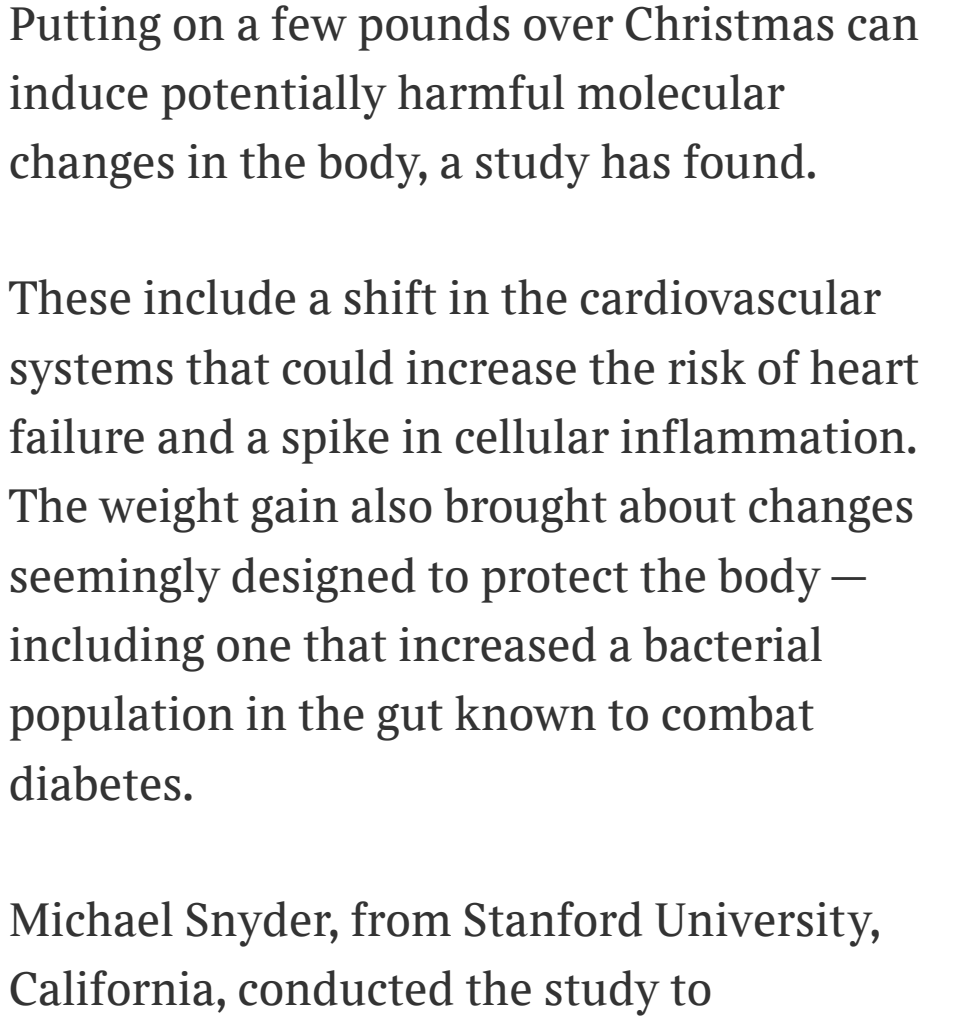




# Gaining 6lb could raise your risk of heart failure

Tom Whipple, Science Editor

January 17 2018, 5:00pm, The Times



Even a modest weight gain can bring profound changes to the body  
GETTY IMAGES

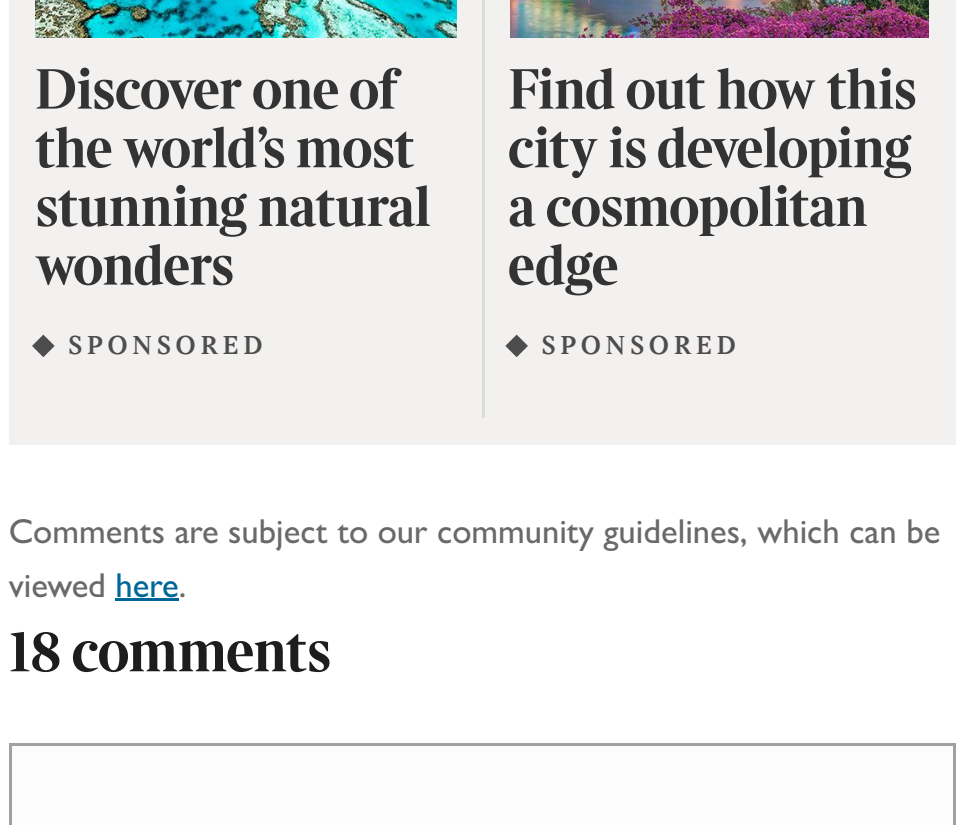
Putting on a few pounds over Christmas can induce potentially harmful molecular changes in the body, a study has found.

These include a shift in the cardiovascular systems that could increase the risk of heart failure and a spike in cellular inflammation. The weight gain also brought about changes seemingly designed to protect the body — including one that increased a bacterial population in the gut known to combat diabetes.

Michael Snyder, from Stanford University, California, conducted the study to understand better the processes involved in weight gain and the associated health risks. “I don’t think we know in incredible molecular detail what happens when people gain weight or when they lose it,” he said.

He and his colleagues convinced 23 people to switch to a high-calorie, but not intrinsically unhealthy, diet.

“It wasn’t exactly french fries and McDonalds,” he said. “But it was definitely more food.” After 30 days they measured their weight, which had increased by about 6lb per person. At the same time, they measured markers of their molecular health throughout their bodies.



Professor Snyder said that he was shocked by the changes, which he described in the journal *Cell Systems*. “There were a huge number of changes, just with the kind of weight you might gain over the holidays that just occurred,” he said.

“They were pretty extensive — the top pathway was the inflammation pathway. The other was to do with the heart. By measuring all these different molecules we were able to see this global effect on heart functioning.”

The good news came in the second part of the experiment. After putting on the weight, the volunteers were placed on a diet and given help to lose it. When they did, almost all of the troubling changes returned to normal.

Professor Snyder said that this provided hope for people that they could turn their health around. But by showing what a relatively modest weight gain over a short period of time could do, he said that he also wanted to emphasise the risks of overeating.

“This is meant to hammer home what’s going on,” he said. “If people had a better idea about what effect weight gain is having on their bodies, that could raise awareness. You’re having a pretty dramatic effect on your heart and immune system. We think it is a big deal.”

Health

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## 18 comments

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**Sandy Smith** 18 hours ago  
And the best exercise is ... pushing your plate away!

3 ★ Recommend Reply

**Iain Sanders** 19 hours ago  
Death around every corner  
Every mortal man a mourner  
If you dine you're sure to die  
With every bite a grave will try..

2 ★ Recommend Reply

**Godfrey Johnson** 20 hours ago  
All the derogatory comments on this thread have obviously been written by fatties ;-)  
The truth hurts.

2 ★ Recommend Reply

**Chris Taylor** 21 hours ago  
No hope for you if you go on a cruise then.

2 ★ Recommend Reply

**Chris Huckle** 10 hours ago  
Especially on Hampstead Heath.

2 ★ Recommend Reply

**Chris Frankland** 21 hours ago  
Professor Snider? (sic)

You couldn't make this up. Has President Ronald McDonald read this?

★ Recommend Reply

**Martin Pawley** 21 hours ago  
Thank god I only put 4 kilos on then.

2 ★ Recommend Reply

**Mr Gerald McDermott** 21 hours ago  
So how many of you 8 are now going to lose weight, and stop smoking and drinking?

Which seems the whole point of telling you something obvious, but you have never acted on.

★ Recommend Reply

**DAVID GREEN** 22 hours ago  
So let's see. This is based on a sample of .....23 people.

That's 23 people chosen based on what? For all we know they were all already obese and bordering on serious illness.....or chosen because they were a 'normal' weight (so overweight) or based on some idealised idea of what is a 'desirable weight'?

Someone who is so dim they are in denial that their obesity is due to eating too much may actually be unquestioning enough to be impressed that science has established a link.

The rest of us, shown by comments below, are jealous and would like funding to research the bleedin obvious for ourselves. Personally, I would like to be funded for a month or two in Tobago to see if I get hotter in the sun.

So, that's clearly one for DFID. If I rope in some schoolkids to measure my temperature here and in Tobago then I should be able to blag a few grand from the British Council too? I promise I'll publish my results.....hell, I'll even invite my family (sorry, colleagues) to Tobago to peer review it all. ;)

6 ★ Recommend Reply

**Evelyn Donnelly** 22 hours ago  
I love you guys, you really made me laugh.

★ Recommend Reply

**Iain Sanders** 19 hours ago  
**@Evelyn Donnelly** The researchers..?

★ Recommend Reply

**Zabonga** 22 hours ago  
No Sh\*T Sherlocks?

More statements of the bleedin' obvious.  
Give it a rest.

2 ★ Recommend Reply

**Freeliner** 23 hours ago  
Well I'm pleased his colleagues were all awarded a PhD for this groundbreaking work.

What a L.O.B!!

3 ★ Recommend Reply

**David Illsley** 23 hours ago  
So if I eat more, I get fat...  
And that's bad.....  
Science is hard!

5 ★ Recommend Reply

**Diogenes911** 23 hours ago  
I have this idea that the sun rises in the East. Will Stanford fund my research?

8 ★ Recommend Reply

**Chris Huckle** 10 hours ago  
I think the sun has set on that aspiration;talking of which , you could do some reach on where that is...?

★ Recommend Reply

**fowler2owen** 23 hours ago  
Shock news indeed !

Thank goodness someone is researching this stuff. I feel safer knowing they are.

17 ★ Recommend Reply

**Millie** 23 hours ago  
**@fowler2owen**

Indeed. The frontiers of scientific knowledge were certainly breached on this occasion.

3 ★ Recommend Reply



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