Kombucha: Healthy or Hype?

Known as the “Immortal Health Elixir” by the Chinese as long ago as 220 B.C., kombucha’s recent popularity has moved it from health food stores and home kitchens into mainstream grocery stores and bars. It is generally marketed as a “functional beverage”, meaning it has the potential to provide far-reaching health benefits, beyond its nutritional value. In the case of kombucha, proponents tout that it can support the health and function of one’s liver, heart, and immune system while helping manage diabetes, relieving joint pain, preventing cancer, aiding digestion and providing mental clarity. But is it really as good as it sounds?

What is kombucha?
Kombucha is a fizzy beverage made by fermenting sweet green or black tea (or combination of both and/or other teas) using a culture of yeast and bacteria. The mixture of bacteria and yeasts used for the fermentation process is sometimes referred to as a “SCOBY” (symbiotic colony of bacteria and yeast). The SCOBY is held together in a semi-permeable membrane, which looks a bit like a mushroom, and for this reason, sometimes is referred to as a “kombucha mushroom” or “Manchurian mushroom”. Sometimes the beverage is called “mushroom tea”, but to be clear, no mushrooms are used in the creation of kombucha. Unique flavors like “orange ginger”, “cranberry lavender” can sound quite interesting. Depending on added flavors, it can have spicy, herbaceous, and/or fruity notes, but the overall taste is often described as “acquired”, similar to sparkling apple cider but noticeably more sour.

Is kombucha beneficial?
At this point, there is little scientific evidence to prove kombucha’s health benefits. A review of the available research studies on kombucha was published in the Annals of Epidemiology earlier this year (Feb 2019). And guess what? They only found one study that specifically looked at the benefits of kombucha directly on human subjects (they ruled out test tube studies and studies done on animals). The 24 human subjects in the study had diabetes and drank kombucha for 3 months - they did have improved blood sugar control, but the study wasn’t controlled or randomized. Studies done on a cellular level and those done on animals such as rats, mice, ducks, pigs, cattle and chickens suggest the potential for some health benefits from kombucha, like anti-inflammatory and/or anti-microbial properties, but these benefits are yet to be backed up in human studies and are likely due to the polyphenols and antioxidants already present in the tea, not necessarily because the tea has been fermented into a kombucha beverage.

Is kombucha harmful?
There are some safety concerns when it comes to kombucha. There have been individual reports of upset stomach, allergic reactions, and infections believed to be related to consumption of kombucha. The SCOBY can increase risk of infections in those that are immunocompromised, like those undergoing cancer treatment, have received an organ transplant, or have AIDS. Two hospitalizations (one resulting in death) from lactic acidosis (too much acid in the blood) is thought to be related to
kombucha, so those with lung and kidney problems and those at risk for lactic acidosis should be cautious about drinking kombucha. This acidic tea may make stomach ulcers worse and could affect medications that are sensitive to pH.

Most commercial products are likely to be safe, but home brewed kombucha concoctions that are not brewed in a sterile environment run a higher risk of contamination. If brewed in an improperly manufactured ceramic pot, there is risk for lead poisoning, as lead can be leached from the ceramic glaze. Reports of anthrax contamination in kombucha exist as well.

Does kombucha contain alcohol?
Alcohol is a natural by-product of the fermentation process, so all kombucha products contain some alcohol. If left to ferment long enough, alcohol levels can increase to that of beer, and as such, there are now "hard kombucha" products on the market. Most commercial kombucha is marketed as “non-alcoholic”, however. And modern standardization of the fermentation process limits the final alcohol content to be less than .5% alcohol by volume, the federal threshold that prevents it from being regulated as an “alcoholic beverage”. There are some reports of fluctuating alcohol levels in kombucha once it’s on the shelf; this could be of concern to pregnant women, children, those with liver problems or those in addiction recovery.

Bottom Line: given the fact that there is little scientific evidence to back up the health claims of kombucha, as well as the fact that there are some risks to consider with its use, it’s probably best to steer clear until more definitive information is available. If it’s probiotics you’re looking for, there are a variety of fermented foods to choose from that have a long, defined safety record – yogurt, sauerkraut, kimchi to name a few. If you have more questions about functional foods and beverages, or any other nutrition-related concern, be sure to set up a nutrition assessment with Campus Recreation’s registered dietitian nutritionist, Annie Bell. Appointments are individualized and last about an hour – oh, and they’re free! Follow the prompts here to register: https://campusrec.utsa.edu/nutritionregistration

References:
https://healthybutsmart.com/kombucha-health-benefits/