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We spend hours perfecting the agenda for the day, designing and delivering highly engaging content and activities to achieve our desired outcomes. Then break time rolls around and we feast on an assortment of baked goods, white bread and processed meats, washed down with high-sugar beverages. Like clockwork, mental fog descends. Eyes glaze over and the energy in the room plummets, and try as we might, it never lifts to pre-snack levels – lopping off almost half a day of learning in the time it takes to scoff down that breakfast bagel.

We need to ask ourselves, ‘is the catering we provide killing our participants’ learning potential?’

PLATING UP PEAK MENTAL PERFORMANCE

Many of us know what it takes to have a healthy diet for our bodies. Yet our hungriest organ, our brain, has different and specific dietary needs that are often left unconsidered.

Crucial for memory, learning, attention and a sense of achievement is the neurotransmitter, acetylcholine. For our bodies to create this essential neurotransmitter, we require the B vitamin, choline – yet our bodies can only produce approximately 10% of our choline needs. If we want to remember what we learn, we need to consume choline. By far the best source is egg yolk, but fish roe, shiitake mushrooms, quinoa, almonds and chicken are

all good sources too. For vegans, brewers’ yeast, which is often used to make vegan ‘cheese’, also contains high levels of choline.

Choline isn’t the only B vitamin essential for learning. Folate, vitamin B12 and vitamin B6 all play a vital role in maintaining memory performance and preventing brain shrinkage. For these Bs, our vegetarian participants would benefit from dishes with plenty of lentils, spinach, tofu, black-eyed peas and avocado, while shellfish and fatty fish such as salmon, trout, mackerel and fresh tuna are great sources for pescatarians.

Nuts are another well-known snack that can help improve brain function. In particular, walnuts have a combination of nutrients that can potentially enhance cognitive function and learning – particularly as we age.

DEGUSTATION FOR GOOD GUT CONCENTRATION

It’s not just your brain that impacts your ability to learn. Your gut releases serotonin, which is a hormone and neurotransmitter closely linked to cognitive functioning and mood. In fact, a network of over 100 million neurons line your gut – if you put them all together, you’d have a brain the size of a cat’s head. This is called the enteric nervous system, or, ‘your brain in the gut’.

We used to think that the brain in the head sent signals to the brain in the gut to do things, but we are now finding it’s reciprocal – the gut brain is also telling your head brain to do things. Recent advances in neuroscience show that the neurons in our gut could affect our learning and memory. For example, a recent study from the University of Southern California has found a direct connection between gut signals and memory activity in the hippocampus, while another study from Imperial College London and Cardiff University has made a link between gut bacteria and memory function.

The bacteria in your gut can either be helpful or harmful to learning. Some microbes help us absorb the all-important B vitamins and some even produce folate, helping both our gut brain and our head brain function better. Like all living things, these bacteria need to be fed in order to survive. The helpful bacteria feed on prebiotics found in onions, artichokes, garlic, asparagus, bananas, oats and milk. This makes porridge a great choice for breakfast, along with some probiotic yogurt.

FLUIDS THAT UNLOCK MENTAL FLOW

Helpful bacteria thrive on fibre and fermented foods and drinks, so perhaps try some kombucha instead of soft drinks or juice for your next round of beverages. We also cannot forget water, which is essential for hydration and key to healthy brain function – even mild dehydration (fluid loss of 1-3%) can severely impact mental performance and energy levels. For the caffeine fiends among us, instead of

instant coffee, try green tea. Studies show that green tea may boost brain plasticity and connectivity to enhance short-term task performance. And for long-term learning, tea contains flavonoids that seem to prevent the build-up of a type of plaque in your arteries that reduces cognitive function over time.

CATERING THAT DELIVERS

When it comes to organising our learning and development, we must remember to not only prep learning design that delivers learning outcomes but catering that delivers too. Just as important as what we eat, is what we don't: refined sugar, artificial sweeteners, saturated fats, processed meats and excessive dairy all contribute to the dreaded after-lunch slump.

So, when it comes to choosing the catering for your next offsite, what does your gut tell you?

To help make good choices, we have prepared this menu cheat sheet:

	FEAST FOR LEARNING	FEAST FOR LAZING
<i>Breakfast</i>	Greek yoghurt and oats, topped with walnuts, almonds, fresh berries and bananas	Bagels, croissants and white toast with various sugary toppings
<i>Lunch</i>	Nicoise salad – dark leafy greens, tuna/anchovies, egg, chat potatoes Or Quinoa with spinach, chicken, artichoke, onion and vegan cheese Or Curried lentils, spinach, tofu, garlic over bed of brown rice	Ham and salami salad sandwiches on white bread Or Deep-fried finger food, pies, sausage rolls Or Assorted salads with high sugar, processed dressing (i.e. Caesar)
<i>Afternoon tea</i>	Green tea, kombucha, water	Instant coffee, high fructose juice, soft drink



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When not connecting people with their purpose as a senior associate at Performance Frontiers, Natalie Richardson can be found volunteering at the Gallery of Modern Art, Brisbane or visiting aged care homes with her therapy greyhound. Contact via LinkedIn.

FURTHER READING AND RESOURCES

Brain Food: The Surprising Science of Eating for Cognitive Power (Lisa Mosconi, 2018, Viking)

Consumption of Green Tea, but Not Black Tea or Coffee, is Associated with Reduced Risk of Cognitive Decline (Moeko Noguchi-Shinohara et al, 2014, PLOS ONE) <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0096013>

Discovery and Functions of Acetylcholine (Kendra Cherry, 2019, Verywell Mind) <https://www.verywellmind.com/what-is-acetylcholine-2794810>

Green Tea's Impact on Cognitive Function Now Visible (Megan Brooks, 2014, Medscape) <https://www.medscape.com/viewarticle/823690>

Gut vagal sensory signalling regulates hippocampus function through multi-order pathways (Andrea N.Suarez et al, 2018, Nature Communications) <https://www.nature.com/articles/s41467-018-04639-1>

Long-term multi-species Lactobacillus and Bifidobacterium dietary supplement enhances memory and changes regional brain metabolites in middle-aged rats (C. Hagan et al, 2017, PubMed) <https://www.ncbi.nlm.nih.gov/pubmed/28602659>

13 Proven Health Benefits of Walnuts (Marsha McCulloch, 2018, Healthline) <https://www.healthline.com/nutrition/benefits-of-walnuts>

7 Science-Based Health Benefits of Drinking Enough Water (Joe Leech, 2017, Healthline) <https://www.healthline.com/nutrition/7-health-benefits-of-water>