TikTok on Contraception: misleading to say the least

A new study has raised warnings about the contraception advice being handed out in Tik Tok videos which are being viewed billions of times.

Most Australian TikTok users fall within the 18-24 demographic, a group that is typically sexually active and seeking fertility control options. So, it's no surprise that videos on contraception are popular and influential, especially true when influencers use all the techniques and algorithms to attract viewers. And because of how TikTok works, it finds your interests and keeps feeding them to you, which means you're just getting more and more of the same contraceptive advice. All of this would be incredibly powerful if the information was reliable and based on evidence.

There have been concerns about reproductive health influencers for a while. Many use medical sounding titles which might be permissible in their home countries, but not in Australia. They often don't seem to have any qualifications and the information, while very slickly delivered, is often wrong or misleading. It's not clear what drives the influencers - some may be trying to undermine faith in mainstream medicine.

Three researchers at La Trobe University in Melbourne wanted to see what was available on TikTok to a hypothetical young Australian woman aged 18. They used five hashtags with large volumes of views

- #birthcontrol: 4.4 billion views
- #contraception: 810.2 million views
- #thepill: 295.6 million views
- #naturalbirthcontrol: 96.8 million views
- #cycletracking: 73.1 million views

They then selected the top 20 Tik Tok videos for each hashtag – so 100 in all.
Most of the creators were based in the US, UK or Australia. Almost all were female and aged between 18 and 40. The videos received a mammoth 4.85 billion views. Most of the creators were general uploaders with no declared qualifications. Some called themselves hormonal health coaches or health educators. Only 10% of the creators described themselves as medical professionals.

The study found that 53% of the uploaders rejected hormonal contraception and they were all either general uploaders, health educators or hormonal health coaches. Many communicated distrust of health professionals and based their views on personal opinion. Many used negative stories – which are known to be clickbait and gain more audience numbers. Fertility tracking was a popular topic related to natural birth control which can work, but needs a lot of care and attention and can be highly unreliable. Safe-sex barrier methods such as condoms were rarely mentioned.

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The conclusions were that a lot of young women are using social media for their contraceptive advice, much of which is unreliable or wrong. Interestingly, the researchers found that when doctors made TikTok videos, the information quality and accuracy was also poor, although these doctors were more likely to have strong followings, presumably because young women trusted their qualifications.

Bottom line: none of this substitute good advice from your GP. Maybe there's an opportunity for those GP's with specific interest and experience, to become involved as content creators and ensure shared advice is medically sound and evidence-based.

Contraceptive techniques: some facts

A recent review of the evidence found that the pill has a pregnancy rate of between 4 and 7% per year of use, often related to missing doses. Long-acting contraception such as an IUD or an implant has a pregnancy rate of less than 1% per year. For every 100 women using fertility awareness techniques for a year, 22 will fall pregnant. This obviously depends on how well educated you are about the technique and how obsessive about sticking to it.

The main risk from hormonal contraception is clots in the veins (venous thrombosis). Women not on the pill have a natural rate of venous thrombosis of 2 to 10 clots for every 10,000 women during a year. This rises to between 7 and 10 clots per 10,000 women years on the pill. Implants and progesterone-only contraception have risks which are much lower. The risks of venous thrombosis in pregnancy are far higher.
The pill reduces the risk of ovarian and uterine cancer and has a small increased risk of early breast cancer in current users. The natural rate of early breast cancer diagnosis is 55 per 100,000 person years in non-users which goes up to 68 per 100,000 person years in pill users.

Condoms, spermicides and pH interventions have a rate of 13 pregnancies for every 100 women (or their partners) using them for a year.

Read the review: Contraception Selection, Effectiveness, and Adverse Effects: A Review | Clinical Pharmacy and Pharmacology | JAMA | JAMA Network
HealthDirect also provides links to reliable contraception advice: Family Planning Australia | healthdirect

Jet Lag - what works and what about melatonin?

Jet lag is caused by your body clocks being 'out of sync' when you land in another time zone. It can mess with your sleeping, and in some people, feeling out of sorts for a few days. Not everyone is bothered by jet lag, so the symptoms are not inevitable. The more time zones you travel across, the worse the jet lag feels - especially if you're flying east. It's really a function of air travel because of the speed of change, for most of human evolution travel was so slow that your body kept up with the changing day/night cycle.

Most cells in our body, if left to their own devices, have internal clocks including your body temperature - which is at its lowest at 4am. But the clocks throughout the body are told what to do by a central clock in the brain, which responds to day and night - namely the strength of light passing from the eyes to the brain. One result of this is that melatonin is produced from the pineal gland at night and helps to bring on sleep and that's why people use it to treat jet lag. But as it turns out if melatonin works, it isn't by taking it at night at your destination. More on that later.

The reason that flying west is easier on your body clocks is that the time shift is to later in the day. This fits better with the natural timing of our body clocks, which is longer than 24 hours in the absence of sunlight.

So, here's what elite athletes are advised if they want to be in as peak condition as possible when they arrive. If flying west, they start the process about three or four days beforehand. They shift their bedtimes an hour later each night, try to get light exposure in the evening as well and darkness in the morning. If flying east, they shift bedtime an hour earlier each night, if they can, and avoid light in the evening and maximise exposure in the morning. Mealtimes are shifted in a similar way.

If you're flying, get whatever sleep you can and try to avoid alcohol and large meals. At the destination, get exercise – because this does shift your body clock, and don't be afraid of a short afternoon nap.

Now back to melatonin. This is your choice in consultation with your GP. The evidence is not terrific, since jet lag is so individualised and subjective. What seems to be the case is that taking melatonin at night can mess with your body clock adjustment. What some experts recommend instead, is to time your melatonin around your lowest body temperature (4am wherever you are). Flying west, they say you should take the melatonin four hours afterwards – so at about 8 or 9am and if flying east then about 11 or 12 hours before the minimum so around 3-4pm in the afternoon. 2mg doesn't appear to work, and the advice is to take 5mg but no more. Vivid dreams are a side effect.

And for what it's worth, I avoid alcohol on the flight, sleep when I can, then get out-and-about when I arrive. I also think it helps scheduling a flight which arrives at night so you can go straight to bed. I don't take melatonin because I don't like swallowing medications which haven't been studied as well as I'd like.

Hope that helps when you're lucky enough to have your next overseas trip!

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Should you exercise when you're sick?

Some of us (yes, me included) are so obsessed with staying fit and getting our 150 minutes of moderate exercise in a week, that it's just downright inconvenient when we get a cold. But will we make it worse by exercising? Now the bottom line is how sick you are and whether the symptoms are below the neck as well as in the head. And your GP is the best person to advise. Here though, is the evidence.

First, it depends on what you're sick with. Cancer outcomes are better if you exercise and your treatment team can advise what you should do. Exercise is now considered part of evidence-based cancer therapy – without the side effects!

With viral infections, especially those in the nose and throat, exercise has had a bad name, probably unfairly. That's because researchers have found that athletes taking part in team or group events have a higher incidence of viral infections after the event, and they claim to have found poorer immune cell function and numbers. What actually seems to be happening is that athletes are being exposed to many other athletes at a time when everyone is breathing heavily. So, viruses are more likely to spread during the event and appear soon afterwards.

Gentle to moderate exercise appears to improve immune function so is unlikely to do you any harm if you've a mild viral upper respiratory infection. If you've a high fever and don't know why, or having trouble breathing, then you need to see your GP because exercise will be the last thing you need, or in fact, probably want. What you do need is an accurate diagnosis and prompt treatment.

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