

Injected Semaglutide for obesity in adolescents

In a placebo-controlled trial, semaglutide recipients had a mean 16% decrease in body-mass index.

STAR HEALTH REPORT

A new type of drug, technically known as Glucagon-like peptide-1 (GLP-1) receptor agonists lower weight in obese adults, and one such drug (liraglutide) also is U.S. FDA approved for adolescents. Now, in an industry-sponsored trial, 201 adolescents (age range, 12–17) with body-mass index (BMI) $\geq 95^{\text{th}}$ percentile (mean BMI, 37 kg/m²) were randomised to receive weekly injections of the GLP-1 agonist semaglutide or placebo for 68 weeks, along with behavioral lifestyle therapy.

Mean changes in BMI at 68 weeks were -16.1% in the semaglutide group and +0.6% in the placebo group. The semaglutide group also had reductions in cardiometabolic risk factors, including weight, waist circumference, glycosylated hemoglobin level, and lipid levels.

Gastrointestinal adverse effects classified as “nonserious” (e.g., nausea, vomiting, abdominal pain) were more common with semaglutide than with placebo (62% vs. 42%). Additionally, 5 semaglutide recipients and no placebo recipients developed acute gallbladder disease. In the 7 weeks after cessation of treatment, BMI increased significantly in the semaglutide group.

Injected semaglutide lowered weight in teenagers with obesity. Although semaglutide is not yet FDA approved for adolescents, some paediatricians and adolescent medicine experts likely believe sufficient evidence already exists to use GLP-1 agonists liberally in these patients.

Ideally, a short-term course of semaglutide would be accompanied by healthy lifestyle changes that maintain weight reduction after the drug is stopped, but that goal often is elusive.



Fading the age spots

STAR HEALTH DESK

Age spots are characterised by their flat, dark appearance and their small size. They range in size and most frequently show up on areas of the body that are exposed to sunlight, such as the face, hands, shoulders, and arms. Age spots, also known as sunspots, liver spots, and solar lentigines.

They are more common if you are over 50, but you can get them if you are younger and you spend a lot of time outside. They don't require treatment, but your doctor may take a sample to make sure it is not cancer. They can lighten them with bleaching products or remove them if you want. To prevent them, use sunscreen and avoid the sun.

Beware of Mercury: Check your



skin lightener label for mercury. It can damage your liver and nerves. Mercury-containing products can cause serious health issues in those around you. The bottle or tube may say “mercury” or “mercuric”. Mercury products may also contain calomel, cinnabaris, hydrargyri oxydum rubrum, or quicksilver.

Get a prescription: A dermatologist could save you time and money on ineffective creams. Your doctor can help figure out which formulas, if any, will be best for your skin. Prescription remedies are stronger than the over the counter ones.

Age spot procedures: A procedure that removes layers of discolored skin may work better than a lightening cream for dark spots. These techniques include laser treatments, freezing (cryotherapy), dermabrasion, microdermabrasion, microneedling, and chemical peels. Keep in mind that procedures cost



more than creams. They also come with more risks. Your doctor can help you weigh your options.

Laser treatment: Your doctor can remove age spot-causing cells with narrow light beams without harming your skin. It may require multiple treatments. Lasers may initially crust or darken spots. These side effects usually pass quickly.

Freezing (Cryotherapy): Your doctor will briefly apply liquid nitrogen. This freeze spots. Your skin will lighten as it heals. This treatment may cause pain, swelling, blisters, and redness. It may leave scars or darker patches.

Dermabrasion: Doctors use a rapidly brush to sand down spotted skin to replace it. It may take multiple attempts. Swelling, redness, and scabs may result. Your skin may also heal slowly.

Microdermabrasion: It “sands” the skin with tiny crystals. Age spots can be faded with repeated treatments over months. It may cause redness or flaking.

Microneedling: The doctor makes tiny, evenly spaced holes in your skin with fine needles. Your body heals small wounds by producing youthful collagen and elastin. This response improves age spots and other skin damage.

Chemical peel: Your doctor will remove age spot layers with an

acid-based solution. New skin will replace it. You may need to repeat it. This procedure may scar, infect, or change your skin color. Food Lemon juice, oatmeal, and honey can help age spots. These will not harm your skin but will not help age spots. Use doctor-recommended treatments to fade those spots.

Age spot prevention: These tips will lighten age spots and prevent new ones. Avoid intense sunlight. Apply and reapply a good broad-spectrum sunscreen before going outside. Protect age spots with gloves, hats, or other clothing.

Consider your skin type: Fair-skinned people get more age spots. But anyone can get them. Given your skin color, type, and other factors, a doctor can advise you on how to fade age spots.

Pigment spots are typically harmless, but they can have a negative impact on a person's sense of self-confidence. Certain types, such as melanoma, which is a form of skin cancer, can pose a significant risk to one's life. Consult your physician as soon as possible if you notice any changes in the size, shape, or color of your pigment spots, or if they start to itch or bleed. Changes in any of these characteristics should prompt you to seek medical attention.

Source: WebMD

HAVE A NICE DAY

Dopamin detox, the reality

DR RUBAIUL MURSHED

The book ‘Dopamine Detox’ has become popular. A chemical messenger, dopamine, is produced in the brain. It plays a role in our body movement, memory, and motivation. Dopamine levels are associated with neurological diseases.

The pleasure hormone or “feel good” hormone, dopamine, gets released when we perform activities that make us happy like, eating a nice meal, having a good family or friends' gathering, or going on a pleasure trip, a little bit of dopamine is released in our brain. Alcohol or recreational drugs also releases dopamine into the brain. Thus, the chemical messenger is linked to addiction. Dopamine detox helps stop unhealthy behaviour.

Dopamine detox becomes obligatory when the addiction becomes serious about controlling health issues. This is where dopamine detox comes in handy to help reduce unhealthy habits and regulate dopamine production.

In short, dopamine detox helps overcome addiction. But it is crucial to identify the addiction type first. Well, it could be food, alcohol, TV serials, video games, or a combination of these.

Dopamine is a vital hormone. Low dopamine can cause fatigue, depression, insomnia, low libido, Parkinson's, and schizophrenia. It can also reduce motivation, apathy, and concentration. However, dopamine detox improves our lives by controlling our emotions.

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Arsenic-contaminated water associated with antibiotic resistance in children, study finds

STAR HEALTH REPORT

In rural Bangladesh, areas with more arsenic in the drinking water have more antibiotic-resistant *Escherichia coli* in the water and in the stool samples of children than areas with less arsenic. This is according to a new study by Mohammad Aminul Islam of Washington State University and his colleagues, which was published on December 8, 2022, in PLOS Pathogens.

Antibiotic resistance is one of the leading causes of death and hospitalisation worldwide. While the major drivers of antibiotic resistance are the overuse and misuse of antibiotics, natural elements such as heavy metals can also promote antibiotic resistance.

In the new study, researchers collected water and stool samples from both mothers and young children in 100 families in two rural subdistricts in Bangladesh. Families in the Hajiganj subdistrict get their drinking water from shallow tube wells, which have a high concentration of arsenic, while families in Matlab collect their drinking water from arsenic-free



deep tube wells.

The median amount of arsenic in the 50 samples of water from Hajiganj was 481 µg/L while the median arsenic concentration in the 50 samples of water from Matlab was 0 µg/L. Overall, 84% of all water and stool samples across both sites were found to be positive for *E. coli*.

Antibiotic resistant *E. coli* was more common in the water in Hajiganj (48%) than in Matlab (22%) and among children in Hajiganj (94%) compared to children in Matlab (76%), but not among mothers. Moreover, a higher proportion of *E. coli* from Hajiganj were resistant to multiple antibiotics, including penicillin, cephalosporin, and chloramphenicol.

“The positive association found between arsenic exposure and antibiotic resistance among children in arsenic-affected areas in Bangladesh is an important public health concern that calls for redoubling efforts to reduce arsenic exposure,” the authors say.

Dr Islam also stated that heavy metals like arsenic are more persistent than antibiotics and exert selective pressure on bacteria for a longer time, which promotes community-wide antimicrobial resistance. Controlling the environmental factors that make bacteria resistant to antibiotics is very important, as is their responsible use in medicine and agriculture.

FIFA and WHO marked International Human Rights Day with anti-discrimination message

On the International Human Rights Day (December 10), the Fédération Internationale de Football Association (FIFA), and the World Health Organisation (WHO) both talked about how discrimination has no place in football or in society. One of the most common human rights violations and abuses is discrimination in all its forms.

FIFA reforms have prioritised anti-discrimination since 2016. FIFA established a monitoring system and a zero-tolerance policy for racism and discrimination in



2019. FIFA's #NoDiscrimination campaign includes an innovative monitoring and moderation service to keep players safe from

mean, racist, or threatening comments on social media.

The service helps players avoid social media abuse so they can focus on playing. During the tournament's group stage, the service automatically and instantly hid more than 100,000 abusive and offensive comments, and more than 6,000 posts were reported directly to social media companies for further action. This shows that online abuse is still a serious problem for football players and society, affecting mental health and well-being.



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