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Singapore team develops skin patch to reduce fat

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The new type of skin patch contains hundreds of micro-needles, each thinner than a human hair, which are loaded with the drug Beta-3 adrenergic receptor agonist or another drug called thyroid hormone T3 triiodothyronine.

When the patch is pressed into the skin for about two minutes, these micro-needles become embedded in the skin and detach from the patch, which can then be removed.

As the needles degrade, the drug molecules then slowly diffuse to the energy-storing white fat underneath the skin layer, turning them into energy-burning brown fats.

The amount of drugs used in the patch is much less than those used in oral medication or an injected dose. This lowers the drug ingredient costs while the slow-release design minimizes its side effects.

The team has received keen interest from biotechnology companies and is looking to partner clinician scientists to further their research.