syndrome. It was found that if a concussion was not followed by at least 7 days of symptom-free rest after an initial injury, a second concussion could cause sudden massive brain swelling and rapid brain death or at least severe permanent brain injury. Except in boxing, the syndrome primarily affects individuals under the age of 20. The next concern is that following a concussion there could be a more serious injury than initially suspected. It is critical that concussed individuals be followed closely for changing signs and symptoms and if these worsen or new symptoms such as intensifying headache, vomiting, and weakness weakness of arms or legs develop, emergency evaluation is needed. These changes occur less than 1% of the time but do require immediate medical evaluation and possible imaging with a CT brain scan or similar test. Prolonged symptoms of concussion rarely occur and do require a period of continued medical supervision. Finally, regarding CTE, we currently do not know the threshold of head injury severity or frequency necessary to cause chronic brain injury. We do know that nearly 100% of the brains of former NFL players which have been examined exhibit the abnormalities associated with CTE. These abnormalities have also been identified in athletes in other sports and in those as young as their 20s. It is clear that the more concussions the greater the risk and many of the blows causing injury are not recognized at the time as concussions. A great deal of research is being done in this area and I expect that in the next 3-5 years much more will be known and that

knowledge will allow us to better protect children and professionals alike from the short and long term risks associated with contact and collision sports.

Share in the excitement of fall sports but stay alert for the hidden menace of concussion. Help us at the Kern County Concussion Consortium (www.KCCC.us) protect our children and young athletes so they can safely enjoy the activities they love. Let's remember that when it comes to concussion it is best to "Be Aware and Be Prepared".

Supplements, Vitamins and Meds

What Works and What Doesn't? From the Editor – Dr. Baker

According to the Council for Responsible Nutrition (CRN) 2015 survey of Americans, about 170 million take vitamins or dietary supplements. This is 68% of Americans and the percentage has been stable for the past 5 years. 84% of these individuals have a high level of confidence in the quality and safety of the supplements they take. 78% indicate that they believe this is a smart choice for a healthy lifestyle and 65% say that their doctors talk to them about the benefit of supplements. Of the vitamins, 98% are multivitamins, 32% take vitamin D, 27% take vitamin C and 24% take calcium. Of the supplements, 19% take omega 3 fatty acids, 13% take fiber and 12% take probiotics. Among users of these substances 68% are elderly men and 19% are elderly women. This is a $122 Billion industry. But, do they work? Does swallowing all these pills really make us healthier or live longer? What about some of the other over the counter products we take like Glucosamine-chondroitin and probiotics?

In this issue I would like to present the current medical knowledge concerning some of these products. In future issues we will discuss others. Let's start with vitamin D. Vitamin D is essential to absorbing calcium and building bone, without which our bones are soft and fragile (a disorder called rickets in children and osteomalacia in adults). Vitamin D has also been touted as essential to immune function and helpful in preventing heart disease, breast, prostate and colon cancers, weight gain and possibly helpful in treating autism, depression autoimmune disease, osteoporosis and other disorders. Much of this information has driven the widespread usage of vitamin D supplementation. Unfortunately, in spite of many trials attempting to demonstrate benefit, vitamin D supplementation has been proven to NOT be of benefit in

preventing falls or fractures in community dwelling adults and is NOT recommended to prevent coronary heart disease or any other disease. Furthermore, vitamin D overuse can be harmful if taken in excessive amounts. Over time, high doses of vitamin D (such as prolonged use of 50,000 Units per week) can cause bones to become brittle. While vitamin D supplementation may be useful in some women to maintain bone health, the needed dose is only 600-800 units per day. So if you wish to take vitamin D, take a modest amount and set your expectations low. This is not the wonder drug we thought it was even a few years ago. (US Preventive Task Force –JAMA 2018, April 17)

What about Omega-3 fatty acid? Well, the story is still unfolding but it appears that Omega-3 fatty acids may have some benefit for reducing cardiovascular risk. From the ACC Journal of May 2017 the findings of the American Heart Association (AHA) Science Advisory concluded that among patients with coronary heart disease, treatment with Omega-3 polyunsaturated fatty acid (fish oil) to reduce heart attack associated death was reasonable. Similarly, benefit was shown among patients with heart failure with poor heart pumping function. There was noted no benefit in patients to prevent heart disease in patients with diabetes and no benefit to prevent stroke or atrial fibrillation. The role of dietary sources of Seafood Long-Chain n-3 Polyunsaturated Fatty Acids is presented in Circulation of May 15, 2018. This article cites the AHA 2015-2020 Dietary Guidelines for Americans, demonstrating benefit in eating 1-2 meals of fatty fish (salmon, herring, mackerel, tuna, sardines) per week as a proven way to reduce the risk of congestive heart failure, coronary heart disease, ischemic stroke and sudden cardiac death.

As for Niacin the resounding answer is NO. From the American Journal of Cardiology May 30, 2018, Niacin is reported as significantly increasing mortality from all causes in patients taking Niacin at doses of 1-3 grams per day. While initial studies suggested potential benefit from the elevations in HDL achieved with Niacin, numerous subsequent trials demonstrated no cardiovascular benefit from Niacin. In addition, there were noted significant excesses of bleeding, infections, and diabetic complications, gastrointestinal problems such as diarrhea and indigestion and skin rashes.

Review of the study on "Supplemental Vitamins and Minerals for CVD Prevention and Treatment" concluded that while there may be some benefit from supplementation with folic acid in reduced risk of stroke as seen in a study from China, no such benefit has been demonstrated from a North American study. Furthermore, no benefit for prevention of cardiovascular death was recognized from a variety of other vitamins and supplements including the antioxidant combinations of vitamin A, C, E, Beta-carotene, selenium and zinc and there was actually an even higher risk of death from all causes with taking this combination than with Niacin. So, NO to the antioxidants. No significant benefit or harm was seen for vitamins A, B6, E, beta-carotene, magnesium, iron, selenium or multivitamins.

It is concluded that what we have known for a very long time is true. Eat a healthy plant-based diet which supplies all of the vitamins and minerals we will need. Eat 1-2 meals of fatty fish per week. Eat real, good food rather than taking pills!

Athleticism vs. Fitness - By Kelsey Reason, CEP

As we pull out our favorite jerseys to prepare to root for the fall sports we love so much, we can't help but admire these athletes' physique, fitness level, and dedication to their training regimes, and we wonder if they have the secret to success when it comes to health and wellness. While these athletes seem to be in the best shape ever, the truth is that their style is not for everyone. There is a significant difference between how they work out (let's face it, they're professionals!) and how we should be working out to maintain our fitness as an average Joe. Let's take a moment to look at these differences and get a game plan for how we should maintain our cardiovascular health.

A major principle in the world of fitness is "specificity" which is the idea that you train specifically for what you want to develop or accomplish. For example, one wouldn't do crunches to bulk up their biceps, practice football passes to improve pole vaulting skills, or run sprints to train for a marathon. Your training regime should reflect your ultimate goals. An athletic football star is not only working on cardiovascular endurance but are also working on speed, agility, power, hand-eye coordination, etc. Therefore, to simply live a life of general fitness some of these elements are not necessary for our activities of daily living. An athlete who is working at these higher levels to increase performance would likely be exercising in the range of 80-100% of their max heart rate. To be active enough to play with your grandkids without being overly tired after only 5 minutes requires a different strategy.

To maintain cardiovascular endurance you should be exercising between 70-90% of your max heart rate. As a quick review, the Karvonen method is the most accurate calculation to estimate your max heart rate because it takes into account your resting heart rate too. Let's look at an example calculation for a 50 year old man with a resting heart rate of 60 BPM.

(220-50 age) – 60 resting = 110
70%: (110 x .7) + 60 = 137
90%: (110 x .9) + 60 = 159

This man would exercise with a heart rate of 137 – 159 BPM to maintain cardiovascular endurance. If this same man happened to be an athlete exercising at 80-100% max heart rate their range would be 148 – 170 BPM. Keep in mind that the harder the exercise is, the less likely you will be able to sustain it for a long duration. Endurance and stamina is sustained over time whereas strength and power is a quick burst of energy. This is why the athlete runs sprints and drills with rest breaks in between while you settle in on the treadmill or stepper for at least 20 – 60 minutes at the gym. There is an inverse relationship between duration and intensity; the higher the intensity of exercise, the shorter the duration of exercise and vice versa.

Just as a developing athlete cannot expect to be an all-star in their first season, if you are new to exercise don't expect to be an exercise guru after only a few weeks. As with anything worthwhile, fitness takes time to develop so don't give up. Any exercise is better than none and will aid in improving your fitness level to some degree. As the exercise becomes harder, over time your body will adapt and you will improve. Athletes apply this concept to their sport specific exercises but this idea works for all. If you have trouble keeping your heart rate between 70-90% of your max heart rate for the recommended 20-60 minutes, start at 60-70% instead and increase your intensity level gradually over time. But don't forget that even athletes need a doctor's clearance before they start the new season and so do you; always contact your doctor before starting a new exercise program.

Don't Let the Flu Sneak Up on You

- By Bakersfield Heart Hospital

Getting an annual flu shot is the first and best way to protect yourself and your family from the flu. Flu vaccinations can reduce flu illnesses, doctors' visits, and missed work and school due to flu, as well as prevent flu-related hospitalizations. Increasing the number of people who get the flu shot each year helps to protect more people, including older people, very young children, pregnant women and people with certain health conditions who are more at risk for serious flu complications.

What is Influenza (also called Flu)?

The flu is an easily spread illness caused by influenza viruses that infect the nose, throat, and lungs. It can cause mild to severe illness, and at times can lead to death. The best way to prevent the flu is by getting a flu shot each year.

People who have the flu often feel some or all of these signs and symptoms:

- Fever or feeling feverish/chills
- Cough
- Sore throat
- Runny or stuffy nose
- Muscle or body aches
- Headaches
- Fatigue (very tired)
- Some people may have vomiting and diarrhea, though this is more common in children than adults.

For most people, the flu lasts anywhere from about three days to two weeks. If it lasts much longer than two weeks, you may have developed another infection. If your symptoms are not improving after a week to 10 days or if you start to feel better then get much worse (often with a higher fever), contact your doctor or seek medical attention.

If you do get the flu, don't share it with others.

In addition to getting vaccinated, follow the steps below to prevent the spread of the flu.

- Stay home if you're sick. Not only can you spread the flu by coughing, sneezing or talking, you can also leave the flu virus on surfaces or objects you touch.
- Wash hands often, especially after coughing or sneezing. If soap and water are not available, use an alcohol-based hand-sanitizer.
- Cover your nose and mouth with a tissue or sleeve when coughing or sneezing, and throw the tissue away. If a tissue isn't available, cough or sneeze into your elbow/sleeve, not your hands.
- Avoid touching your eyes, nose or mouth.
- Avoid close contact with people who are sick.
- Regularly clean surfaces you touch often at home, work and school.
- You can pass the flu to someone else a day before you have symptoms and 5 to 7 days after you are sick.

Mark Your Calendar!

It takes about two weeks for the flu vaccine protection to set in. Everyone six months of age and older should get a yearly flu vaccine to protect against getting sick. Anyone 14 years and older can get a free flu shot and much more at the Bakersfield Heart Hospital Health Fair on October 6th.

Bakersfield Heart Hospital is owned in part by certain physicians who practice at the Hospital. A list of physician investors is available upon request.

Centric Health

Centric Health is a multispecialty medical group comprised of many of the most outstanding medical professionals and medical groups in Bakersfield dedicated to providing the highest quality of medical care in a rapidly changing health care landscape. Centric Health was developed to enable physicians to do their best work and to assure access to high quality care for residents of our community. Centric Health includes a broad spectrum of medical specialties and services designed to meet the many needs of patients.

- **Central Cardiology Medical Center**
- **Preferred Family Care**
- **Sillect Medical Centers**
- **Central Nephrology Medical Group**
- **Kern Endocrine Center**
- **WF Baker MD and Associates**
- **J. Foster Campbell, MD**
- **Dr. Kuran – Infectious Disease**
- **Dr. Virdi - Neurology**
- **Dr. Fontaine and Dr. Borst - Radiology**
- **Dr. Ashraf - Pulmonology**
- **Dr. Nisim - General Surgery**
- **Southwest Internal Medicine**
- **Clinica Del Valle**
- **Dr. Sinaie & Dr. Lee - Podiatry**
- **Golden State Hospitalists**
- **Centric Health Imaging**
- **Centric Urgent Care**
- **Centric Infusion Center**
- **Centric Priority Care Clinic**

What's new at Centric?

It is an exciting time at Centric Health as we grow to better serve our community. We are pleased to announce the following developments:

- Centric Health would like to welcome to our family of providers, Dr. Kyle Heber. Dr. Heber has joined Dr. William Baker and his team. Dr. Heber completed his Internal Medicine Residency from UCSF Fresno Medical Center. He focuses his clinical expertise in diagnosing, treating, and delivering compassionate care across the spectrum of all adult illnesses. Please extend a warm welcome to Dr. Heber next time you meet him.

- Our new Magnetom wide bore MRI is now up and running. This MRI has one of the largest bore (opening) that is currently on the market – accommodating patients weighing up to 500 lbs. The MRI suite offers additional comforts including the ability for patients to rest with their heads completely outside the magnet to alleviate claustrophobia. We are pleased to offer this advanced technology to the community. Give us a call at **(661) 716-4770** to schedule appointments.

Centric Health is Pleased to Welcome

Kyle Heber, MD

Internal Medicine

Dr. Kyle Heber is joining Dr. William Baker and his team. Dr. Heber completed his Internal Medicine Residency from UCSF Fresno Medical Center. As an internist, he focuses his clinical expertise in diagnosing, treating, and delivering compassionate care across the spectrum of all adult illnesses. Dr. Heber encourages healthy living and disease prevention.

During the interim after graduating from medical school and starting residency, Dr. Heber taught mathematics to 6th - 8th graders here in Bakersfield. His passion for teaching was kindled during medical school and residency, where he also taught medical students as a graduate teaching assistant. Additionally, Dr. Heber has conducted research and has published in the clinical fields of Cardiology, Rheumatology, Pulmonology, and Psychiatry. In medical school and residency he garnered many recognitions and honors for his academics and research.

Dr. Heber, his wife and children enjoy spending time outdoors and are very active members in their church. Dr. Heber looks forward to actively participating in the community.

CENTRIC HEALTH
A MULTISPECIALTY GROUP PRACTICE

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Healthy Eating

Fireside Fajitas

From Diabetic Living magazine [Eatingwell.com]

With some foil and a cast-iron skillet, this tex-mex favorite cooks up easily on your next camping trip. Simply pack the seasoned chicken and prepped peppers and onions in the cooler.

Ingredients – makes 4 servings

2 teaspoons salt-free fiesta lime seasoning such as Mrs. Dash

1 teaspoon garlic powder

1/8 teaspoon salt

1/8 teaspoon black pepper

1 pound skinless, boneless, chicken breast halves, cut into thin strips

2 teaspoons canola oil

2 cups green, yellow, and/or red sweet pepper strips

1 large onion

8 (6 inch) 100% whole wheat flour tortillas, such as Mission brand

½ cup refrigerated salsa

¼ cup snipped fresh cilantro

¼ cup plain fat-free Greek yogurt

¼ cup refrigerated avocado dip (guacamole)

1 lime cut into 4 wedges

Preparation

Light firewood or charcoal and let campfire burn down to medium-hot embers or coals. Top with grill rack

In a plastic bag combine lime seasoning, garlic powder, salt and black pepper. Add chicken strips, several at a time, shaking to coat.

In a 12-inch cast iron skillet heat 1 tsp canola oil over campfire. Add chicken; cook 3-4 minutes or until no longer pink, stirring frequently. Remove chicken.

In skillet heat remaining 1 tsp oil over the campfire. Add sweet peppers and onion: cook 8-10 minutes or until tender and golden, stirring frequently. Stir in chicken: heat through. Meanwhile, wrap tortillas in foil. Heat foil packet over campfire 8-10 minutes or until tortillas are warm, turning once.

Serve chicken mixture in tortillas with the remaining ingredients.

Nutritional information

Serving size 2 fajitas

Per serving: 359 calories: 9 g fat, (3 g st); 6 g fiber; 38 g carbohydrates; 33 g protein, 25 mcg folate; 83 mg cholesterol; 6 g sugars; 521 IU vit A; 59 mg vit C; 163 mg calcium; 3 mg iron; 588 mg sodium; 575 mg potassium

Nutrition bonus vit C (98% daily value)

Carbohydrate servings: 2 ½

Exchanges: 1 ½ vegetables, 2 starch, 3 lean meat, 1 fat

"Care for some freshly-ground fiber on your cheese fries?"

Special Warning - Dangerous Air!!

Look out the window and you will see, not the beautiful mountains we are surrounded by but the gray haze of smoke. The air was bad enough already, now wildfire smoke has made it worse. Other than spoiling our view, what's the problem? We all need to understand the answer.

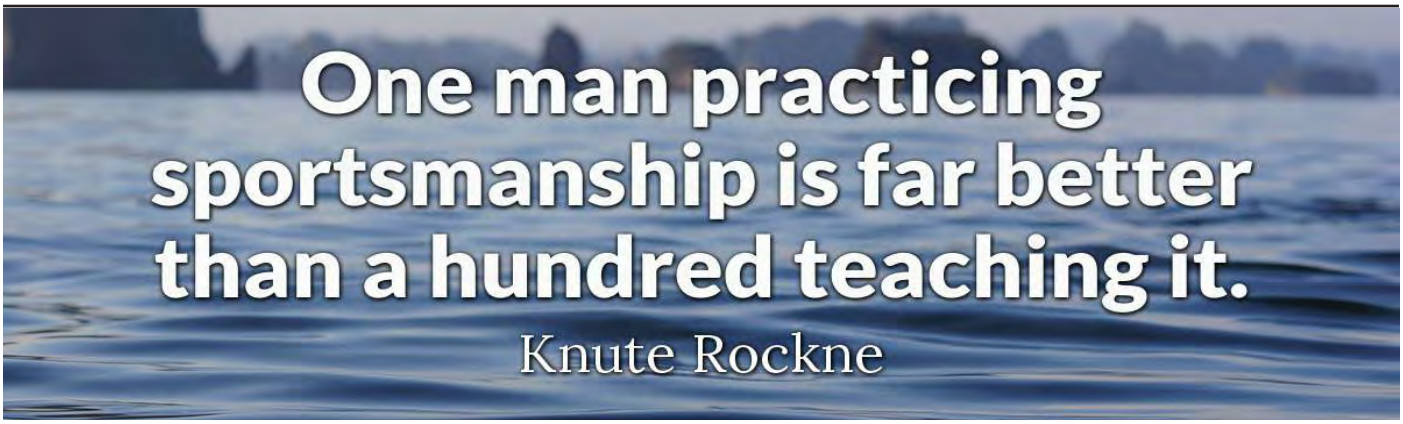
Bakersfield air is ranked 3rd worst in the US for yearly particle pollution and worst for 24 hour particulate pollution. We are 2nd worse overall for high ozone days. Besides ozone our bad air is composed of particles measured by size as PM 1, PM 2.5 and PM10 (10 micron particles), carbon monoxide, sulfur dioxide, nitrogen dioxide, lead and other bad stuff. Because of these pollutants, the Bakersfield air is rated as unhealthy for 2/3 of the year. Unfortunately, the topography works against us as we are surrounded on 3 sides by mountain ranges and the prevailing winds blow pollutants south down the valley. The further south we live the worse the air quality. We have to breathe, so we do with what we have – bad air!

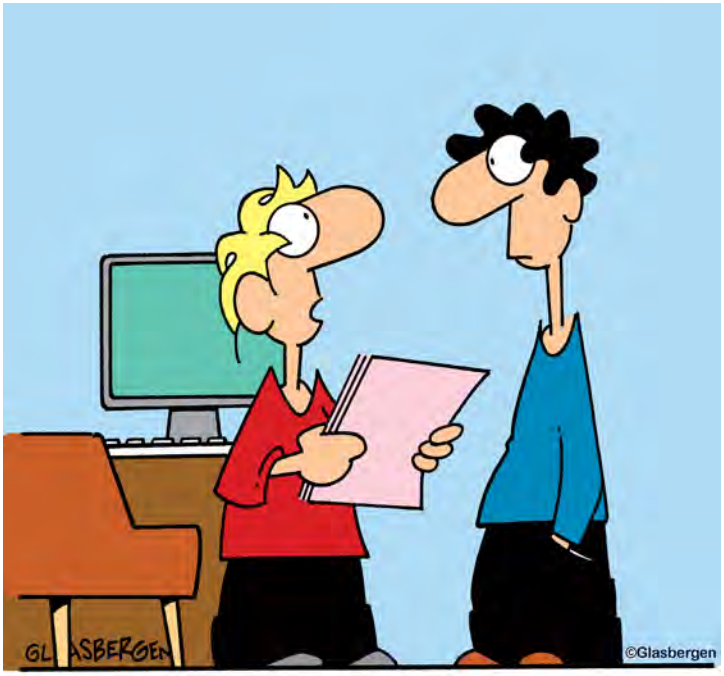
Medical studies have shown a 0.5% increase in overall mortality for every 10 mg per cubic millimeter increase in PM10 measured the day before death. This effect was slightly greater for deaths due to heart and lung disease than for total deaths. For those age 65 and older there is noted a 1% increase in admissions for cardiovascular disease and about a 2% increase in admissions for pneumonia and chronic lung disease for each 10 mg per cubic millimeter increase in PM10. Sunday August 26, 2018 the PM10 was 30. Looking back to a 2009 analysis our average PM10 was 40, California overall 25 and the US overall 20. One January day in 2016, the PM10 was 40 and in LA it was 12. In addition to the highest rate of cardiovascular and lung disease in California, the bad air is also linked to a high risk of various types of cancer. From 2016 data, of a Kern County population of 852,000 there were an amazing 160,000 individuals with cardiovascular disease and 60,000 with asthma.

Now we have the smoke! The smoke from wildfires has been found to substantially increase the PM1 as well as add many toxins to the air. The results is a marked increase in the number of asthma attacks, heart attacks and the development of cancer. The frequency of these disorders has been shown to be significantly increased in the western states experiencing a plague of large wildfires in the past decade.

So what to do?

1) Check air quality information daily (available in The Bakersfield Californian or on the bakersfield.com website or www.valleyair.com). 2) Do not exercise outdoors on bad air quality days. 3) Realize that the air we breathe is not necessarily our friend, so be sure to receive regular medical care including appropriate screenings for cardiovascular disease, lung disease and cancer.





"My report is about music from the 1960's, but my spell-checker made me leave out The Beatles, Monkees, and Byrds!"

"St. John's Wort is a great herb for improving your mood. But maybe it's time to cut back the dosage."