

With social freedoms curtailed over the last 12 months, many of us have turned to baking, jogging and, when all else fails, watching TV for hours on end. We speak to three biomedical scientists who are expert in these fields about the impact of lockdown.

> ur work and social lives have been limited drastically by successive lockdowns: no more theatre, cinema trips or live music. Pubs and restaurants, meeting friends and visiting relatives indoors have been off the cards for months.

Many of us have embraced the daily exercise allowed by government – in March 2020, nearly one million people tuned into personal trainer Joe Wick's online PE lesson on YouTube, breaking a Guinness World Record. We've also sought comfort and entertainment in front of the television. In August 2020, Ofcom reported that people in the UK spent 40% of their day watching TV and online video services.

In place of the pastimes outside of the home, many people have turned to baking. In the first two months of the first 2020 lockdown, 34% of more than 4000 UK adults polled by the National Association of British and Irish Millers had used two or more bags of flour to bake something.

Time to bake

Yan Tsou, Quality Control Scientist at the Francis Crick Institute and contestant on series eight of *The Great British Bake Off*, says it was hard to find flour in the first lockdown. "Luckily – and this is one of the things that comes from being on *The Great British Bake Off* – you get to know all the tricks," she says, adding that fellow former contestants put her into contact with people in the flour industry.

But the flour shortage, combined with extra time at home, allowed Yan to investigate alternatives, often using Youtube videos. "Sourdough is already a complicated process and I experimented with different flours because I had to. I was able to improve and now my loaf is the best I have made because I have learnt more."

Yan has also experimented with cooking what would normally be considered food waste. "During the first SCIENCE



banana peel - a vegan version of pulled pork. The amount of energy and science that goes into making food - I cannot waste it."

lockdown my partner and I made pulled

But there are fewer people for Yan to share her bakes with. She makes bread for her family - Yan is in a bubble with her partner and brother and his family - but things have changed at work. "I used to bake a loaf of sourdough for the team. someone else would bring cheese and butter and we'd have it at tea break in the morning. Ironically, I have got more time to make sourdough now but I can't share it. And I can't share cakes."

The team at the Crick - which acts as a "support unit with a bit of research thrown in" in cell services - have been "on the ball" with social distancing, testing and PPE. "We were one of the first teams to come in wearing masks, we have two metres of social distancing and I am in my own laboratory area," she says. "We're lucky enough to be tested twice a week."

"The amount of energy and science that goes into making food – I cannot waste it"

Yan's team acts as quality control for the cell services team - giving technical advice and tuition in basic cell culture techniques and testing for mycoplasma. They also do species ID authentication and single tandem repeat testing on human cell lines. The team provided cells for the early COVID-19 models, setting up a vaccine team "very quickly".

This meant Yan was still allowed to travel into work at the Institute in the first lockdown, and she's now there four days a week. "It's not possible to work from home permanently, the amount of work that's ramping up, you need to be at the bench using the machines," she says. "We have to be more skilled at time management." This means planning work effectively when in the lab so that on the days when working from home Yan can go through any data.

Current day-to-day life for Yan is going to work and coming home again. An introvert by nature, she found the recognition that came with her appearance on The Great British Bake Off "unnerving". But being on the show has served as an "ice breaker" for social settings. "I never did The Great British Bake Off to change my life in my work, but it has opened doors to things we would never have experienced. I am thankful for being given the opportunities."

YAN TSOU'S TOP 5 LOCKDOWN BAKES

- ✓ Sourdough bread "If you have the time to do it."
- Brownies "As decadent as you want them if you have left over biscuits or candy you can chuck them all in."
- Rocky road "Not strictly baking, but chocolatey."
 - Katsu curry chicken pie "A good pie is great, especially not your standard pie fillings. This has got a nice flavour to it and you can't get it in the shops – you have to make it yourself."
 - Feta and spinach pie "Use filo pastry and put a honey glaze on it to add sweetness, like baklava."

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Feet up in front of the telly

Being recognised in the street is a familiar experience for Umar Siddiqui, who appears on the Channel 4 show *Gogglebox*, with brother Baasit and father Sid. "I would be lying if I said it didn't change our lives," Umar says. "You'll incidentally just turn on Channel 4 and there you are. That's the weirdness of it." There have been lots of highlights and "every time people approach you on the street, they have only got good things to say."

Cogglebox was in the middle of filming a series when the first lockdown hit, and the show's participants were given key worker status as part of the broadcast television industry, meaning they could continue filming. "But we didn't feel comfortable with dad being part of the show because he's in a vulnerable group. So just Baasit and I did it for the remainder of that series," Umar says.

When autumn came, Sid was able to participate due to

production changes. "The filming crew have creatively adapted their approach to filming that significantly minimises any risk to the participants. Studio Lambert, which makes *Cogglebox*, have gone above and beyond putting in measures to protect us and them," Umar adds. "They do regular disinfection, temperature checks and courtesy calls each day to make sure you're feeling okay.

"All credit to them and a lot of organisations that don't have a background in science or medicine."

The same applies to his day job, in which wearing masks, plastic screens, regular disinfection and social distancing have become the norm, and his team has been called for the COVID-19

> vaccination. Umar is a **Biomedical Scientist** in microbiology at Burton Hospital, focused mainly on microscopy, culture and sensitivity. "It's basic things like urine

culture, blood cultures, wound swabs, enterics and a bit of serology thrown in there as well." Umar adds.

But this routine work has changed since the pandemic because GPs aren't really offering patient clinics. "The routine samples have decreased but been



replaced by COVID-19 swabs that have been coming in. We don't do the PCR testing in-house but we have to package up those samples, check details and then deal with the results when they come back."

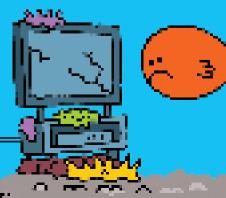
Umar balances his time between the lab in Burton, being on-call and working from home training other biomedical scientists. "It's an unusual situation because I know and work with the staff at

SHANNON HYLTON'S TOP 5 EXERCISE TIPS FOR LOCKDOWN

- ✓ Just go out and start something "Do whatever feels natural to you. Do something small if you want. And don't set any expectations."
- ✓ Use weights to work out at home "Something that
- Small bands are great for people to do exercise at home "You can buy these online."
- ✓ Do workouts at home "I like a high-intensity workout, so I would do 30 seconds of burpees, high knees, crunches and mountain climbers. But you can vary the level you do it at."
- ✓ Yoga "I really enjoy doing this, and you can do it online."

UMAR SIDDIQUI'S TOP 5 LOCKDOWN TV SHOWS AND FILMS

- ✓ Tiger King, Netflix "The TV show I will always associate with the first lockdown. It provided quite a nice distraction from everything that was going on."
- ✓ 2020: The Year Where Covid Changed Everything, ITV "This is a really good programme for a review of the pandemic and crisis."
- The Chase, ITV "I love
- watching quiz shows."
- Old Christmas movies "You find comfort in
- things from the past."
- The Crown, Netflix - "I have been watching



Burton so I can gauge their competencies and capabilities," Umar says. "But with staff at the Coventry lab [who he also trains] I have to gauge competency at a distance." He's immensely grateful to his colleagues – they remain "unsung heroes" during the pandemic. "If we get anything from the pandemic it's hopefully greater recognition for the work we do."

He can spot the parallels in his work and *Cogglebox* role. "With programmes like the news or *Panorama*, I put my scientific hat on when watching. But it's also important to watch something that has absolutely nothing to do with what is going on with COVID," he adds. "I think uplifting TV is often the way to go."

Taking regular exercise

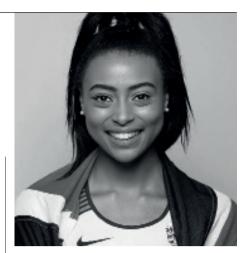
Shannon Hylton spent time during the first lockdown "chilling in front of Netflix". "But there is only so much Netflix you can take," she adds. The British Champion 100m and 200m sprinter – along with her twin sister Cheriece (also a British sprinter) – also did mini workouts for their younger siblings, who were missing out on PE lessons and physical activity at school.

The first lockdown was "really tough" for Shannon, who graduated with a First-Class degree in biomedical science from the University of East London in 2019. "But because it was a new thing, you adjust and adapt and don't think too deeply about it. Also the weather was pretty nice," she says. "If I had a gym session I could just go on the grass with some free weights. I had to do some of my hill runs in the woods and found loads of new places in the area where I live and met loads of dog walkers in the mornings, which is just

nice." But lockdown now is tougher. "In winter training on the grass isn't ideal because you want to feel the traction on the ground."

As regulations have allowed for elite sport to continue, Shannon has access to all her facilities, which provides some crucial structure to the week. She does two-hour track sessions at her running club in Bromley with her coach six days a week, visits the gym three times a week in north London, because her local gym is closed, and does online yoga once a week. "I have my own little bubble, we wear our masks, sanitise everything and social distance. It's a new normal to adapt to but we are still getting the work done."

The main focus at the moment is the Summer Olympic Games in Toyko, which may or may not take place later in the year. "No one knows what is going to happen but we are preparing and staying ready because there will be other competitions anyway," she says. "The one thing the last year has shown us is that nothing is guaranteed and you need to



"The last year has shown us nothing is guaranteed and you need to enjoy what you are doing"

enjoy what you are doing and stay ready."

This doesn't mean she's left her biomedical science behind, "Even though I am not in an academic environment I am still continuing to learn, reading papers and listening to podcasts, especially focusing on neurology, neuropharmacology and immunology." Shannon still emails her tutors to discuss how the COVID-19 vaccine research is progressing, and plans someday to have a career in research. "I'm particularly interested in neurology," she says. "It's quite astounding how an organ the fraction of our body weight [the brain] can provide us with an infinite number of questions. I love that science is a way of thinking as much as a body of knowledge." And it applies to her athletics training. "Discipline is one thing that overlaps, and you have to have the aptitude to work with different situations and different scenarios. You have to be able to adapt. The same is true with biomedical science," she concludes.