

**IPD-Work consortium: pre-defined meta-analyses of individual-participant data strengthen evidence base for a link between psychosocial factors and health <sup>1</sup>**

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<sup>1</sup> Appendix

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## Altmetric analysis:

### IPD-Work paper on job strain and coronary heart disease (Kivimaki et al. *Lancet*. 2012;380(9852):1491-7) in newspaper stories, tweets, blog post & comments

The Altmetric score is one measure of the quality and quantity of online attention that this article has received. You can read about [how Altmetric scores are calculated \(http://support.altmetric.com/knowledgebase/articles/83337-how-is-the-altmetric-score-calculated-\)](http://support.altmetric.com/knowledgebase/articles/83337-how-is-the-altmetric-score-calculated-) here.

This article scored **244.17** (by 27-Oct-2014)

The score is a weighted count of the different sources (newspaper stories, tweets, blog posts, comments) that mention the paper.

#### Compared to all articles in The Lancet (British Edition)

So far Altmetric has tracked 10,906 articles from this journal. They typically receive a lot more attention than average, with a mean score of 18.1 vs the global average of 5.0. This article **has done particularly well**, scoring higher than 98% of its peers.

In the	Ranks
<b>98%ile</b>	<b>113th</b>

#### All articles of a similar age

Older articles will score higher simply because they've had more time to accumulate mentions. To account for age we can compare this score to the 71,571 tracked articles that were published within six weeks on either side of this one in any journal. This article has done particularly well, scoring **higher than 99% of its contemporaries**.

In the	Ranks
<b>99%ile</b>	<b>122nd</b>

#### Other articles of a similar age in The Lancet (British Edition)

We're also able to compare this article to 398 articles from the same journal and published within six weeks on either side of this one. This article **has done very well**, scoring higher than 99% of its contemporaries.

In the	Ranks
<b>99%ile</b>	<b>1st</b>

#### All articles

More generally, Altmetric has tracked 2,679,871 articles across all journals so far. Compared to these this article has done particularly well and is in the 99th percentile: it's **in the top 5% of all articles ever tracked** by Altmetric.

In the
<b>99%ile</b>

## Altmetric analysis:

**IPD-Work paper on long working hours and type 2 diabetes (Kivimaki et al. *Lancet Diabetes Endocrinol.* 2015 Jan;3(1):27-34; Epub 2014 Sep 25) in newspaper stories, tweets, blog post & comments**

The Altmetric score **180.77** (by 2-Dec-2014)

### Compared to all articles in The Lancet Diabetes & Endocrinology

So far Altmetric has tracked 219 articles from this journal. They typically receive a lot more attention than average, with a mean score of 28.0 vs the global average of 5.1. This article **has done particularly well**, scoring higher than 96% of its peers. It's actually **the 7th highest scoring article** in this journal that we've seen so far.

In the	Ranks
<b>96%ile</b>	<b>7th</b>

### All articles of a similar age

Older articles will score higher simply because they've had more time to accumulate mentions. To account for age we can compare this score to the 87,592 tracked articles that were published within six weeks on either side of this one in any journal. This article has done particularly well, scoring **higher than 99% of its contemporaries**.

In the	Ranks
<b>99%ile</b>	<b>413th</b>

### Other articles of a similar age in The Lancet Diabetes & Endocrinology

We're also able to compare this article to 28 articles from the same journal and published within six weeks on either side of this one. This article **has done well**, scoring higher than 89% of its contemporaries.

In the	Ranks
<b>89%ile</b>	<b>3rd</b>

### All articles

More generally, Altmetric has tracked 2,773,578 articles across all journals so far. Compared to these this article has done particularly well and is in the 99th percentile: it's **in the top 5% of all articles ever tracked** by Altmetric.

In the
<b>99%ile</b>

## Examples of the news stories:

<http://www.bbc.co.uk/news/health-19584526>

### Work stress 'raises heart risk'



By James Gallagher Health and science reporter, BBC News  
Can a stressful job damage the heart?

Having a highly demanding job, but little control over it, could be a deadly combination, UK researchers say.

They analysed 13 existing European studies covering nearly 200,000 people and found "job strain" was linked to a 23% increased risk of heart attacks and deaths from coronary heart disease.

The risk to the heart was much smaller than for smoking or not exercising, [the Lancet medical journal](#) report said.

The British Heart Foundation said how people reacted to work stress was key.

Job strain is a type of stress. The research team at University College London said working in any profession could lead to strain, but it was more common in lower skilled workers.

Doctors who have a lot of decision-making in their jobs would be less likely to have job strain than someone working on a busy factory production line.

Freedom

There has previously been conflicting evidence on the effect of job strain on the heart.

In this paper, the researchers analysed combined data from 13 studies.

“The negative effect of workplace strain is much smaller than, for example, the damage caused by smoking or lack of exercise.”

Prof Peter Weissberg British Heart Foundation

At the beginning of each of the studies, people were asked whether they had excessive workloads or insufficient time to do their job as well as questions around how much freedom they had to make decisions.

They were then sorted into people with job strain or not and followed for an average of seven and a half years.

One of the researchers, Prof Mika Kivimaki, from University College London, said: "Our findings indicate that job strain is associated with a small but consistent increased risk of experiencing a first coronary heart disease event, such as a heart attack."

The researchers said eliminating job strain would prevent 3.4% of those cases, whereas there would be a 36% reduction if everyone stopped smoking.

'Unable to change'

Prof Kivimaki said the evidence of a direct effect of job strain on the heart was mixed.

He told the BBC job strain was linked to other lifestyle choices that were bad for the heart: "We know smokers with job strain are more likely to smoke a bit more, active people with job strain are more likely to become inactive and there is a link with obesity.

"If one has high stress at work you can still reduce risk by keeping a healthy lifestyle."

Prof Peter Weissberg, medical director at the British Heart Foundation, said: "We know that being under stress at work, and being unable to change the situation, could increase your risk of developing heart disease.

"This large study confirms this, but also shows that the negative effect of workplace strain is much smaller than, for example, the damage caused by smoking or lack of exercise.

"Though stresses at work may be unavoidable, how you deal with these pressures is important, and lighting up a cigarette is bad news for your heart. Eating a balanced diet, taking regular exercise and quitting smoking will more than offset any risk associated with your job."

Dr Bo Netterstrom, from Bispebjerg Hospital in Denmark, said other stresses at work such as job insecurity "are likely to be of major importance".

He said job strain was "a measure of only part of a psychosocially damaging work environment".

# Work Stress May Strain Coronary Arteries

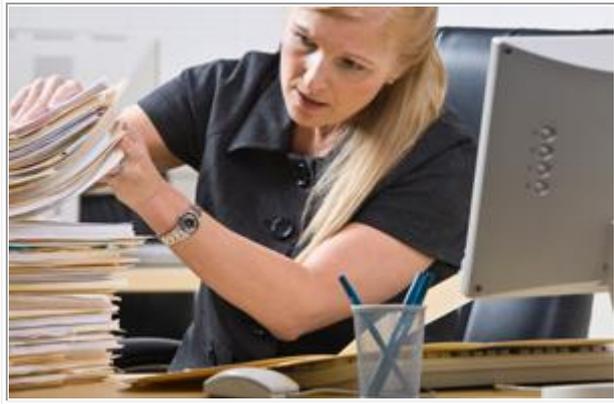
By Cole Petrochko, Associate Staff Writer, MedPage Today

Published: September 13, 2012

Reviewed by [Robert Jasmer, MD](#); Associate Clinical Professor of Medicine, University of California, San Francisco and Dorothy Caputo, MA, BSN, RN, Nurse Planner

## Action Points

- Being stressed on the job was associated with nearly a 25% increased risk of coronary heart disease (CHD) in workers, a meta-analysis found.
- Note that the association between job strain and coronary heart disease remained significant when adjusted for age, sex, and socioeconomic status.



Being stressed on the job was associated with nearly a 25% increased risk of coronary heart disease (CHD) in workers, researchers found.

In a meta-analysis of published and unpublished European studies, job stress was significantly associated with CHD events compared with no stress in the workplace (HR 1.23, 95% CI 1.10 to 1.37), according to Mika Kivimaki, PhD, of the University College London in England, and colleagues.

The risk of CHD was more pronounced in published (HR 1.43, 95% CI 1.15 to 1.77) than unpublished (HR 1.16, 95% CI 1.02 to 1.32) studies, Kivimaki and co-authors wrote online in *The Lancet*.

The authors noted that the increased risk was "small, but consistent," even after adjustment for lifestyle, conventional, and demographic factors.

The meta-analysis looked at data from 13 cohort studies involving a combined 197,475 working adults from Finland, Sweden, Denmark, the Netherlands, Belgium, France, and England who were employed at baseline.

Job strain was measured at baseline in all studies and included questions about quantity of work, demands of the job, and if the participant had sufficient time to do the work, as well as whether or not the participant had decision freedom or learned new things at work. Job stress was evaluated against study-specific median scores.

CHD incidence was assessed through national hospital admission and death registries at follow-up in all studies.

Data were gathered on participant age, sex, socioeconomic status, lifestyle, and conventional coronary risk factors.

Out of 1,488,728 person-years, there were 2,358 incidents of CHD recorded in all studies.

The mean hazard ratio from the 13 pooled studies was a significant 1.23 (95% CI 1.10 to 1.37), with a population-attributable risk of 3.4% (95% CI 1.5 to 5.4), or 1.17% after adjustment for age, sex, and socioeconomic status (95% CI 1.05 to 1.31).

The risk remained significant when the studies were stratified by published and unpublished status, though the unpublished research showed a weaker relation between job stress and CHD. The risk also remained elevated when scores were adjusted for exclusion of CHD within 3 years of study baseline (HR 1.31, 95% CI 1.15 to 1.48) and 5 years of study baseline (HR 1.30, 95% CI 1.13 to 1.50).

Associations remained significant when adjusted for age, sex, and socioeconomic status, the authors wrote.

Kivimaki and colleagues noted that the meta-analysis measured job strain through one baseline assessment, but that other research suggests that "cumulative exposure to job strain, ascertained by several assessments repeated in time, could be a stronger predictor of coronary heart disease."

In an accompanying editorial, Bo Netterstrøm, MD, of the Department of Occupational and Environmental Medicine in Copenhagen, also noted that the singular measure was not the entire picture of stress-related CHD, adding that "prevention of workplace stress could reduce incidence of coronary heart disease to a greater extent than stated in the authors' interpretation of the calculated population-attributable risk for job strain."

The authors said the study was limited by not being based on a systematic review.

The authors declared no conflicts of interest. Kivimaki received support from the Medical Research Council, U.K. and the National Institutes of Health.

Netterstrøm declared no conflicts of interest.

**Primary source:** The Lancet

Source reference:

[Kivimaki M, et al "Job strain as a risk factor for coronary heart disease: a collaborative meta-analysis of individual participant data" \*Lancet\*; DOI: 10.1016/s0140-6736\(12\)60994-5.](#)

**Additional source:** The Lancet

Source reference:

[Netterstrøm B "Job strain as a measure of exposure to psychological strain" \*Lancet\*; DOI: 10.1016/20140-6736\(12\)61512-8.](#)

## Job strain has modest effect on heart disease risk

Tackling job strain will have only modest effect on heart disease risk

One of the largest studies ever published looking at job strain and its association with heart disease has found there is a link, albeit small. Tackling smoking and other well established risk factors for CHD would likely have a greater effect on outcomes than trying to reduce work stress, say the authors.

September 13, 2012

Lisa Nainggolan

**London, UK**-Job strain is associated with a small, but consistent increased risk of coronary heart disease, according to new research [1]. The study pooled published and unpublished data to generate a cohort of almost 200,000 people, and this "allowed us to investigate the association between CHD and job strain with greater precision than has previously been possible," say **Dr Mika Kivimäki** (University College, London) and colleagues in their paper in *The Lancet*.

Kivimäki told [heartwire](#) that more than 30 years of research on workplace stress and its link with heart disease has produced mixed results, with some studies finding up to a nine-fold increased risk while others found no association. Also, there has been the issue of whether there is a particular subgroup of person who is more adversely affected, he says.

"Our finding is that there is an effect of job strain, and although it's fairly modest, it's very robust."

"This study is more than twice the size of the most recent meta-analysis published on this topic, the magnitude is different. Our finding is that there is an effect of job strain, and although it's fairly modest, it's very robust. In addition, we don't see any subgroups who are more vulnerable than any other."

He stressed that it is still not know whether the relationship between job strain and heart disease is causal. But assuming it is, the risk associated with work stress is still "substantially less" than that for other known risk factors for CHD, such as smoking, abdominal obesity and inactivity, he noted.

### 20-30% increased risk of heart disease associated with job strain

In the collaborative meta-analysis, Kivimäki and colleagues analysed job strain in employees without CHD at baseline who participated in 13 European national cohorts conducted in Belgium, Denmark, Finland, France, Netherlands, Sweden, and the UK between 1985 and 2006. All participants completed questionnaires at the start of the studies to assess job demands, excessive workload, the level of time-pressure demands, and freedom to make decisions. Only three of the cohorts had previously published their data, Kivimäki told [heartwire](#).

30214 (15%) of the 197,473 participants reported job strain. There were 2356 incident CHD events (first non-fatal heart attack or coronary death) during the average 7.5 year course of follow-up.

After adjustment for sex and age, the hazard ratio for job strain versus no job strain was 1.23; this remained the same even after taking into account factors such as lifestyle, age, gender, and socioeconomic status. However, the effect estimate was higher in published (HR 1.43) than in unpublished (1.16) studies, the researchers note.

They then further subdivided job strain into four categories-- based on demands and control--and looked at the interplay of these factors. Kivimäki says it looks like the worst kind of job stress "is to have high demands/pressure but little decision authority, so very little say on what goes on at work, and the opportunities to learn are poor."

Accordingly, they found the highest risk of CHD in those who reported high demands and low control (HR 1.28 compared with low demands/high control as a comparator).

The team also sought to reduce bias owing to reverse causation by exclusion of disease events that occurred in the first three and five years, but this did not seem to have any material effect on their conclusions.

## More sophisticated analyses of workplace stressors needed

In an accompanying editorial [2], **Dr Bo Netterstrøm** (Department of Occupational and Environmental Medicine, Copenhagen, Denmark) says the new work is one of the few publications to have analysed the interaction between demand and control as separate components of job strain.

But Netterstrøm says that the job strain model is now limited, due to societal developments that mean it is only "part of a psychologically damaging work environment and best suited to industrial work." Nevertheless, it "will remain a useful method to assess part of the psychosocial strain in workplaces, especially in the developing world," he adds.

But more sophisticated measures will be needed to better distinguish between different stressors in the workplace in the future, Netterstrøm explains, for example distinctions between quantitative, cognitive and emotional demands.

"High work pace is not necessarily a stressor if sufficient time is allowed and difficult tasks might be a challenge rather than being excessively strenuous if achieved successfully; hence different types of work will have different strain profiles."

Kivimäki agrees. "Netterstrøm is correct. It is time to look at other workplace exposures. We are now starting to examine things such as job insecurity and the ratio between efforts and reward. If you put a lot of effort into work but receive little reward in terms of satisfaction and salary that is a bad combination, for example."

[Telegraph.co.uk](http://www.telegraph.co.uk)

<http://www.telegraph.co.uk/health/healthnews/9541190/Stressful-job-raises-heart-attack-risk-even-in-healthy.html#>

## Stressful job 'raises heart attack risk, even in healthy'

**Having a stressful job increases the chance of a heart attack, even among those who take good care of their health, a UK-led study has found.**



Critically, researchers at University College London took into account differences in age, sex and health lifestyle before calculating estimates of risk. Photo: ALAMY



By [Stephen Adams](#), Medical Correspondent

6:30AM BST 14 Sep 2012

Having a stressful job with little autonomy raises the risk of a heart attack by almost a quarter, compared to having a job that is less demanding, according to the pan-European research.

Stressful high paid jobs appear to raise the risk of a heart attack more than those that are similarly taxing but are lower paid.

The study, published online in *The Lancet* today, found those in higher paid stressful jobs were more than 50 per cent more likely to have a heart attack than those in less stressful, but equally well remunerated, positions.

Critically, researchers at University College London and other institutions took into account differences in age, sex and health lifestyle before calculating their estimates of risk.

That means among a group of people living healthy lives - eating well, exercising regularly and not smoking - those who had stressful jobs would still be at a relatively higher risk of heart attack.

Mika Kivimäki, from UCL, who led the research, said: "Our findings indicate that job strain is associated with a small, but consistent, increased risk of experiencing a first coronary heart disease event such as a heart attack."

His team looked at results from 13 studies in seven countries including Britain, which tracked the health of nearly 200,000 people in total.

They concluded: "Our findings suggest that prevention of workplace stress might decrease disease incidence; however, this strategy would have a much smaller effect than would tackling of standard risk factors, such as smoking."

Prof Peter Weissberg, medical director at the British Heart Foundation (BHF), reiterated that advice, saying: "Though stresses at work may be unavoidable, how you deal with these pressures is important, and lighting up a cigarette is bad news for your heart.

"Eating a balanced diet, taking regular exercise and quitting smoking will more than offset any risk associated with your job."

## Work stress can raise risk of heart attack by 23%, study finds

Research claims those most at risk are those with high demands on them but little control over how and when to do the work



Workers without much control over the pace at which they do their work are more likely to suffer a heart attack, research shows. Photograph: Alamy

People with highly stressful jobs but little real control over decision making are running a 23% increased risk of a heart attack, according to authoritative research.

Many people in today's world, where the pace of life is fast and money is tight, may consider themselves stressed at work, but the definition used by authors of [the study in the Lancet medical journal](#) is precise. They considered job strain to involve high demands on the individual and little freedom to make his or her own decisions about how and when to do the work.

This sort of stress is to be found among all sorts of people, holding down all sorts of jobs on both high and low salaries, said one of the authors of the study, Professor Andrew Steptoe of the department of epidemiology and public health at University College London.

"It is the coupling [of high demand and low control] that is problematic," he said. "It is more common in low income jobs where people are doing the same thing again and again, such as assembly line work, but it is across the whole social spectrum.

"A doctor could be someone who has very high skills but might well feel that they have very little control over how quickly they can work, and they have high demands on them."

Some stress will inevitably be subjective, he agreed. "It is a combination of what you are expected to do and how you perceive that and experience that."

Airline pilots are another group who have a high status job with moderate demands, but the control levels are quite low – constrained by schedules and weather.

The large study, involving nearly 200,000 people from seven European countries, is more accurate in its findings than previous research on the issue, the authors contend, because they pooled the findings of both published and unpublished previous studies in a meta-analysis.

"Our findings indicate that job strain is associated with a small, but consistent, increased risk of experiencing a first CHD [coronary heart disease] event such as a heart attack," said Professor Mika Kivimäki, from UCL, who led the research.

The 200,000 people in the studies were followed for an average of 7.5 years, during which time there were 2,356 heart attacks or other first-time coronary heart disease events. Among those who met the definition for job strain, the risk was 23% higher than among the others, even after taking into account potentially confounding factors such as lifestyle, age, gender and socio-economic status.

There were other factors in the workplace which could affect stress and health, Steptoe added. "There is uncertainty of employment and whether wages are going up in the way they expected," he said.

Both employers and individuals could do things to reduce job strain, said Steptoe. But the paper points out that smoking and physical inactivity are still bigger risk factors for heart attacks.

## When work can be bad for your heart

[Jeremy Laurance](#) 

Friday 14 September 2012

Demanding jobs which leave workers little freedom to make decisions sharply increase the risk of a heart attack.

Workers suffering from “job strain” - lots of pressure but little freedom - have a 23 per cent increased risk, according to a Europe-wide study of almost 200,000 people from seven countries.

The findings confirm that lack of control, rather than stress itself, is the most damaging aspect of the work environment on individual's health. High octane lifestyles are often less stressful than humdrum ones.

Stress can be positive or negative depending on whether it is driven by excitement or fear. Beginning in the 1980s, the Whitehall studies involving tens of thousands of civil servants in the UK showed that those in low status jobs who were required to follow orders of their bosses were more stressed, and died sooner, than the top executives handing out the orders.

Now a review of 13 published and unpublished studies from the last 25 years across Europe (Belgium, Denmark, Finland, France, Netherland, Sweden and the UK) has confirmed the earlier findings “with greater precision than has previously been possible”, the authors say in *The Lancet*.

The overall risk of a heart attack during the average 7.5 years for which the individuals were followed was 3.4 per cent, suggesting that job strain “would account for a notable proportion of [heart attacks] in working populations.”

However, Mika Kimivaki, lead author of the study from University College, London, said it had much less impact than the known risk factors of smoking with a risk of 36 per cent, and physical inactivity with a risk of 12 per cent.

The ill effects of job strain may be underestimated. In a comment on the findings, Bo Netterstrom from Bispebjerg Hospital in Copenhagen said: “Job strain is a measure of only part of a psychosocially damaging work environment. This implies that prevention of workplace stress could reduce incidence of coronary heart disease to a greater extent than stated in the author's interpretation of the calculated risk attributable to job strain.”

Job insecurity and emotional responses to the departure of colleagues leaving smaller staffs under greater pressure were likely to be “of major importance in the future,” he said.

“The present economic crisis will almost certainly increase this importance,” he added.

Research published in 2009 showed that people treated unfairly at work who suffered in silence had twice the risk of a heart attack or dying of heart disease compared with those who vented their anger. “Covert copers” had worse health than those who confronted their tormentors.

Professor Peter Weissberg, medical director at the British Heart Foundation (BHF), said: “We know that being under stress at work, and being unable to change the situation, could increase your risk of developing heart disease. This large study confirms this, but also shows that the negative effect of workplace strain is much smaller than, for example, the damage caused by smoking or lack of exercise.”

Stress increases the blood pressure and makes the blood stickier by boosting the platelet count, so it clots faster. This is useful in battle when there is a high risk of injury but not helpful when arteries are already narrowed by fatty deposits. In these circumstances, stress may cause a blood clot to form which circulates round the body until it becomes lodged in the tiny coronary arteries that supply the heart muscle, causing a blockage and a heart attack.

Evidence suggests that patients whose blood pressure is slowest to return to normal following a period of stress and those with the highest platelet counts are most at risk of a stress-triggered heart attack.

## Being bossed around at work 'raises risk of heart attack by 23%'

- **Workers who feel over-pressured yet powerless are more at danger than those who suffer less stress**

By [Jenny Hope](#)

**PUBLISHED:** 00:48, 14 September 2012 | **UPDATED:** 00:48, 14 September 2012

Being in a stressful job where you are bossed around could raise the risk of a heart attack by a quarter, warn researchers.

They said workers who feel over-pressured yet powerless are more at danger than counterparts who suffer less stress.

Their major review of heart health among 200,000 workers examined the risk for all occupations, from civil servants to factory workers.



© Helen King/CORBIS

Worrying: Being in a stressful job where you are bossed around could raise the risk of a heart attack by a quarter, warn researchers

‘Our findings indicate that job strain is associated with a small but consistent increased risk of experiencing a first coronary heart disease event, such as a heart attack,’ said Mika Kivimaki, who led the

University College London research.

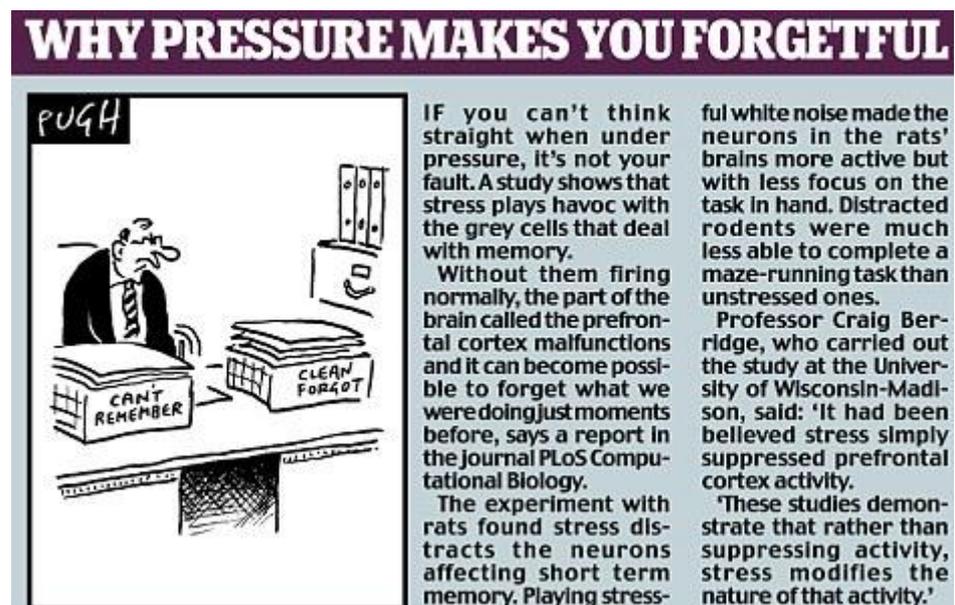
Previous research has suggested stress at work can trigger heart problems but there have been conflicting results.

The UCL investigation pooled results from 13 studies in the UK, Belgium, Denmark, Finland, France, the Netherlands and Sweden between 1985 and 2006.

All the men and women taking part completed questionnaires about their jobs, workload, deadlines and freedom to make decisions.

None had suffered a heart attack before providing the details, says a report in *The Lancet* medical journal.

The researchers defined a stressful job as one involving a high workload coupled with little freedom to make decisions.



Over an average follow-up period of 7.5 years, researchers recorded 2,356 cases of heart disease. These included hospital admissions due to heart attacks and deaths from coronary failure.

Scientists found those in stressful jobs are 23 per cent more likely to experience such an event than the less stressed. The greater risk reported for people in stressful jobs remained after taking into account factors such as lifestyle, age, gender and socio-economic background.

Professor Kivimaki said job stress may account for a 'notable proportion' of heart problems in the working population.

He pointed out that stress reduction would have a much smaller impact than tackling either lack of exercise or smoking, which had a negative effect ten times greater.

Research from a long running survey of Whitehall civil servants was included in the study, which showed working long hours raised the risk of fatal heart attacks by up to 60 per cent.

**SPIEGEL ONLINE**

<http://www.spiegel.de/gesundheit/diagnose/stress-auf-der-arbeit-gefaehrdet-das-herz-a-855599.html>

## Stress auf der Arbeit gefährdet das Herz

ANZEIGE

### Europaweite Studie: Stress im Job gefährdet das Herz

Von [Irene Berres](#)



DPA

Arbeiten bis tief in die Nacht: Ein hohes Arbeitspensum ist einer von mehreren Faktoren für ein erhöhtes Herzrisiko

**Kassierer, Callcenter-Angestellte oder Fließbandarbeiter sind besonders gefährdet. Eine aktuelle Studie zeigt, dass solche Berufsgruppen stark unter Stress leiden und damit ein höheres Herzinfarkttrisiko tragen. Die Gründe: Sie arbeiten viel und haben kaum Gestaltungsmöglichkeiten.**

Hamburg - Stress durchdringt den Körper, er mobilisiert ihn, macht ihn bereit für Kampf oder Flucht. Das Herz beginnt schneller zu schlagen, das Blut schießt mit höherem Tempo durch den Körper. Die Gefäße von Herz, Gehirn, Lunge und

Skelettmuskulatur weiten sich, bündeln die Energie. Was unwichtig erscheint, fährt der Körper herunter. Verdauung? Nebensache!

Kurzzeitiger Stress hilft, kritische Situationen zu meistern, den wichtigen Vortrag vor den Arbeitskollegen, das Bewerbungsgespräch, das erste Date mit dem potentiellen Traumpartner. Auf Dauer kann Stress jedoch auch krank machen - und das Herz stark gefährden.

Das bestätigt jetzt eine [aktuelle Studie aus dem Medizinjournal "Lancet"](#). Menschen mit einem besonders belastenden Job, der ein hohes Arbeitspensum, aber kaum Gestaltungsmöglichkeiten mit sich bringt, haben demnach ein mehr als 20 Prozent erhöhtes Risiko für Herzinfarkt.

Es ist die bisher umfangreichste Studie zu diesem Thema, für die ein internationales Forscherteam um Mika Kivimäki vom University College London die Daten von 13 Analysen aus sieben europäischen Ländern zusammengetragen hat. Diese wurden zwischen 1985 und 2006 durchgeführt und nach strengen Kriterien neu ausgewertet. So kam eine Gruppe mit fast 200.000 Personen zusammen, die über einen Zeitraum von durchschnittlich 7,5 Jahren begleitet wurden.

### **Viel Arbeit, kaum Kontrolle, keine Weiterbildung**

Alle Studienteilnehmer arbeiteten zu Beginn der Untersuchungen und waren noch nicht am Herzen erkrankt. Außerdem füllten sie einen Fragebogen aus, in dem sie beantworten mussten, wie hoch ihr Arbeitspensum ist, was für Gestaltungsmöglichkeiten sie im Job haben und wie viel sie dazulernen können. Auf diese Weise versuchten die Forscher, den sehr individuellen Faktor Stress greifbar zu machen.

Die Theorie dafür lieferte das sogenannte Jobstrain-Modell. Es sagt aus, dass Menschen, die ein großes Arbeitspensum absolvieren müssen, aber kaum Einfluss auf die Gestaltung der Arbeit haben, besonders viel Stress ausgesetzt sind. "Darunter fällt etwa ein Beschäftigter in einer Großmetzgerei", sagt Hermann Burr von der Bundesanstalt für Arbeitsschutz und Arbeitsmedizin, einer der Autoren der Studie. "Er hat in der Regel ein sehr hohes Arbeitstempo, das aber vom Band bestimmt wird." Ähnlich ginge es manchen Mitarbeitern in einem Callcenter oder an der Kasse eines Großmarktes: Sie arbeiteten wie am Fließband, eine individuelle Gestaltung des Arbeitsrhythmus ist häufig kaum möglich.

### **Jeder 25. Krankheitsfall könnte vermieden werden**

"Dem steht etwa eine Reinigungskraft entgegen", sagt Burr. "Sie hat in der Regel auch ein hohes Arbeitspensum, ist aber nicht so gut überwacht und hat dadurch mehr Kontrollmöglichkeiten." Leide sie zum Beispiel unter Rückenproblemen, könne sie einige Räume weniger sorgfältig putzen und dies am nächsten Tag nachholen.

Ebenfalls schädlich ist es laut dem Jobstrain-Modell, wenn die Arbeit keine Weiterbildungsmöglichkeiten bietet. "Das Lernen kann uns helfen, hohe Belastungen zu ertragen", sagt Burr.

Die Ergebnisse der Studie geben dem Stress-Modell Recht: Rund 15 Prozent der Teilnehmer hatten nach eigenen Angaben ein hohes Arbeitspensum, kaum Kontrolle

über ihre Arbeit und lernten nichts dazu - waren auf der Arbeit also besonders belastet. Sie erkrankten in der Studie wesentlich häufiger am Herz als die restlichen Teilnehmer: Ihr Herzinfarkttrisiko war im Vergleich um 23 Prozent erhöht.

## **ANZEIGE**

Auch nachdem die Forscher Geschlecht, Alter, körperliche Bewegung, Rauchgewohnheiten und andere Faktoren herausrechneten, die das Krankheitsrisiko ebenfalls beeinflussen könnten, blieb der Zusammenhang bestehen. "Gäbe es diese Kombination von Arbeit und mangelnder Kontrolle nicht, könnte man laut den Ergebnissen der vorgelegten Studie jeden 25. Fall von koronaren Herzkrankheiten bei Berufstätigen vermeiden", sagt Burr. Insgesamt erkrankten in der Studienzeit 2358 der Teilnehmer ernsthaft an den Herzkranzgefäßen.

## **Rauchen ist viel schädlicher als die Arbeitsbelastung**

Zwar besitzt die Studie, wie viele andere, einen entscheidenden Haken: Sie konnte den Zusammenhang zwischen Arbeitsstress und Herzkrankheiten nicht direkt nachweisen. Somit können sich die Forscher nicht hundertprozentig sicher sein, dass wirklich die Fließbandarbeit und nicht etwas anderes hinter den häufigeren Herzkrankheiten in der Gruppe steckt. Dennoch loben auch unabhängige Forscher den Ansatz: "Eine derartige Analyse zum Thema Stress und Arbeit hat es in diesem Umfang und dieser Qualität noch nicht gegeben", sagt der Kardiologe Clemens von Schacky, Leiter der präventiven Kardiologie an der Ludwig-Maximilian-Universität München.

Zwar gilt nun als sicher nachgewiesen, dass Arbeitsstress dem Herzen schaden kann. Daneben zeigt die Untersuchung jedoch auch etwas anderes: Zwar ließe sich mit weniger Stress am Arbeitsplatz die Anzahl an koronaren Herzerkrankungen und somit Herzinfarkten verringern, die auch in Deutschland den ersten Platz der Todesursachen einnehmen. Allerdings wäre der Effekt viel geringer als etwa der einer rauchfreien Gesellschaft: Während ein stressfreier Arbeitsplatz laut dem Ergebnis knapp vier Prozent der Ereignisse durch koronare Herzkrankheiten verhindern könnte, wären es bei einer rauchfreien Gesellschaft 36 Prozent.

# Job strain stresses heart

[CBC News](#)

Posted: Sep 13, 2012 8:04 PM ET

Last Updated: Sep 14, 2012 11:10 AM ET



[Powerless at work3:17](#)

People with stressful jobs and little power to make decisions face higher risks for heart disease than their peers with less job strain, a European review suggests.

Job strain, the combination of high job demands and low control at work, has been associated with coronary heart disease in previous studies, but the new review defines the risk more precisely.

"Our findings suggest that job strain is associated with a small, but consistent, increased risk of an incident event of cardiovascular heart disease," Mika Kivimaki from University College London and her co-authors concluded in Thursday's online issue of the *Lancet*.



*Job strain is defined as the combination of high job demands and low control at work. (Beawiharta Beawiharta/Reuters)*

"Prevention of workplace stress might decrease disease incidence; however this strategy would have a much smaller effect than would tackling of standard risk factors, such as smoking."

In the study, 15 per cent of the 197, 473 participants reported job strain. Their average age when the study began was 42.

The researchers recorded 2,358 incidents of coronary heart disease.

The researchers estimated the heart risk of job strain was 1.23 times higher for job strain than no job strain, after taking age and sex into account in the analysis.

Recognizing that subclinical coronary heart disease itself can affect levels of stress, the researchers excluded heart attacks and similar events that occurred at the start of the study period.

### **Stress on and off the job**

Factors like socioeconomic status, tobacco smoking, alcohol intake, physical activity levels were also considered.

Since the researchers used non-randomized observational data, they couldn't draw any conclusions about cause-and-effect.

They estimated that 3.4 per cent of the coronary events could be attributed to job strain, which they called "a notable proportion of coronary heart disease events in working populations."

In comparison, standard risk factors such as smoking account for 36 per cent, abdominal obesity for 20 per cent and physical inactivity 12 per cent, previous research suggests.

Other sources of stress, such as organizational downsizing, death of a child, and caring for a sick spouse at home, might also be associated with a higher risk of coronary heart disease, the researchers said.

The findings support the idea that a harmful psychological load often results from a combination of high demands and low job control, rather than either of those factors alone, Bo Netterstrom from the department of occupational and environmental medicine, Bispebjerg Hospital in Copenhagen said in a journal comment published with the study.

Job insecurity and factors related to social capital and motions are likely to be important in the future, particularly in the current economic crisis, Netterstrom said.

[http://www.nlm.nih.gov/medlineplus/news/fullstory\\_129256.html](http://www.nlm.nih.gov/medlineplus/news/fullstory_129256.html)



## Stressed at work? Look out for your heart

Thursday, September 13, 2012

LONDON (Reuters) - People who have highly demanding jobs and little freedom to make decisions are 23 percent more likely to have a heart attack compared with their less stressed out colleagues, according to research published on Friday.

But lighting up a cigarette or remaining chained to your desk rather than getting out to do some exercise is far more damaging for your heart health, researchers said.

A study of nearly 200,000 people from seven European countries found around 3.4 percent of heart attacks can be attributed to job strain - a significant proportion, but far less than the 36 percent attributable to smoking and 12 percent put down to lack of exercise.

For the study, which was published online in The Lancet medical journal, researchers analyzed job strain in employees who had no previous coronary heart disease (CHD).

Participants completed questionnaires about their job demands, workload, the level of time-pressure demands, and their freedom to make decisions.

"Our findings indicate that job strain is associated with a small, but consistent, increased risk of experiencing a first CHD event such as a heart attack," said Mika Kivimaki from University College London, who led the research.

Peter Weissberg, medical director at the British Heart Foundation, said the findings confirmed that being under stress at work and being unable to change the situation could increase the risk of developing heart disease.

But he noted they also showed the negative effects of workplace strain are much smaller than the damage caused by smoking or lack of exercise.

"Though stresses at work may be unavoidable, how you deal with these pressures is important, and lighting up a cigarette is bad news for your heart," he said in an emailed comment.

"Eating a balanced diet, taking regular exercise and quitting smoking will more than offset any risk associated with your job."

(Reporting by Kate Kelland, editing by Paul Casciato)

Reuters Health

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<http://uk.news.yahoo.com/job-strain-boosts-risk-heart-disease-23-percent-222040730.html>

## Yahoo! News

# Job strain boosts risk of heart disease by 23 percent: study



By AFP / AFP – Thu, Sep 13, 2012



Employees work at an Internet provider in France. Workers who suffer job strain are ...

Workers who suffer job strain are 23-percent more likely to have a heart attack than stress-free counterparts, but the risk is far smaller than smoking or a sedentary lifestyle, a large study published in *The Lancet* on Friday says.

"Job strain is associated with a small, but consistent, increased risk of experiencing a first CHD (coronary heart disease) event such as a heart attack," said Mika Kivimaki, an epidemiologist at University College London who led the probe.

The investigation seeks to shed light on an issue that has turned up confusing results, mainly because researchers have used different definitions and varying methods.

The new paper is a meta-analysis -- an overview of 13 studies conducted between 1985 and 2006 in seven European countries that adopted the same approach: participants without CHD were first interviewed and their health was then monitored, for 7.5 years on average.

In all, 197,473 took part in these studies, of whom 30,214 reported job strain, defined as having excessive workloads, time pressures and little freedom to make decisions at work.

During the monitoring period that followed, doctors recorded 2,356 heart attacks, fatal or otherwise.

The risk was 23 percent higher among the "job strain" group, even when age, gender and socio-economic factors, which all influence risk, were taken into account.

Three studies each took place in Denmark and Finland, two each were conducted in the Netherlands and Sweden, and the others were carried out in Belgium, Britain and France.

The authors say the findings are significant.

But they also note that prevention of workplace stress to reduce heart disease would be much less effective than efforts to combat smoking and physical inactivity, where the risk of CHD is more than 10 and nearly four times greater respectively.

In a commentary also carried by The Lancet, Bo Netterstrom of Bispelbjerg Hospital in Copenhagen cautioned that work-related health problems in Europe "will almost certainly increase" because of job insecurity driven by the economic crisis.

<http://www.sknvibes.com/news/newsdetails.cfm/63277>

Posted: Thursday 13 September, 2012 at 9:41 PM

## Job strain boosts risk of heart disease



Paris, FRA) - Workers who suffer job strain are 23-percent more likely to have a heart attack than stress-free counterparts, but the risk is far smaller than smoking or a sedentary lifestyle, a large study published in The Lancet says.

"Job strain is associated with a small, but consistent, increased risk of experiencing a first CHD (coronary heart disease) event such as a heart attack," said Mika Kivimaki, an epidemiologist at University College London who led the probe.

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## **Job Stress Linked to Increased Heart-Attack Risk**

By DR. CHANDANI PATEL, ABC News Medical Unit  
Sept. 13, 2012

"It's true, hard work never killed anybody, but I figure, why take the chance?" former President Ronald Reagan quipped at the Gridiron Dinner in 1987.

Reagan may have been onto something. A new review of research, published today in the journal *Lancet*, shows that job strain can increase the risk of a heart attack and death.

The findings may be particularly relevant today. As the country struggles with an unemployment rate of 8.1 percent, many people are facing tremendous pressure to perform well on the job.

A team of researchers from across Europe examined a total of 13 previous studies conducted between 1986 and 2006 that looked at job strain as a risk factor for heart attack and death. In total, the researchers evaluated data from about 200,000 patients for an average of 7.5 years, more than two times the number of patients studied in a previous review.

The researchers found that people who have highly demanding jobs and little freedom to make decisions are 23 percent more likely to have a heart attack. This was true regardless of gender, age and socioeconomic status.

Additionally, if we assume that job strain causes heart attacks, the risk of having a heart attack from your job is 3.4 percent, relatively low compared to that of smoking (36 percent) and not exercising (12 percent). This study, though, cannot definitively demonstrate a cause-effect relationship.

Scientists think that the increase in job stress triggers your brain to go into a defensive "fight-or-flight" mode that can take its toll on the body, and your heart.

"The [theory] that work stress influences heart health is more than 30 years old," said lead study author Mika Kivimaki of University College London. "[But] the pooling of published and unpublished studies allowed us to investigate [this] with greater precision than has been previously possible."

Dr. Redford Williams, director of the Behavioral Medicine Research Center at Duke University Medical Center, said the new research could leave many wondering what they can do in light of its findings.

"I think this is an area where changing the job situation may not be something that we have that much control over," said Williams, who was not involved with the study. "It may be in the long run that [we need] an alternative approach, rather than changing the work environment, that might focus on workers, try to train them in coping skills."

Williams said he has seen beneficial outcomes in highly stressed patients in his anger and stress management workshop LifeSkills, which provides training in coping skills and building supportive relationships.

He also stresses the importance of other psychosocial factors involved such as depression or stress at home that may play a role in risk of heart disease. Depression and anxiety are among the 10 most common diagnoses in primary care.

Moreover, many studies show that depression occurs more often in patients after a heart attack, creating a perpetual cycle of worsening severe heart disease and major depression.

Still, the American Heart Association considers stress a contributing risk factor to heart disease, but not a major risk factor. According to the AHA, healthy measures like quitting smoking, controlling cholesterol, exercising and maintaining a healthy weight are better ways of reducing your risk of coronary heart disease.

There are also major heart disease risk factors you cannot control, such as getting older, being male and your genes.

If there is one thing that is clear, it is that heart disease is a significant problem in the United States.

An American will have a coronary event about every 25 seconds, and someone will die of one about every minute, according to the updated 2012 AHA report on heart disease.



More than 16 million Americans have heart disease. It caused 1 of every 6 deaths in 2008, accounting for more than 400,000 deaths. Almost 800,000 Americans with have a new heart attack each year, and 470,000 will have a repeat attack.

Study author Kivimaki agreed that people experiencing job strain would do well to address other more significant contributors to heart disease.

"High strain is associated with an elevated risk of developing heart disease, but this excess risk is probably smaller than previously thought," Kivimaki says. "For those with job strain, adopting a healthy lifestyle seems particularly important."

<http://www.doctorslounge.com/index.php/news/pb/32058>



## Job Strain Ups Risk of Coronary Heart Disease

Last Updated: September 14, 2012.

**Job strain is associated with an increase in the risk of coronary heart disease, according to a meta-analysis published online Sept. 14 in *The Lancet*.**

FRIDAY, Sept. 14 (HealthDay News) -- Job strain is associated with an increase in the risk of coronary heart disease, according to a meta-analysis published online Sept. 14 in *The Lancet*.

Mika Kivimäki, Ph.D., from University College London, and colleagues conducted a meta-analysis of individual records from 13 European cohort studies involving 197,473 participants, to examine the relation between job strain and coronary heart disease. Job strain was assessed from validated job-content and demand-control questionnaires.

The researchers found that 15 percent of participants reported job strain. During a mean follow-up of 7.5 years, 2,358 events of incident coronary heart disease (first nonfatal myocardial infarction or coronary death) were recorded. The hazard ratio for job strain versus no job strain was 1.23, even after adjustment for sex, age, lifestyle, and socioeconomic status. The effect estimate was elevated in published versus unpublished studies (1.43 versus 1.16). Analyses that addressed reverse causality by exclusion of events of coronary heart disease that occurred in the first three and five years of follow-up also showed raised hazard ratios (1.31 and 1.30, respectively). There was a 3.4 percent population attributable risk for job strain.



Image courtesy of Blausen Medical

**Hazard ratio is also increased in studies addressing reverse causality**

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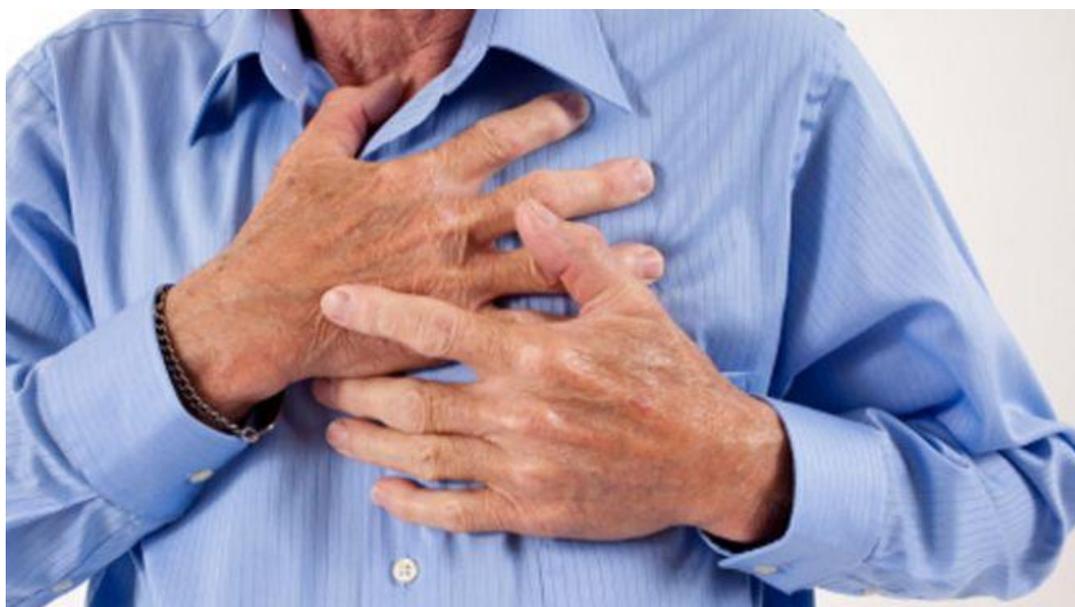
"Our findings suggest that prevention of workplace stress might decrease disease incidence; however, this strategy would have a much smaller effect than would tackling of standard risk factors, such as smoking," the authors write.

<http://www.foxnews.com/health/2012/09/14/stressed-at-work-look-out-for-your-heart/>

## Stressed at work? Look out for your heart

Published September 14, 2012

Reuters



Read more: <http://www.foxnews.com/health/2012/09/14/stressed-at-work-look-out-for-your-heart/#ixzz26VnVQfDh>

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"Eating a balanced diet, taking regular exercise and quitting smoking will more than offset any risk associated with your job."

Read more: <http://www.foxnews.com/health/2012/09/14/stressed-at-work-look-out-for-your-heart/#ixzz26VncIV00>

<http://news.menshealth.com/bust-work-stress/2012/09/13/>

[Men's Health News](#)

## 15 Easy Ways to Bust Work Stress



by [MH Editors](#) September 13, 2012, 06:30 pm EDT

Stop banging your head against the desk!

The average American man works 8.73 hours per day. If you feel like you need 87 hours in a day just to meet all of your deadlines, then you have a bigger problem than drowning under your inbox: You're setting yourself up for heart disease, finds a new study published online today in *The Lancet*.

The study looked at workers under “job strain.” That’s just a fancy way of saying that you 1) have piles of work to do, and 2) feel like you have zero control over your workload, your promotion chances, or the brain-numbing assignments your boss slaps on your desk.

The findings: Men who experience job strain have a 29 percent greater chance of developing heart disease than men without these demands. Even guys who had very high workloads were in the clear as long as they felt like they had some control over their fate.

Strain leads to stress, which increases your blood pressure—the number one risk for heart disease—and could lead to a long list of other heart-damaging side effects, researchers explain.

Are you strained? Answer these two questions:

- Do you feel constantly overloaded at work?
- Do you feel like there’s jack you can do about it?

If yes to both—congratulations!—you have job strain.

But even if you can’t control your workload, you can beat the heart-damaging effects of stress. Step 1: Sweat. A lot. A University of Missouri at Columbia study found that 33 minutes of high-intensity exercise helps lower stress levels more than working out at a moderate pace. What’s more, the benefits last as long as 90 minutes afterward. For a fast-paced, muscle-building, fat-torching workout that’s like nothing you’ve ever seen before, check out [Speed Shred from Men’s Health DeltaFIT](#). The eight follow-along DVDs will change your life, one 30-minute workout at a time.

Steps 2 through 15: These easy tips to turn your workplace into a palace of zen.

## **Take Your Calls Standing Up**

Here’s what happens when you flick on your iMac: “Your breathing rate goes up 30 percent, your blinking rate goes way down, and you tend to tighten your arms and shoulders without knowing it,” says Erik Peper, Ph.D., of the Institute for Holistic Healing at San Francisco State University. Your remedy: Change your body position every half hour or so—simply standing while talking on the phone can improve bloodflow and ease muscle strain. (Is your office chair killing you? Find out in the *Men’s Health* special report [Sentenced to the Chair](#).)

## **Visit Cracked.com**

Each hour, spend a minute perusing a funny blog. Periodic breaks help you process and absorb new information, increasing your efficiency, says Cleveland Clinic psychologist Michael McKee, Ph.D. During your hiatus, take 10-second breaths—inhale 4 seconds, exhale 6—to bolster your heart’s ability to recover from stress.

## **Enforce the Three-Second Rule**

The average working professional spends roughly 23 percent of his workday on email and glances at his inbox about 36 times an hour, finds a study from the University of

Glasgow. It takes you an average of 64 seconds to return to a task once you've stopped to read a new email, according to another study from Loughborough University. Allow yourself no more than 3 seconds to decide whether a message is worthy of your immediate attention, says John Grohol, Psy.D. (Here's an email you'll look forward to receiving every day: The [Men's Health Daily Dose newsletter](#). It's full of tons of useful stuff!)

### **Put a Green Dot on Your Phone**

This is your secret reminder to take one deep breath before you answer a call, says Susan Siegel, of the Program on Integrative Medicine at the University of North Carolina school of medicine. Not only will you feel better, but you'll sound more confident.

### **Go to Starbucks—with Your Coworkers**

Researchers at the University of Bristol in England discovered that when stressed-out men consumed caffeine by themselves, they remained nervous and jittery. But when anxious men caffeine-loaded as part of a group, their feelings of stress subsided. Just make sure you avoid [The 6 Worst Coffee Drinks in America](#).

### **Play Pandora at Work**

A study in *Nature Neuroscience* found that listening to favorite tunes or anticipating a certain point in a song can cause a pleasurable flood of dopamine. Listen to a few songs in a row several times a day.

### **Try the Office Chair Workout**

An Australian study published last month found that just 15 minutes of yoga—practiced right from an office chair—can reduce stress. Got a chair? Sitting in it right now? Great—try [The Office Chair Workout](#).

### **Be Fashionably Late to Happy Hour**

If you're looking forward to unwinding after a grueling work week with a cold brew, hold off on happy hour for 30 minutes: Drinking while stressed out actually prolongs your anxiety—even when you limit yourself to two—according to a study at the University of Chicago. The easy fix: Tell the crew you need to run errands before hitting the bar. Then take a quick walk, browse Best Buy's new releases, or flip to SportsCenter to check the scores.

### **Grab Your Ears**

Tug your lobes (lightly) and move them in circles in opposite directions for a count of 10, advises massage therapist Elizabeth Cornell. The motion moves the tentorium membrane in your head, which can relieve stress. You'll also be in fighting shape for charades.

### **Take the Scenic Route**

If it doesn't add much time to your commute, drive on roads with more trees and grass—natural scenes decrease feelings of anger and frustration on the road, according to a study in the journal *Environment and Behavior*. Not an option? Put on your favorite band's new album. Drivers who faced frustrating and irritating congestion felt less stressed when listening to music they enjoyed, according to a study in the *Journal of Applied Psychology*.

### **Put a Hole in a Tennis Ball and Squeeze**

Let the tension build up in your hand and the rest of your body, then release. This increases relaxation, says Allen Elkin, Ph.D., director of the Stress Management and Counseling Center in New York City. Tennis balls are those yellowy things people hit around in the '70s and '80s.

### **Hold Your Tongue**

When your annoying colleague decides to be annoying once again, tell yourself, I choose to be calm, says Siegel. Ah, now it's a choice, and you choose to be master and commander of the ship.

### **Make a Schedule**

If the boss suddenly dumps a big project on you, try not to say, "I can't do this. I'm gonna get fired." (Try particularly not to say this in front of your boss.) Instead, present him with a schedule outlining when things can be done. What was overwhelming is now under control and open to negotiation, says James Blumenthal, Ph.D., a psychologist at Duke University.

### **Laugh It Off**

Think your job is stressful? Try taking a gig as a New York City firefighter. One study found that every time a fire alarm bell rings, a firefighter's heart rate jumps up to 150 beats per minute—about the same rate as a moderate jog. Firefighter Matt Long says his fire station received between 4,000 and 5,000 calls like that each year. "After a bad day, we deal with things through laughter," Long says. To land the perfect practical joke, make sure you know the person well, always help clean up, and be ready to have your target prank you back.

### **Pop This Pill**

Frazzled medical students fed an omega-3 supplement for 12 weeks saw a 20 percent drop in stress compared to their placebo-taking peers, Ohio State University research shows. Click here for the [10 Best Supplements for Men](#).

Do you feel your blood pressure going down already?

*Additional writing and research by Steve Calechman, Kate Dailey, Paige Greenfield, Cindy Kuzma, Eddie Robbins, Amy Rushlow, and Denny Watkins.*

# Health Buzz: Is Work Stressing You Out? It Could Be Deadly

By [Laura McMullen](#)

September 14, 2012 [RSS Feed](#) [Print](#)

## Study: Stressed Workers More Likely to Have Heart Issues

Stressed at work? A new report indicates that this stress can be deadly. People with highly demanding jobs and little control over it are more likely to develop heart disease, showed the report, [published today](#) in *The Lancet* journal. In fact, people experiencing job strain are 23 percent more likely to have a heart attack or die from coronary heart disease than their more relaxed colleagues, University College London researchers found after analyzing 13 European studies covering about 200,000 people. The report also affirmed that while [job stress](#) can be dangerous, smoking and not exercising is far more demanding on your heart. Of the 200,000 people analyzed for the survey, 3.4 percent of heart attacks were caused by job strain, as opposed to 36 percent caused by smoking and 12 percent caused by lack of exercise. "Though stresses at work may be unavoidable, how you deal with these pressures is important, and lighting up a cigarette is bad news for your heart," Peter Weissberg, medical director at the British Heart Foundation, [told Fox News](#). "Eating a balanced diet, taking regular exercise and quitting smoking will more than offset any risk associated with your job."

<http://www.arabnews.com/job-strain-boosts-risk-heart-disease-23>

Saturday, 15 September 2012 | Shawwal 28, 1433

**arab news**

## Job strain boosts risk of heart disease by 23%

PARIS: ARAB NEWS

Saturday 15 September 2012

Workers who suffer job strain are 23-percent more likely to have a heart attack than stress-free counterparts, but the risk is far smaller than smoking or a sedentary lifestyle, a large study published in *The Lancet* says.

"Job strain is associated with a small, but consistent, increased risk of experiencing a first CHD (coronary heart disease) event such as a heart attack," Mika Kivimaki, an

epidemiologist at University College London who led the probe, said in remarks, cited by AFP.

The investigation seeks to shed light on an issue that has turned up confusing results, mainly because researchers have used different definitions and varying methods.

The new paper is a meta-analysis — an overview of 13 studies conducted between 1985 and 2006 in seven European countries that adopted the same approach: participants without CHD were first interviewed and their health was then monitored, for 7.5 years on average.

In all, 197,473 took part in these studies, of whom 30,214 reported job strain, defined as having excessive workloads, time pressures and little freedom to make decisions at work.

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The risk was 23 percent higher among the “job strain” group, even when age, gender and socio-economic factors, which all influence risk, were taken into account.

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<http://www.bangkokpost.com/lite/news/312313/job-strain-boosts-risk-of-heart-disease>

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- Published: 14/09/2012 at 08:49 AM
  - Newspaper section: [news](#)



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In all, 197,473 took part in these studies, of whom 30,214 reported job strain, defined as having excessive workloads, time pressures and little freedom to make decisions at work.

During the monitoring period that followed, doctors recorded 2,356 heart attacks, fatal or otherwise.

The risk was 23 percent higher among the "job strain" group, even when age, gender and socio-economic factors, which all influence risk, were taken into account.

Three studies each took place in Denmark and Finland, two each were conducted in the Netherlands and Sweden, and the others were carried out in Belgium, Britain and France.

The authors say the findings are significant.

But they also note that prevention of workplace stress to reduce heart disease would be much less effective than efforts to combat smoking and physical inactivity, where the risk of CHD is more than 10 and nearly four times greater respectively.

In a commentary also carried by The Lancet, Bo Netterstrom of Bispelbjerg Hospital in Copenhagen cautioned that work-related health problems in Europe "will almost certainly increase" because of job insecurity driven by the economic crisis.

<http://www.abc.net.au/science/articles/2012/09/14/3590373.htm>



## **Stressed at work? Look out for your heart**

Friday, 14 September 2012 Kate Kelland  
Reuters



The findings confirm that being under stress at work could increase the risk of developing heart disease (*Source: Jesper Elgaard/iStockphoto*)

People who have highly demanding jobs and little freedom to make decisions are 23 per cent more likely to have a heart attack compared with their less stressed out colleagues, according to research.

But lighting up a cigarette or remaining chained to your desk rather than getting out to do some exercise is far more damaging for your heart health, researchers say.

A study of nearly 200,000 people from seven European countries found around 3.4 per cent of heart attacks can be attributed to job strain - a significant proportion, but far less than the 36 per cent attributable to smoking and 12 per cent put down to lack of exercise.

For the study, which was published online in [The Lancet](#) medical journal, researchers analysed job strain in employees who had no previous coronary heart disease (CHD).

Participants completed questionnaires about their job demands, workload, the level of time-pressure demands, and their freedom to make decisions.

"Our findings indicate that job strain is associated with a small, but consistent, increased risk of experiencing a first CHD event such as a heart attack," says Mika Kivimaki from [University College London](#), who led the research.

Peter Weissberg, medical director at the British Heart Foundation, says the findings confirm that being under stress at work and being unable to change the situation could increase the risk of developing heart disease.

But he notes they also showed the negative effects of workplace strain are much smaller than the damage caused by smoking or lack of exercise.

"Though stresses at work may be unavoidable, how you deal with these pressures is important, and lighting up a cigarette is bad news for your heart," he says.

"Eating a balanced diet, taking regular exercise and quitting smoking will more than offset any risk associated with your job."

## **No duh of the day: Stressful jobs linked to heart attacks**

*By Kate Kelland, Reuters*

LONDON -- People who have highly demanding jobs and little freedom to make decisions are 23 percent more likely to have a heart attack compared with their less stressed out colleagues, according to research published on Friday.

But lighting up a cigarette or remaining chained to your desk rather than getting out to do some exercise is far more damaging for your heart health, researchers said.

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"Though stresses at work may be unavoidable, how you deal with these pressures is important, and lighting up a cigarette is bad news for your heart," he said in an emailed comment.

"Eating a balanced diet, taking regular exercise and quitting smoking will more than offset any risk associated with your job."

[http://afr.com/p/world/job\\_strain\\_boosts\\_risk\\_of\\_heart\\_etZvceDaXodXutAaP1WYIK](http://afr.com/p/world/job_strain_boosts_risk_of_heart_etZvceDaXodXutAaP1WYIK)  
<http://www.medconnect.com.au/tabid/311/ct1/c246855/Job-strain-boosts-risk-of-heart-disease/Default.aspx>  
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<http://cardiobrief.org/tag/job-stress/>

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<http://www.manager.co.uk/jobs-resources/job-strain-raises-risk-of-heart-attack-study-finds/>

<http://www.kpho.com/story/19544219/stressful-job-might-be-tough-on-the-heart?clienttype=printable>

## Stressful job might be tough on the heart

*Updated: Sep 14, 2012 11:32 PM FDT*



People whose jobs are very taxing but who also have little power to make workplace decisions may be at greater risk for heart disease.

(©iStockphoto/Thinkstock)

FRIDAY, Sept. 14 (HealthDay News) -- Stressed out by a demanding job? It may be affecting your heart's health, research suggests.

People whose jobs are very taxing but who also have little power to make workplace decisions are at greater risk for heart disease, according to a large new evidence review.

After taking lifestyle, age, gender and socioeconomic status into account, European researchers found that these workers are 23 percent more likely to have a heart attack than other people with less job-related stress.

The study was published online Sept. 13 in the journal *The Lancet*.

"Our findings indicate that job strain is associated with a small but consistent increased risk of experiencing a first [coronary heart disease] event, such as a heart attack," study leader Mika Kivimaki, of the University College London, said in a journal news release.

In conducting the study, the researchers examined the job strain experienced by nearly 200,000 employees with no history of heart disease. Workers from Belgium, Denmark, Finland, France, the Netherlands, Sweden and the United Kingdom were followed between 1985 and 2006.

When the study began, the employees completed surveys on their job demands, their workload, the time pressure they faced and their freedom to make decisions.

The study revealed that nearly 2,400 of the participants had their first nonfatal heart attack over the course of the average 7.5-year follow-up period.

"The overall population attributable risk for [coronary heart disease] events was around 3.4 percent, suggesting that if the association were causal, then job strain would account for a notable proportion of [these heart] events in working populations," Kivimaki explained. "As such, reducing workplace stress might decrease disease incidence."

Two experts in the United States said it's far from proven, however, that anxiety-filled workdays increase cardiovascular risk.

"While it seems intuitive that psychosocial stress and job strain in particular would have an adverse effect on the heart, previously published studies on this subject have been inconclusive," said Dr. Kenneth Ong, interim chairman of the department of medicine and interim chief of cardiology at the Brooklyn Hospital Center in New York City.

Ong said that although the current data review is extremely rigorous, "many unanswered questions remain, such as whether the duration of exposure to stress, type of occupation or amount of time spent at the workplace becomes a factor."

The impact of job strain on heart disease "appears to be small compared to traditional risk factors, such as cigarette smoking, obesity and physical inactivity," Ong said.

Another expert was equally cautious. "This study shows an association with job strain and subsequent heart disease," said Dr. Stephen Green, associate chairman of the department of cardiology at North Shore University Hospital in Manhasset, N.Y. "It does not mean that job strain causes heart disease, but that it is somehow connected to job strain."

"For instance, with increased job strain, an employee might gain weight or drink more coffee or smoke more cigarettes or do something else that might actually be the cause of the increase in heart risk," Green said.

### **More information**

The U.S. Centers for Disease Control and Prevention has more about [work-related stress](#).

<http://www.nydailynews.com/life-style/health/work-related-stress-increases-risk-heart-attacks-deaths-coronary-heart-disease-study-article-1.1159585?asdasd>

## **Work-related stress increases risk of heart attacks and deaths from coronary heart disease: study**

**A new study says job stress increases employees' risk of heart disease and even death, especially for workers who have little control over their stress levels, like retail workers.**

By [Rheana Murray](#) / NEW YORK DAILY NEWS

*Published: Friday, September 14, 2012, 11:18 AM*

*Updated: Friday, September 14, 2012, 2:12 PM*



David De Lossy/Getty Images

**In a study of about 200,000 people who had no history of heart problems, job stress was tracked for an average of seven and a half**

## **years. Researchers found a 23% increased risk of heart attacks and deaths among the subject pool.**

Work-related stress increases employees' risk of heart disease and even related deaths, according to a new study.

The risk is especially great for workers who have little control over their stress levels — a retail employee who has no idea what to expect before a mass of people show up to shop, for example.

“Job strain is composed of two things,” Professor Mika Kivimaki of the University College of London told the Daily News. “One, you have lots of demands, a heavy work load. The other is how much control you have over that. Stress is more common in lower positions than among those who are on the top, who have more authority and control.”

### **NON-ALCOHOLIC WINE IS GOOD FOR YOUR HEART**

The study's main finding is that stress is related to a small but consistent increased risk of coronary heart disease.

Kivimaki and colleagues conducted the study on about 200,000 people who had no history of heart problems. Participants' health and job stress was tracked for an average of seven and a half years. Researchers found a 23 percent increased risk of heart attacks and deaths among participants.

Kivimaki notes other lifestyle choices — like smoking, exercise levels and obesity — are greater risk factors, but says they can all run hand in hand.

### **HOUSEHOLD CHEMICAL LINKED TO HEART DISEASE**

“Smokers, when they're under stress, tend to smoke a bit more than people who are not under stress,” he said. “Those who are physically active, if they have job stress, they seem to be more likely to become inactive. So these seem to be related.”

If you can't avoid a stressful work environment, making other healthy choices can help keep heart problems at bay.

“If one has high stress at work, it's even more important to keep healthy otherwise,” Kivimaki said.

A healthy diet, exercise, keeping weight and cholesterol in check and avoiding heavy drinking can all offset negative effects job stress has on the heart.

The research was published Friday in the British medical journal [The Lancet](#).

*rmurray@nydailynews.com*

Read more: <http://www.nydailynews.com/life-style/health/work-related-stress-increases-risk-heart-attacks-deaths-coronary-heart-disease-study-article-1.1159585#ixzz26XBKgtfo>

## Job strain boosts risk of heart disease

AAP

September 14, 2012 10:53AM

**WORKERS who suffer job strain are 23-percent more likely to have a heart attack than stress-free counterparts, but the risk is far smaller than smoking or a sedentary lifestyle, a large study published in *The Lancet* says.**

"Job strain is associated with a small, but consistent, increased risk of experiencing a first CHD (coronary heart disease) event such as a heart attack," said Mika Kivimaki, an epidemiologist at University College of London who led the probe.

The investigation seeks to shed light on an issue that has turned up confusing results, mainly because researchers have used different definitions and varying methods.

The new paper, published on Friday, is a meta-analysis - an overview of 13 studies conducted between 1985 and 2006 in seven European countries that adopted the same approach: participants without CHD were first interviewed and their health was then monitored, for 7.5 years on average.

In all, 197,473 took part in these studies, of whom 30,214 reported job strain, defined as having excessive workloads, time pressures and little freedom to make decisions at work.

During the monitoring period that followed, doctors recorded 2,356 heart attacks, fatal or otherwise.

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Three studies each took place in Denmark and Finland, two each were conducted in the Netherlands and Sweden, and the others were carried out in Belgium, Britain and France.

The authors say the findings are significant.

But they also note that prevention of workplace stress to reduce heart disease would be much less effective than efforts to combat smoking and physical inactivity, where the risk of CHD is more than 10 and nearly four times greater respectively.

In a commentary carried by *The Lancet*, Bo Netterstrom of Bispelbjerg Hospital in Copenhagen cautioned that work-related health problems in Europe "will almost certainly increase" because of job insecurity driven by the economic crisis.

<http://www.cbs19.tv/story/19544219/stressful-job-might-be-tough-on-the-heart?clienttype=printable>

## **Stressful job might be tough on the heart**

*Updated: Sep 14, 2012 11:32 PM FDT*



People whose jobs are very taxing but who also have little power to make workplace decisions may be at greater risk for heart disease.

(©iStockphoto/Thinkstock)

FRIDAY, Sept. 14 (HealthDay News) -- Stressed out by a demanding job? It may be affecting your heart's health, research suggests.

People whose jobs are very taxing but who also have little power to make workplace decisions are at greater risk for heart disease, according to a large new evidence review.

After taking lifestyle, age, gender and socioeconomic status into account, European researchers found that these workers are 23 percent more likely to have a heart attack than other people with less job-related stress.

The study was published online Sept. 13 in the journal *The Lancet*.

"Our findings indicate that job strain is associated with a small but consistent increased risk of experiencing a first [coronary heart disease] event, such as a heart attack," study leader Mika Kivimaki, of the University College London, said in a journal news release.

In conducting the study, the researchers examined the job strain experienced by nearly 200,000 employees with no history of heart disease. Workers from Belgium, Denmark, Finland, France, the Netherlands, Sweden and the United Kingdom were followed between 1985 and 2006.

When the study began, the employees completed surveys on their job demands, their workload, the time pressure they faced and their freedom to make decisions.

The study revealed that nearly 2,400 of the participants had their first nonfatal heart attack over the course of the average 7.5-year follow-up period.

"The overall population attributable risk for [coronary heart disease] events was around 3.4 percent, suggesting that if the association were causal, then job strain would account for a notable proportion of [these heart] events in working populations," Kivimaki explained. "As such, reducing workplace stress might decrease disease incidence."

Two experts in the United States said it's far from proven, however, that anxiety-filled workdays increase cardiovascular risk.

"While it seems intuitive that psychosocial stress and job strain in particular would have an adverse effect on the heart, previously published studies on this subject have been inconclusive," said Dr. Kenneth Ong, interim chairman of the department of medicine and interim chief of cardiology at the Brooklyn Hospital Center in New York City.

Ong said that although the current data review is extremely rigorous, "many unanswered questions remain, such as whether the duration of exposure to stress, type of occupation or amount of time spent at the workplace becomes a factor."

The impact of job strain on heart disease "appears to be small compared to traditional risk factors, such as cigarette smoking, obesity and physical inactivity," Ong said.

Another expert was equally cautious. "This study shows an association with job strain and subsequent heart disease," said Dr. Stephen Green, associate chairman of the department of cardiology at North Shore University Hospital in Manhasset, N.Y. "It does not mean that job strain causes heart disease, but that it is somehow connected to job strain."

"For instance, with increased job strain, an employee might gain weight or drink more coffee or smoke more cigarettes or do something else that might actually be the cause of the increase in heart risk," Green said.

### **More information**

The U.S. Centers for Disease Control and Prevention has more about [work-related stress](#).



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## [Workplace stress could be taking a toll on the heart – CTV News](#)

Sunday, September 16th, 2012 12:16 am

CTVNews.ca Staff

Published Saturday, Sep. 15, 2012 10:30PM EDT

Those in high-stress positions with little say in the office could be working themselves into a heart attack, according to a new European study.

A study published in *The Lancet* medical journal on Friday showed those with demanding jobs and little freedom to make decisions are 23 per cent more likely to experience a heart attack compared to their less-stressed counterparts.

“The pooling of published and unpublished studies allowed us to investigate the association between coronary heart disease and exposure to job strain with greater precision than has been previously possible,” lead researcher Mika Kivimäki of University College London said in a news release. “Our findings indicate that job strain is associated with a small, but consistent, increased risk of experiencing a first coronary heart disease event such as a heart attack.”

Kivimäki said while previous studies have looked at job strain and its effect on the human heart, the findings were often limited in their scope.

The new collaborative project examined the results of nearly 20,000 surveys from 13 studies that were conducted in Belgium, Denmark, Finland, France, the Netherlands, Sweden, and the U.K. between 1985 and 2006.

Participants completed questionnaires at the beginning of the studies that assessed job demands, excessive workload, the level of time-pressure demands, and freedom to make decisions.

The researchers then recorded 2,356 incidents of non-fatal heart attacks over the course of seven years.

The results showed a clear link between heart disease and stress even after lifestyle, age, gender and socioeconomic status were taken into account.

While lower stress levels are healthier for the heart, Kivimäki said cutting out risk factors such as smoking, or being more physically active remain a more effective means of avoiding heart disease.

One labour relations expert told CTV News that workplace stress is on the rise as the work day moves beyond the eight-hour realm with employer-issued laptops and smartphones.

“People are working more,” Mike Cuma of the Legacy Bowes Group told CTV News.

“They are working longer hours, more overtime. They are actually being required to put out more efforts of work.”

Dr. Brian Baker of the Heart and Stroke Foundation has studied the effects of stress on the heart for decades and said that stress is a health problem that has not been properly recognized.

“It’s best that you not ruminate, you not obsess about your work,” said Baker. “Because then you are more liable to the effects of stress over time.”

*With a report from CTV’s Winnipeg Bureau Chief Jill Macyshon*

<http://www.reuters.com/article/2014/10/08/us-diabetes-workers-idUSKCN0HX06220141008>



## **Working long hours tied to increased diabetes risk among poor**

BY SHEREEN LEHMAN

NEW YORK Tue Oct 7, 2014 10:27pm EDT

(Reuters Health) - People in low-paying jobs may be at higher risk of developing diabetes if they work long hours, suggests a new analysis of past research.

Low-income workers were more likely to develop type 2 diabetes if they put in more than 55 hours per week than if they worked normal hours, researchers found. Work hours weren't tied to increased diabetes risks among wealthier people, however.

“Those who worked long hours in these jobs had 30 percent increased risk of developing type 2 diabetes,” said Mika Kivimäki, the study’s lead author from the UK’s University College London.

“One possible reason for this is that working long hours displaces health-restorative activities, in particular physical activity, sufficient sleep and healthy diet,” Kivimäki told Reuters Health in an email.

About one in 10 people living in the U.S. has diabetes, according to the Centers for Disease Control and Prevention (CDC). About 30 percent of diabetes cases are undiagnosed.

The vast majority of cases are type 2 diabetes, which is sometimes referred to as adult-onset diabetes. It occurs when the body's cells are resistant to the hormone insulin, or the body doesn't make enough of it. Insulin gives blood sugar access to the body's cells to be used as fuel.

Previous studies had suggested that working long hours is tied to an increased risk of developing diabetes, but more recent research had suggested the link is only true among the poorest workers, Kivimäki and his colleagues write in *The Lancet Diabetes and Endocrinology*.

For the analysis, they combined data from four previously published studies and 19 unpublished studies that looked at working long hours, which they defined as 55 hours or more per week, and the risk of developing diabetes.

The studies included more than 200,000 people, who were followed for an average of seven years, from the U.S., [Japan](#), [Australia](#) and several European countries.

Out of every 10,000 study participants, about 29 developed diabetes each year during the study.

Overall, when the researchers compared people who worked long hours to people who worked a standard 35- to 40-hour work week, they found similar diabetes risks in both groups.

But when they focused on people who worked long hours, they saw a difference by wealth class.

Specifically, among every 10,000 of the lowest-paid workers, there were 13 extra cases of diabetes each year among those who worked longer hours, compared to those who worked normal hours.

There was no increased risk among the wealthiest people who worked long hours.

While the new study can't prove working long hours leads to diabetes among poor workers, Kivimäki said that it's good for health professionals to know of the link.

"Well targeted prevention and early diagnosis can reduce the number of diabetes cases and lower rates of developing complications," he said.

Orfeu Buxton, a researcher with The Pennsylvania State University in University Park, and Cassandra Okechukwu, a researcher from Harvard School of Public Health in Boston, suggest in a commentary accompanying the new analysis that the increased risk among the poorest group may stem from working longer shifts, late nights or split shifts that disrupt the body's so-called clocks - known as circadian rhythms.

"It's not the work hours themselves directly that are necessarily toxic - it's what they create or cause," Buxton told Reuters Health in a phone call.

Circadian rhythms can slow down metabolism and cause the pancreas to secrete less insulin after meals, he said. This can lead to diabetes in some people.

"We don't think that everybody faces the same risks," Buxton said, adding that some people can handle long hours and shift work, but others may have problems within a few weeks.

Kivimäki said he hopes the study will prompt policymakers and employers to think of ways the workplace can support healthy lifestyles. He also said there are a few ways individuals can lower their risks of developing diabetes.

"Diabetes prevention guidelines emphasize that 30 minutes of moderate-intensity physical activity on most days and a healthy diet can substantially reduce the risk of developing type 2 diabetes," he said.

Losing weight is also an excellent way of lowering diabetes risk, he said.

SOURCES: [bit.ly/1uy5IJm](http://bit.ly/1uy5IJm) and [bit.ly/1twTL2d](http://bit.ly/1twTL2d) The Lancet Diabetes and Endocrinology, online September 25, 2014.

[http://well.blogs.nytimes.com/2014/09/29/working-long-hours-tied-to-diabetes-risk/?\\_php=true&\\_type=blogs&\\_r=0](http://well.blogs.nytimes.com/2014/09/29/working-long-hours-tied-to-diabetes-risk/?_php=true&_type=blogs&_r=0)

# The New York Times

## Working Long Hours Tied to Diabetes Risk

By [Nicholas Bakalar](#)

September 29, 2014 4:15 pmSeptember 29, 2014 4:15 pm

Working long hours may increase the risk for Type 2 diabetes, a new review has found, but the risk is apparent only in workers of lower socioeconomic status.

Long working hours are associated with diabetes risk factors — work stress, sleep disturbances, depression and unhealthy lifestyle, and some studies have found long hours associated with increased risk for cardiovascular disease.

Researchers combined data from 19 published and unpublished studies on more than 222,000 men and women in several countries.

The analysis, [published in The Lancet Diabetes & Endocrinology](#), found no effect of working hours in higher socioeconomic groups. But in workers of lower socioeconomic status, working more than 55 hours a week increased the risk for Type 2 diabetes by almost 30 percent. The association persisted after excluding shift workers and adjusting for age, sex, obesity and physical activity.

The study is observational, and the lead author, Mika Kivimäki, a professor of epidemiology at University College London, said there were no intervention studies that could establish cause and effect.

“My recommendation for people who wish to decrease the risk of Type 2 diabetes,” he said, “applies both to individuals who work long hours and those who work standard hours: Eat and drink healthfully, exercise, avoid overweight, keep blood glucose and lipid levels within the normal range, and do not smoke.”

<http://www.hospitalhealth.com.au/news/research/long-hours-low-socioeconomic-jobs-linked-type-2-diabetes/>



**Long Hours in Low Socioeconomic Jobs Linked to Type 2 Diabetes**  
[Sophie Blackshaw](#)

on September 24, 2014 at 9:37 am

The Lancet Diabetes and Endocrinology journal has published the results of the largest study into the field of diabetes and long working hours so far, and found that people working more than 55 hours per week in a manual or low socioeconomic job have a 30% greater risk of developing type 2 diabetes.

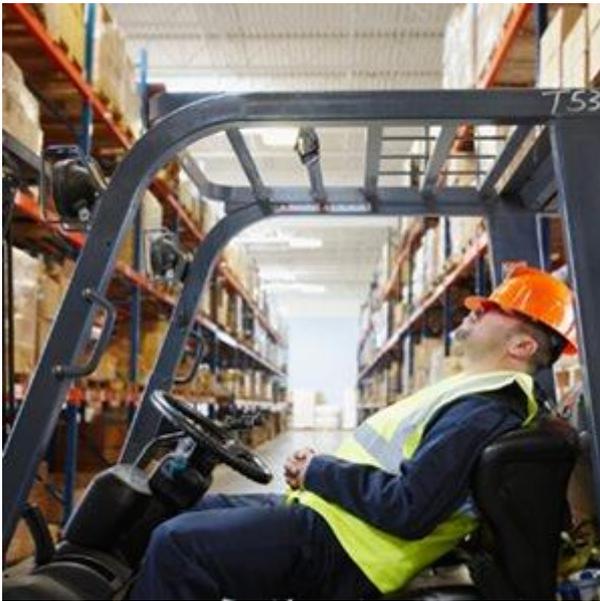
University College London's professor of epidemiology Mika Kivimäki and colleagues conducted a review and meta-analysis of published studies and unpublished individual-level data examining the effects of long working hours on type 2 diabetes, concluded in late April this year.

The analysis involved 222,120 men and women from the USA, Europe, Japan and Australia who were monitored for an average of 7.6 years, and the results found that those working more than 55 hours per week had a greater risk of developing type 2 diabetes than those working a regular 40 or under.

A further analysis of the results, however, revealed that the individuals working these longer hours in low socioeconomic jobs had about a 30% increased risk of developing the disease than their low socioeconomic working counterparts who worked 35-40 hours a week. Surprisingly, health behaviours like smoking and physical activity and other risk factors like age, sex and obesity were taken into account, and did not affect change the outcome.

The researchers said that further research is needed to discover the underlying causes, but suggested that working disruptive schedules that affect sleeping, unwinding and exercise could be a major component.

According to Professor Kivimäki, "The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible. Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socioeconomic status jobs".



## Long hours in low paid work ups diabetes risk

29 September, 2014 [Rachel Worsley](#)

Workers in low socioeconomic status jobs who work long hours have an increased risk of developing type 2 diabetes than workers who worked fewer hours, according to a large [study](#).

The meta-analysis published in The Lancet included 23 studies involving over 220,000 people in the USA, Europe, Japan and Australia. It found those who worked 55 hours or more per week in a low socioeconomic status job had a 30% increased risk compared to those who worked between 35 to 40 hours a week.

The finding held even after adjusting for shift work, smoking, physical activity, age, sex and obesity.

According to the study, the meta-analysis's focus on socioeconomic status-specific patterns helps explain discrepancies in previous studies that showed mixed results

<http://www.delhidailynews.com/news/Working-long-hours-can-raise-diabetes-risk--Study-1411740266/>

## Working long hours can raise diabetes risk: Study

Daily Delhi News Correspondent Posted on 26 Sep, 2014 at 07:34:PM IST

**According to a new research, obesity is not the only factor which can be linked to type 2 diabetes and even working long hours can raise your diabetes risk.**

At least three new studies have pointed out other factors that may also be an underlying cause behind the disease. Factors such as a hormone known as amylin, genetic mutations and disturbances in the natural clock of the body can be linked with the Type 2 diabetes.

Type 2 diabetes causes building up of sugar in the blood and develops as the cells of the body become resistant to insulin (a hormone produced in pancreas that helps in ushering sugar into cells for energy) . Hence it becomes difficult for those cells to use sugar for fuel.

As a result, more and more insulin is produced by the pancreases which eventually fail to keep up with the demand. This is when type 2 diabetes occurs in a patient, says the U.S national Institute of Diabetes and Digestive and Kidney Disease (NIDDK).

NIDDK is certain that genes play a role in type 2 diabetes. Other than genes, a sedentary lifestyle, family history and ethnicity can also be linked with the disease.

Researchers are not aware of all the genetic mutations or genes that can be responsible for type 2 diabetes. The best course of treatment is not really clear even after the genes have been identified.

The genetic study that was conducted recently focuses on PPAR $\gamma$ , a gene that was known to be involved in type 2 diabetes. However, the research found that around one per cent of people have one of nine mutations that effects the way that gene functions. For such people, the risk of developing type 2 diabetes increases considerably.

Another study looked at the hormone called amylin. Amylin works together with insulin to help the body process the sugars from food for its use. However, the researchers have found that some amylin can also get deposited around the pancreases and this may lead to formation of toxic clumps. These clumps can then kill the insulin producing cells and lead to diabetes. The study can be found in Journal of the Federation of American Societies for Experimental Biology.

The third study, published online in Diabetes Research and Clinical Practice says that the disturbance in the internal clock of the body may also be a factor in development of type 2 diabetes. The body's internal clock can be affected by unusual food timings, shift work and nocturnal lightening.

No matter what the additional causes are, presently weight is one of the few factors that can be modified for helping in managing Type 2 diabetes.

## **Extended working hours may trigger diabetes, study suggests**

DDN Correspondent Posted on 25 Sep, 2014 at 09:27:PM IST

**People employed in low-paid jobs who are required to work for 55 hours or maybe more per week face a 30 percent increased risk of developing type 2 diabetes as compared to those individuals who work for 35-40 hours per week, a new study suggests.**

The study was conducted by Mika Kivimaki, who is employed as a Professor of Epidemiology at University College London, UK, and her coworkers which took into account the methodical assessment and also meta-analysis of the studies published as well as not published individual-level statistics assessing the impact of prolonged working hours on type 2 diabetes.

The data was taken for assessment from 4 published studies and 19 unpublished studies which incorporated 222,120 men and women hailing from the US, Europe, Japan, and Australia who were followed for a period of 7 years and 6 months.

The research findings revealed that people who are employed in low socioeconomic grade jobs and put in long working hours, which may go up to 55 hours or more per week were posed with an approximately 30 per cent higher risk of developing diabetes as compared to the people who worked for 35-40 hours per week. The researchers reached this conclusion post consideration of health factors such as smoking and exercising, and other concerns including age, sex, and overweight.

Kivimaki said in a statement "Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socioeconomic status jobs".

The study was published in the journal The Lancet Diabetes & Endocrinology.

<http://www.asianage.com/india/55-hours-manual-work-week-raises-diabetes-risk-854>

# THE ASIAN AGE

Delhi | Mumbai | Kolkata | London

10:02 AM, Thursday Sep 25, 2014

## **55 hours manual work a week raises diabetes risk**

Sep 25, 2014 - [TEENA THACKER](#) |

[New Delhi](#)

People working for more than 55 hours per week doing manual work or other low socio-economic status jobs have a 30 per cent greater risk of developing Type 2 diabetes, according to the largest study in this field so far, published in Lancet Diabetes & Endocrinology.

Analysis of data involving 2,22,120 men and women from the US, Europe, Japan and Australia, who were followed for an average of 7.6 years, found a similar risk of developing Type 2 diabetes in people working more than 55 hours a week compared to those putting in a normal 35 to 40-hour week.

Further analyses revealed that individuals doing low socio-economic status jobs who worked 55 hours or more per week had a roughly 30 per cent increased risk of developing diabetes compared to their counterparts who worked between 35 and 40 hours a week, even after taking into account health behaviours such as smoking and physical activity, and other risk factors, including age, sex, and obesity.

“This association remained strong even after excluding shift work, which has been shown to increase the risk of obesity and developing Type 2 diabetes,” Lancet said.

Researchers, however, say that further research is needed to identify the underlying mechanisms for the association between long working hours and diabetes in people doing low socio-economic status jobs, but suggest a number of possible explanations, including working disruptive schedules that leave little time to take part in health restoring behaviours, such as sleeping, unwinding, and exercise.

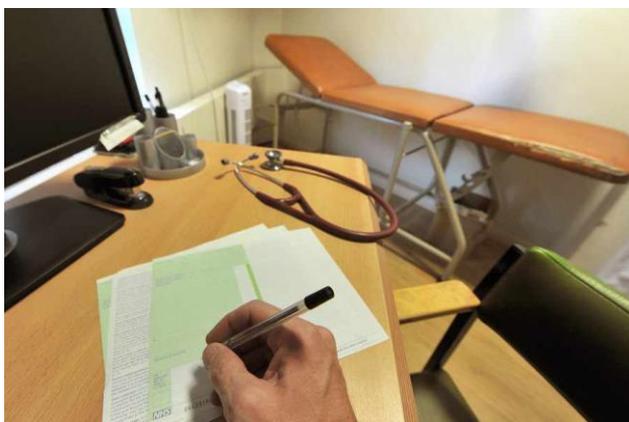
According to Mika Kivimäki, professor of epidemiology at University College London, “The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible. Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socio-economic status jobs.”

<http://www.expressandstar.com/business/uk-money/2014/09/24/study-reveals-job-link-to-diabetes/>

PUBLISHED: September 25, 2014 12:30 am

## Study reveals job link to diabetes

**Long hours in a dead-end job can increase diabetes risk by almost a third, research has shown.**



Health professionals have been warned that working long hours in a low-paid job is a risk factor for Type 2 diabetes

People in low-status, poorly paid jobs who work 55 hours or more a week are 30% more likely to develop Type 2 diabetes than those putting in 35 to 40 hours, scientists found.

The difference remained after taking account of factors such as smoking, physical activity, age, gender and obesity.

Even excluding the impact of shift work, which has been shown to increase the risk of obesity and diabetes, did not alter the result.

Researchers analysed data from more than 222,000 men and women who participated in diabetes studies in the US, Europe, Japan and Australia.

Lead scientist Professor Mika Kivimaki, from University College London, said: "The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible.

"Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socio-economic status jobs."

The findings are reported in the journal *The Lancet Diabetes & Endocrinology*.

In an accompanying comment article, US experts Dr Orfeu Buxton, from Pennsylvania State University, and Dr Cassandra Okechukwu, from Harvard School of Public Health, wrote: "The results remained robust even after controlling for obesity and physical activity, which are often the focus of diabetes risk prevention, suggesting that work factors affecting health behaviours and stress may need to be addressed as part of diabetes prevention."

Maureen Talbot, senior cardiac nurse at the British Heart Foundation, which co-funded the research, said: "The findings of this study suggest a link between working more than 55 hours a week and an increased risk of developing Type 2 diabetes, but only in those people deemed to be in low socio-economic groups.

"The study's authors confirm more research into this finding is needed. Having diabetes increases someone's risk of having a heart attack or stroke so reducing that risk is essential."

<http://www.itv.com/news/update/2014-09-25/study-shows-jobs-link-to-diabetes/>

## **Long hours and low status jobs 'link' to diabetes**

Long hours in a dead-end job can increase diabetes risk by almost a third, research has shown.

People in low-status, poorly paid jobs who work 55 hours or more a week are 30% more likely to develop Type 2 diabetes than those putting in 35 to 40 hours, scientists found.

<http://consumer.healthday.com/diabetes-information-10/misc-diabetes-news-181/can-all-work-and-no-play-make-you-diabetic-692028.html>

## Can All Work and No Play Make You Diabetic?

Blue-collar jobs of 55 hours a week or more might raise your risk, study says



WEDNESDAY, Sept. 24, 2014 (HealthDay News) -- Working long hours may increase your risk for diabetes, a new study suggests. But the finding seems to depend on your job.

Researchers examined data from prior studies involving more than 222,000 men and women in the United States, Europe, Japan and Australia who were followed for an average of 7.6 years.

The initial analysis revealed no difference in the risk of type 2 diabetes among people who worked more than 55 hours a week and those who worked 35 to 40 hours a week.

However, further analyses showed that people who worked more than 55 hours a week at manual labor or other types of "low socioeconomic status jobs" were 30 percent more likely to develop diabetes than those who worked 35 to 40 hours a week.

This increased risk remained even after the researchers accounted for diabetes risk factors such as smoking, physical activity levels, age, sex and obesity, and after the researchers excluded shift work, which increases the risk of obesity and diabetes.

Although the study, published Sept. 24 in *The Lancet Diabetes & Endocrinology*, found an association between long work weeks and diabetes, it didn't establish a cause-and-effect relationship.

Further research is needed to learn more about the seeming link between working long hours and increased diabetes risk, the study authors said.

Possible explanations include the fact that people who work long hours have little time for healthy behaviors such as exercise, relaxation and adequate sleep.

"Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socioeconomic status jobs," Mika Kivimaki, professor of epidemiology at University College London in England, said in a journal news release.

The authors of an accompanying journal commentary said the findings may have implications for diabetes-prevention programs.

The study findings remained strong "even after controlling for obesity and physical activity, which are often the focus of diabetes risk prevention, suggesting that work factors affecting health behaviors and stress may need to be addressed as part of diabetes prevention," Dr. Orfeu Buxton, of Pennsylvania State University, and Dr. Cassandra Okechukwu, from Harvard School of Public Health, wrote.

#### More information

The U.S. Office of Disease Prevention and Health Promotion outlines how to [prevent type 2 diabetes](#).

SOURCE: *The Lancet Diabetes & Endocrinology*, news release, Sept. 24, 2014  
-- [Robert Preidt](#)

Last Updated: Sep 24, 2014

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[http://www.guardian-series.co.uk/news/11494169.Study\\_reveals\\_job\\_link\\_to\\_diabetes/](http://www.guardian-series.co.uk/news/11494169.Study_reveals_job_link_to_diabetes/)

# Guardian

## News

### Study reveals job link to diabetes

Health professionals have been warned that working long hours in a low-paid job is a risk factor for Type 2 diabetes

First published 02:06 Thursday 25 September 2014 in [News](#) © by [Press Association 2014](#)

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Researchers analysed data from more than 222,000 men and women who participated in diabetes studies in the US, Europe, Japan and Australia.

Lead scientist Professor Mika Kivimaki, from University College London, said: "The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible.

"Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socio-economic status jobs."

The findings are reported in the journal *The Lancet Diabetes & Endocrinology*.

### [Recommended by](#)

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<http://health.usnews.com/health-news/articles/2014/09/24/can-all-work-and-no-play-make-you-diabetic>

## Can All Work and No Play Make You Diabetic?

HealthDay Sept. 24, 2014 | 7:00 p.m. EDT + More



By Robert Preidt, *HealthDay Reporter*



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### **More information**

The U.S. Office of Disease Prevention and Health Promotion outlines how to [prevent type 2 diabetes](#).

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<http://www.mirror.co.uk/news/uk-news/diabetes-risk-increased-people-working-4318696>

# **Diabetes risk increased for people working long hours in poorly paid jobs**

[Sep 25, 2014 00:00](#)



By [Andrew Gregory](#)

**A study by University College London found those putting in 55 hours or more a week in low-skill jobs were 30% more likely to get it than those working 35 to 40**

Bloomberg  
Stress: Diabetes increases risk of a heart attack or a stroke

People working long hours in poorly paid jobs have an increased risk of going on to [develop Type 2 diabetes](#).

A study found those putting in 55 hours or more a week in low-skill jobs were 30% more likely to get it than those working 35 to 40 hours.

And the huge difference between the two groups remained even after taking into account such factors as smoking, physical activity, age, gender and obesity among the [220,000 people](#) who took part in the study.

Prof Mika Kivimaki, of University College London, said: “Although working long hours is unlikely to increase the diabetes risk in everyone, health professionals should be aware that it is associated with a significantly higher risk in people doing low socioeconomic status jobs.”

Maureen Talbot, senior cardiac nurse at the British Heart Foundation which co-funded the research, added: “The findings of this study suggest a link between working more than 55 hours a week and an increased risk of developing Type 2 diabetes, but only in those people deemed to be in low socio-economic groups.

“Having diabetes increases someone’s risk of [having a heart attack](#) or stroke, so reducing that risk is essential.”

<http://www.mirror.co.uk/news/uk-news/diabetes-risk-increased-people-working-4318696#ixzz3Ely2ipM0>

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<http://www.thesun.co.uk/sol/homepage/news/5942811/Diabetes-peril-of-working-long-hours-in-lowly-jobs.html>

## Diabetes peril of working long hours



Professor Kivimaki  
By NICK McDERMOTT, Health Editor  
Published: 5 hrs ago

## **LOW pay and long hours are a major diabetes peril, a study warned yesterday.**

Slaving more than 55 hours a week boosts the risk of the disease by a third, researchers found.

<http://newstral.com/en/article/en/958469678/study-reveals-job-link-to-diabetes>

## **Study reveals job link to diabetes**

- [Australia](#)
- [Japan](#)
- [Europe](#)
  
- [British Heart Foundation](#)
- [Harvard School of Public Health](#)
- [The Lancet Diabetes & Endocrinology](#)
- [University College London](#)
- [Pennsylvania State University](#)

<http://healthyng.blogspot.co.uk/>

### **Can All Work and No Play Make You Diabetic?**

By Robert Preidt, *HealthDay Reporter*

WEDNESDAY, Sept. 24, 2014 (HealthDay News) -- Working long hours may increase your risk for diabetes, a new study suggests. But the finding seems to depend on your job.

Researchers examined data from prior studies involving more than 222,000 men and women in the United States, Europe, Japan and Australia who were followed for an average of 7.6 years.

The initial analysis revealed no difference in the risk of type 2 diabetes among people who worked more than 55 hours a week and those who worked 35 to 40 hours a week.

However, further analyses showed that people who worked more than 55 hours a week at manual labor or other types of "low socioeconomic status jobs" were 30 percent more likely to develop diabetes than those who worked 35 to 40 hours a week.

This increased risk remained even after the researchers accounted for diabetes risk factors such as smoking, physical activity levels, age, sex and obesity, and after the researchers excluded shift work, which increases the risk of obesity and diabetes.

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Further research is needed to learn more about the seeming link between working long hours and increased diabetes risk, the study authors said.

Possible explanations include the fact that people who work long hours have little time for healthy behaviors such as exercise, relaxation and adequate sleep.

"Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socioeconomic status jobs," Mika Kivimaki, professor of epidemiology at University College London in England, said in a journal news release.

The authors of an accompanying journal commentary said the findings may have implications for diabetes-prevention programs.

The study findings remained strong "even after controlling for obesity and physical activity, which are often the focus of diabetes risk prevention, suggesting that work factors affecting health behaviors and stress may need to be addressed as part of diabetes prevention," Dr. Orfeu Buxton, of Pennsylvania State University, and Dr. Cassandra Okechukwu, from Harvard School of Public Health, wrote.

<http://www.yorkshirepost.co.uk/news/main-topics/general-news/working-long-hours-in-low-paid-job-raises-diabetes-risk-1-6859439>

## THE YORKSHIRE POST

### **Working long hours in low-paid job 'raises diabetes risk'**

Published on the 25 September  
2014  
01:30

**Long hours in a dead-end job can increase diabetes risk by almost a third, research has shown.**

People in low-status, poorly- paid jobs who work 55 hours or more a week are 30 per cent more likely to develop type 2 diabetes than those putting in 35 to 40 hours, scientists found.

The difference remained after taking account of factors such as smoking, [physical activity](#), age, gender and obesity.

Even excluding the impact of shift work, which has been shown to increase the risk of obesity and diabetes, did not alter the result.

Researchers analysed data from more than 222,000 men and women who participated in diabetes studies in the US, Europe, Japan and Australia.

Lead scientist Professor Mika Kivimaki, from University College London, said: “The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible.

“Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socio-economic status jobs.”

The findings are reported in the medical journal *The Lancet Diabetes & Endocrinology*.

In an accompanying comment article, Dr Orfeu Buxton, from Pennsylvania State University, and Dr Cassandra Okechukwu, from Harvard School of Public Health, wrote: “The results remained robust even after controlling for obesity and [physical activity](#), which are often the focus of diabetes risk prevention, suggesting that work factors affecting health behaviours and stress may need to be addressed as part of diabetes prevention.”

Maureen Talbot, senior cardiac nurse at the British Heart Foundation, which co-funded the research, said: “The findings of this study suggest a link between working more than 55 hours a week and an increased risk of developing Type 2 diabetes, but only in those people deemed to be in low socio-economic groups.”

The study was published just 24 hours after it was claimed that as many as one in every 10 people diagnosed with type 2 diabetes is a normal [weight](#).

The figures from charity Diabetes UK revealed that 11.3 per cent of people diagnosed with the condition are deemed to have a normal weight.

And a small number of patients – 0.4 per cent – are actually underweight.

<http://www.medicalnewstoday.com/articles/282978.php>

## **Working long hours in low socioeconomic status jobs 'increases diabetes risk'**

Last updated: Today at 12am PST

MNT ChoiceAcademic Journal

A new study published in *The Lancet Diabetes & Endocrinology* claims people who work more than 55 hours a week doing jobs of low socioeconomic status are at significantly higher risk of developing type 2 diabetes, compared with those who work fewer hours.



*Researchers say people who work long hours doing jobs of low socioeconomic status - such as manual work - are much more likely to develop type 2 diabetes than those who work fewer hours.*

Long working hours have previously been associated with poor health outcomes. A study recently reported by *Medical News Today*, for example, found a [higher risk of coronary heart disease](#) among people who work more than 60 hours a week.

The researchers of this latest study, led by Mika Kivimäki, professor of epidemiology at University College London in the UK, notes that past studies have also linked long working hours to [stress](#), unhealthy lifestyles, depressive symptoms and disturbed sleep, which they say are factors that can contribute to development of [diabetes](#).

"However, the direct association between long working hours and incident type 2 diabetes has been assessed in only a few studies," the researchers add.

With this in mind, the team conducted the largest study so far to investigate how long working hours influence the risk of type 2 diabetes.

## **Long hours in low socioeconomic status jobs 'increases type 2 diabetes risk by 30%'**

To reach their findings, the team analyzed data from a selection of published and unpublished studies looking at the effect of long working hours on type 2 diabetes. The data involved 222,120 men and women from the US, Europe, Japan and Australia, and participants were followed up for an average of 7.6 years.

When the researchers compared people who worked 55 hours or more each week with those who worked the standard 35-40 hours a week, they found no significant difference in the risk of developing type 2 diabetes.

**However, when they compared results by socioeconomic status, the team found that participants with jobs of low socioeconomic status - such as jobs involving manual labor - who worked 55 hours or more each week were 30% more likely to develop type 2 diabetes, compared with those who worked 35-40 hours a week.**

The researchers note that this finding remained even after accounting for age, sex, [obesity](#) status, smoking and physical activity. It also remained when the researchers excluded participants who do shift work, which has previously been linked to increased risk of obesity and type 2 diabetes.

Although the team did not investigate the reasons for this association, they hypothesize that it could be down to a number of factors. Those who work long hours in low socioeconomic status jobs may be more likely to have less sleep and less time to engage in physical exercise, for example, which may increase the risk of type 2 diabetes.

Commenting on their findings, Prof. Kivimäki says:

"The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible.

Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socioeconomic status jobs."

In an editorial linked to the study, Dr. Orfeu Buxton, of Pennsylvania State University, and Dr. Cassandra Okechukwu, of Harvard School of Public Health in Boston, MA, say that this study offers a "solid foundation" for further research into the risks and interventions for diabetes.

"The results remained robust even after controlling for obesity and physical activity," they add, "which are often the focus of diabetes risk prevention, suggesting that work factors affecting health behaviors and stress may need to be addressed as part of diabetes prevention."

*MNT* recently reported on a study from the Centers for Disease Control and Prevention (CDC), revealing that [rates of diabetes in the US leveled off](#) between 2008 and 2012.

Written by [Honor Whiteman](#)

# Beware! Working for more than 55 hours/week may lead to Type-2 diabetes

Last Updated: Thursday, September 25, 2014 - 12:39



## Zee Media Bureau

New Delhi: Long working hours are a common thing these days. Prolonged sitting, modern erratic lifestyle and lack of physical activity can lead to the onset of Type-2 diabetes and other heart related problems.

According to a study conducted by the International Diabetes Federation (IDF), the number of Indians suffering from this malicious disease is expected to cross the 100 million mark by 2030.

A study conducted by researchers at University College London suggests that working for more than 55 hours per week may impair glucose tolerance which can increase the risk of developing Type 2 diabetes.

Researchers conducted a systematic review and meta-analysis of published studies and unpublished individual-level data examining the effects of long working hours on type 2 diabetes up to 30 April 2014.

The study revealed that individuals doing low socio-economic status jobs who worked 55 hours or more per week had a roughly 30 percent increased risk of developing diabetes compared to their counterparts who worked between 35 and 40 hours a week, even after taking into account health behaviours such as smoking and physical activity, and other risk factors including age, sex, and obesity.

This association remained strong even after excluding shift work, which has been shown to increase the risk of obesity and developing type-2 diabetes.

The study is published in The Lancet Diabetes and Endocrinology.

(With Agency inputs)

<http://newshence.com/working-long-hours-may-trigger-diabetes.html>

## Working long hours may trigger diabetes

Posted On: *September 25, 2014 | 11:51 AM*

**London, Sep 25:** People engaged in manual work or other low socio-economic status jobs for more than 55 hours per week do have a 30 percent greater risk of developing type 2 diabetes, warns a new study.

The analysis of data from four published studies and 19 studies with unpublished data involving 222,120 men and women led the researchers to come to the conclusion that type 2 diabetes is more likely to develop in people working more than 55 hours a week compared to those putting in a normal 35 to 40 hour week.

“The analysis took into account health behaviours such as smoking and physical activity and other risk factors including age, sex and obesity. This association remained strong even after excluding shift work, which has been shown to increase the risk of obesity and developing type 2 diabetes,” explained Mika Kivimaki, a professor of epidemiology at University College London.

“Although working long hours is unlikely to increase diabetes risk in anyone, healthcare professionals should be aware that it is associated with people doing low socio-economic status jobs,” Kivimaki noted.

The researchers suggest a number of possible explanations for this, including disruptive schedules that leave little time to take part in health restoring behaviour such as sleeping, unwinding and exercise.

The study appeared in the journal Lancet Diabetes and Endocrinology.

<http://medicalresearch.com/author-interviews/longer-working-hours-linked-increased-risk-diabetes-lower-socioeconomic-jobs/7842/>

**[Medical Research News and Interviews:  
MedicalResearch.com](http://MedicalResearch.com)**

# Exclusive News and Interviews with Researchers From Major and Specialty Medical Research Journals and Meetings

## Longer Working Hours Linked To Increased Risk of Diabetes in Lower Socioeconomic Jobs

Posted on [September 25, 2014](#)



**MedicalResearch.com Interview with:  
Prof Mika Kivimäki PhD**

Department of Epidemiology and Public Health,  
University College London, London, UK  
Hjelt Institute, Medical Faculty, University of Helsinki, Helsinki, Finland

*Medical Research: What are the main findings of the study?*

**Prof. Kivimäki:** In our study, we pooled published and unpublished data from 222 120 men and women from the USA, Europe, Japan, and Australia. Of them, 4963 individuals developed [type 2 diabetes](#) during the mean follow-up of 7.6 years. This is the largest study to date on this topic.

In an analysis stratified by socioeconomic status, the association between long working hours and diabetes was evident in the low socioeconomic status group, but was null in the high socioeconomic status group. The association in the low socioeconomic status group did not change after taking into account age, sex, obesity, physical activity, and shift working. So, the association was very robust.

In brief, the main finding of our meta-analysis is that the link between longer working hours and type 2 diabetes was apparent only in individuals in the low socioeconomic status groups.

*Medical Research: What was most surprising about the results?*

**Prof. Kivimäki:** The socioeconomic patterning in these results. The higher the person's position in the socioeconomic hierarchy, the less working long hours was linked to type [diabetes](#). Why high socioeconomic position protects against the diabetogenic effects of long working hours is unclear.

*Medical Research: What should clinicians and patients take away from your report?*

**Prof. Kivimäki:** Treating physicians should be aware that in low socioeconomic groups individuals who work 55 h or more per week have almost 30% higher risk of developing [diabetes](#) than those who worked 35–40 h per week.

**Medical Research: What recommendations do you have for future research as a result of this study?**

**Prof. Kivimäki:** It is unclear what specific aspects in low socioeconomic status jobs increase the risk of [diabetes](#). Future studies should examine these.

**Citation:**

[Working long hours linked to increased risk of type 2 diabetes in people doing low socioeconomic status jobs](#)

[Mika Kivimäki, Marianna Virtanen, Ichiro Kawachi, Solja T Nyberg, Lars Alfredsson, G David Batty, Jakob B Bjorner, Marianne Borritz, Eric J Brunner, Hermann Burr, Nico Dragano, Jane E Ferrie, Eleonor I Fransson, Mark Hamer, Katriina Heikkilä, Anders Knutsson, Markku Koskenvuo, Ida E H Madsen, Martin L Nielsen, Maria Nordin, Tuula Oksanen, Jan H Pejtersen, Jaana Pentti, Reiner Rugulies, Paula Salo, Johannes Siegrist, Andrew Steptoe, Sakari Suominen, Töres Theorell, Jussi Vahtera, Peter J M Westerholm, Hugo Westerlund, Archana Singh-Manoux, Markus Jokela](#)

[The Lancet Diabetes & Endocrinology, Early Online Publication, 25 September 2014](#)

[doi:10.1016/S2213-8587\(14\)70178-0](#)



By [Marie Benz MD FAAD](#)

Physician in practice over 30 years. Editor of MedicalResearch.com. All interviews conducted exclusively for MedicalResearch.com by Marie Benz, MD.

[http://zeenews.india.com/news/health/health-news/beware-working-for-long-hours-may-lead-to-type-2-diabetes\\_1475485.html](http://zeenews.india.com/news/health/health-news/beware-working-for-long-hours-may-lead-to-type-2-diabetes_1475485.html)

# **Beware! Working for long hours may lead to Type-2 diabetes**

Last Updated: Thursday, September 25, 2014 - 14:54

## **Zee Media Bureau**

New Delhi: Long working hours are a common thing these days. Prolonged sitting, modern erratic lifestyle and lack of physical activity can lead to the onset of Type-2 diabetes and other heart related problems.

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This association remained strong even after excluding shift work, which has been shown to increase the risk of obesity and developing type-2 diabetes.

The study is published in The Lancet Diabetes and Endocrinology.

<http://indianexpress.com/article/lifestyle/health/working-long-hours-may-trigger-diabetes/Working-long-hours-may-trigger-diabetes>

[Indo-Asian News Service](#) | London | Posted: September 25, 2014 1:25 pm



People engaged in manual work or other low socio-economic status jobs for more than 55 hours per week do have a 30 percent greater risk of developing type 2 diabetes, warns a new study.

The analysis of data from four published studies and 19 studies with unpublished data involving 222,120 men and women led the researchers to come to the conclusion that type 2 diabetes is more likely to develop in people working more than 55 hours a week compared to those putting in a normal 35 to 40 hour week.

“The analysis took into account health behaviours such as smoking and physical activity and other risk factors including age, sex and obesity. This association remained strong even after excluding shift work, which has been shown to increase the risk of obesity and developing type 2 diabetes,” explained Mika Kivimaki, a professor of epidemiology at University College London.

“Although working long hours is unlikely to increase diabetes risk in anyone, healthcare professionals should be aware that it is associated with people doing low socio-economic status jobs,” Kivimaki noted.

The researchers suggest a number of possible explanations for this, including disruptive schedules that leave little time to take part in health restoring behaviour such as sleeping, unwinding and exercise.

The study appeared in the journal *Lancet Diabetes and Endocrinology*.

- See more at: <http://indianexpress.com/article/lifestyle/health/working-long-hours-may-trigger-diabetes/#sthash.FqCcLD1s.dpuf>

**Summary** People in poorly paid jobs who work 55 hours or more a week are more likely to develop Type 2 diabetes...

People in low-status, poorly paid jobs who work 55 hours or more a week are 30 per cent more likely to develop Type 2 diabetes than those putting in 35 to 40 hours, a new study has warned.

Mika Kivimaki, Professor of Epidemiology at University College London, UK, and colleagues conducted a systematic review and meta-analysis of published studies and unpublished individual-level data examining the effects of long working hours on type 2 diabetes.

Analysis of data from 4 published studies and 19 studies with unpublished data involving 22,2,120 men and women from the US, Europe, Japan, and Australia who were followed for an average of 7.6 years, found a similar risk of developing type 2 diabetes in people working more than 55 hours a week compared to those putting in a normal 35 to 40 hour week.

However, the researchers noted significant differences when the results were looked at more closely.

Further analyses revealed that individuals doing low socioeconomic status jobs who worked 55 hours or more per week had a roughly 30 per cent increased risk of developing diabetes compared to their counterparts who worked between 35 and 40 hours a week, even after taking into account health behaviours such as smoking and physical activity, and other risk factors including age, sex, and obesity.

This association remained strong even after excluding shift work, which has been shown to increase the risk of obesity and developing type 2 diabetes.

Researchers said further study is needed to identify the underlying mechanisms for the association between long working hours and diabetes in people doing low socioeconomic status jobs.

They suggest a number of possible explanations, including working disruptive schedules that leave little time to take part in health restoring behaviours such as sleeping, unwinding, and exercise.

"The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible," said Kivimaki.

"Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socioeconomic status jobs," Kivimaki said.

The study was published in The Lancet Diabetes & Endocrinology.

<http://www.financialexpress.com/news/working-long-hours-may-trigger-diabetes/1292734>

# Working long hours may trigger diabetes



[Press Trust of India](#) | London |

Updated: Sep 25 2014, 15:33 IST

"The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible," said Kivimaki. (Reuters)

**Summary** People in poorly paid jobs who work 55 hours or more a week are more likely to develop Type 2 diabetes...

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Mika Kivimaki, Professor of Epidemiology at University College London, UK, and colleagues conducted a systematic review and meta-analysis of published studies and unpublished individual-level data examining the effects of long working hours on type 2 diabetes.

Analysis of data from 4 published studies and 19 studies with unpublished data involving 22,2,120 men and women from the US, Europe, Japan, and Australia who were followed for an average of 7.6 years, found a similar risk of developing type 2 diabetes in people working more than 55 hours a week compared to those putting in a normal 35 to 40 hour week.

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They suggest a number of possible explanations, including working disruptive schedules that leave little time to take part in health restoring behaviours such as sleeping, unwinding, and exercise.

"The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible," said Kivimaki.

"Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socioeconomic status jobs," Kivimaki said.

The study was published in *The Lancet Diabetes & Endocrinology*.



September 25, 2014

## Working long hours linked to increased risk of diabetes



In a study part-funded by us, scientists at University College London (UCL) have found that those working more than 55 hours per week doing a manual or low socioeconomic status job have around a 30 per cent greater risk of developing type 2 diabetes than co-workers who work a shorter week.

The study, published in [The Lancet Diabetes and Endocrinology](#), analysed published and unpublished data from over 200,000 men and women and found that people working over 55 hours in lower socioeconomic jobs were at a 30 per cent increased risk of type 2 [diabetes](#) compared to their co-workers who worked the standard 35-40 hour week.

Professor Mika Kivimäki and colleagues at University College London (UCL) pooled data from Europe, the USA, Japan and Australia and took into consideration factors such as [smoking](#), [physical activity](#), age, sex and [obesity](#).

The study found no increase in diabetes risk for those who worked longer hours in higher status jobs.

### Diabetes and your heart

Maureen Talbot, our Senior Cardiac Nurse said:

Having diabetes increases the risk of having a heart attack or stroke so reducing that risk is essential

“The findings of this study support a link between working more than 55 hours a week and an increased risk of developing type two diabetes, but only in those people

deemed to be in low socioeconomic groups. The study's authors confirm more research into this finding is needed.

“Having diabetes increases the risk of having a [heart attack](#) or [stroke](#) so reducing that risk is essential. If you are worried you may be at an increased risk have a chat with your GP.”

## Researching diabetes and heart disease

We fund a range of research which is looking to explain the link between diabetes and heart disease, including funding [scientists at the University of Bristol](#), who have already made breakthroughs in our understanding of the link between diabetes and [coronary heart disease](#).

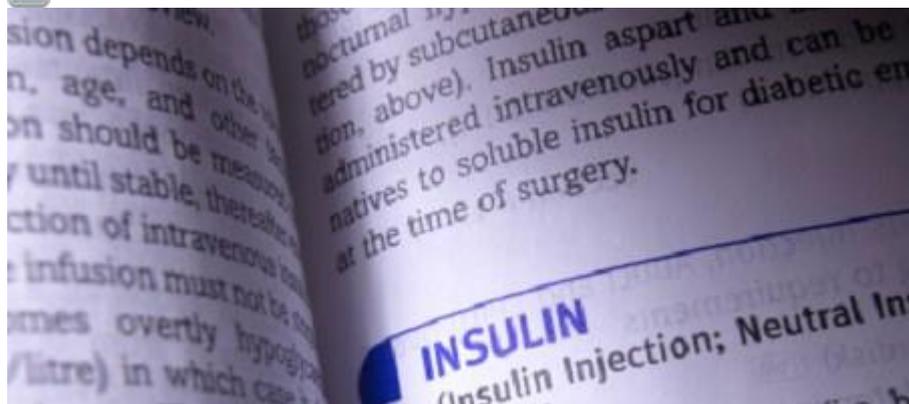
Like all the studies we fund, this research relies entirely on donations from the public.

[http://article.wn.com/view/2014/09/25/Working\\_hours\\_and\\_diabetes\\_British\\_Heart\\_Foundation/](http://article.wn.com/view/2014/09/25/Working_hours_and_diabetes_British_Heart_Foundation/)

<http://www.diabetes.co.uk/news/2014/sep/long-hours-and-low-pay-increase-diabetes-risk-30-per-cent-97103270.html>

# Long hours and low pay increase diabetes risk 30 per cent

Thu, 25 Sep 2014



Having a poorly paid 55 hour working week increases the risk of developing [type 2 diabetes](#) by 30 per cent compared to people working 35 to 40 hours.

The [research](#) was carried out by [University](#) College London and published in the journal the Lancet: Diabetes and Endocrinology. The researchers reviewed a number of different [clinical studies](#) which included over 220,000 participants from Europe, the United States, Australia and Japan.

To ensure no significant bias was involved within the study, the researchers took account of factors such as age, gender, [BMI](#), smoking status and physical activity. The researchers also noted that the 30% increased [diabetes risk](#) remained even when shift

workers were excluded from the analysis. [Shift workers](#) are another group of workers that have previously been shown to have high risks of developing diabetes.

The study did not aim to investigate why low paid [jobs](#) with long working hours was connected with such a significant increase in [diabetes risk](#) but we can at least speculate as to why a higher risk was observed.

Long working hours would certainly result in having less time available in which to plan and [cook meals](#). Less free time could also be problematic for workers in jobs involving little movement as the long working hours would provide less time in which to [exercise](#).

Low wages would reduce choice in food. Fresh meat, [fish](#) and vegetables are not cheap and families on low incomes often feel forced to turn to relatively cheap sources of calories made from refined carbohydrates such as white bread, rice and pasta.

In addition to impacting upon diet and activity, long working weeks and low wages may contribute to increased levels of [stress](#) which is another factor linked with increased risk of diabetes.

The results of the study beg the question whether not working at all would further minimise diabetes risk? Previous research has helped to answer that question. A study published in 2013 showed that [sustained periods of unemployment raised the risk of diabetes](#) as well.

[http://www.nlm.nih.gov/medlineplus/news/fullstory\\_148558.html](http://www.nlm.nih.gov/medlineplus/news/fullstory_148558.html)



## Can All Work and No Play Make You Diabetic?

Blue-collar jobs of 55 hours a week or more might raise your risk, study says

By Robert Preidt

Wednesday, September 24, 2014



WEDNESDAY, Sept. 24, 2014 (HealthDay News) -- Working long hours may increase your risk for diabetes, a new study suggests. But the finding seems to depend on your job.

Researchers examined data from prior studies involving more than 222,000 men and women in the United States, Europe, Japan and Australia who were followed for an average of 7.6 years.

The initial analysis revealed no difference in the risk of type 2 diabetes among people who worked more than 55 hours a week and those who worked 35 to 40 hours a week.

However, further analyses showed that people who worked more than 55 hours a week at manual labor or other types of "low socioeconomic status jobs" were 30 percent more likely to develop diabetes than those who worked 35 to 40 hours a week.

This increased risk remained even after the researchers accounted for diabetes risk factors such as smoking, physical activity levels, age, sex and obesity, and after the researchers excluded shift work, which increases the risk of obesity and diabetes.

Although the study, published Sept. 24 in *The Lancet Diabetes & Endocrinology*, found an association between long work weeks and diabetes, it didn't establish a cause-and-effect relationship.

Further research is needed to learn more about the seeming link between working long hours and increased diabetes risk, the study authors said.

Possible explanations include the fact that people who work long hours have little time for healthy behaviors such as exercise, relaxation and adequate sleep.

"Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socioeconomic status jobs," Mika Kivimaki, professor of epidemiology at University College London in England, said in a journal news release.

The authors of an accompanying journal commentary said the findings may have implications for diabetes-prevention programs.

The study findings remained strong "even after controlling for obesity and physical activity, which are often the focus of diabetes risk prevention, suggesting that work factors affecting health behaviors and stress may need to be addressed as part of diabetes prevention," Dr. Orfeu Buxton, of Pennsylvania State University, and Dr. Cassandra Okechukwu, from Harvard School of Public Health, wrote.

SOURCE: *The Lancet Diabetes & Endocrinology*, news release, Sept. 24, 2014

## Featured Research

*from universities, journals, and other organizations*

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# Working long hours linked to increased risk of type 2 diabetes in people doing low socioeconomic status jobs

*Date:*

September 24, 2014

*Source:*

The Lancet

*Summary:*

People working for more than 55 hours per week doing manual work or other low socioeconomic status jobs have a 30% greater risk of developing type 2 diabetes, according to the largest study in this field so far.

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People working for more than 55 hours per week doing manual work or other low socioeconomic status jobs have a 30% greater risk of developing type 2 diabetes, according to the largest study in this field so far, published in *The Lancet Diabetes & Endocrinology*.

Mika Kivimäki, Professor of Epidemiology at University College London, UK, and colleagues conducted a systematic review and meta-analysis of published studies and unpublished individual-level data examining the effects of long working hours on type 2 diabetes up to 30 April 2014.

Analysis of data from 4 published studies and 19 studies with unpublished data involving 222 120 men and women from the USA, Europe, Japan, and Australia who were followed for an average of 7.6 years, found a similar risk of developing type 2 diabetes in people working more than 55 hours a week compared to those putting in a normal 35 to 40 hour week. However, the researchers noted significant differences when the results were looked at more closely.

Further analyses revealed that individuals doing low socioeconomic status jobs who worked 55 hours or more per week had a roughly 30% increased risk of developing diabetes compared to their counterparts who worked between 35 and 40 hours a week, even after taking into account health behaviours such as smoking and physical activity, and other risk factors including age, sex, and obesity. This association remained strong even after excluding shift work, which has been shown to increase the risk of obesity and developing type 2 diabetes.

The researchers say that further research is needed to identify the underlying mechanisms for the association between long working hours and diabetes in people doing low socioeconomic status jobs, but suggest a number of possible explanations, including working disruptive schedules that leave little time to take part in health restoring behaviours such as sleeping, unwinding, and exercise.

According to Professor Kivimäki, "The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible. Although working long hours is unlikely to increase diabetes risk in

everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socioeconomic status jobs."

In a linked Comment, Dr Orfeu Buxton from Pennsylvania State University, PA, USA and Dr Cassandra Okechukwu from Harvard School of Public Health, MA, USA write that, "Kivimäki and colleagues' elegantly designed study provides a solid foundation for both epidemiological and intervention work on diabetes risks. The results remained robust even after controlling for obesity and physical activity, which are often the focus of diabetes risk prevention, suggesting that work factors affecting health behaviours and stress may need to be addressed as part of diabetes prevention."

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### Journal Reference:

1. Mika Kivimäki, Marianna Virtanen, Ichiro Kawachi, Solja T Nyberg, Lars Alfredsson, G David Batty, Jakob B Bjorner, Marianne Borritz, Eric J Brunner, Hermann Burr, Nico Dragano, Jane E Ferrie, Eleonor I Fransson, Mark Hamer, Katriina Heikkilä, Anders Knutsson, Markku Koskenvuo, Ida E H Madsen, Martin L Nielsen, Maria Nordin, Tuula Oksanen, Jan H Pejtersen, Jaana Pentti, Reiner Rugulies, Paula Salo, Johannes Siegrist, Andrew Steptoe, Sakari Suominen, Töres Theorell, Jussi Vahtera, Peter J M Westerholm, Hugo Westerlund, Archana Singh-Manoux, Markus Jokela. **Long working hours, socioeconomic status, and the risk of incident type 2 diabetes: a meta-analysis of published and unpublished data from 222 120 individuals.** *The Lancet Diabetes & Endocrinology*, 2014; DOI: [10.1016/S2213-8587\(14\)70178-0](https://doi.org/10.1016/S2213-8587(14)70178-0)

## More Than 55 Hours a Week of Manual Work Linked to Type-2 Diabetes Risk

[Benita Matilda](#)

First Posted: Sep 25, 2014 07:44 AM EDT

<http://www.scienceworldreport.com/articles/17368/20140925/more-than-55-hours-a-week-of-manual-work-linked-to-type-2-diabetes-risk.htm>



## SCIENCE WORLD REPORT

More Than 55 Hours a Week of Manual Work Linked to Type 2 Diabetes Risk (Photo : Becky Wetherington)

**People working for more than 55 hours per week or more doing manual work or low socioeconomic status jobs, have a 30 percent increased risk of developing type-2 diabetes.**

The latest study led by researchers at [University College London](#), United Kingdom, looked at the effects of long working hours on the risk of developing typ-2 diabetes. For this, they used the

systematic review and meta-analysis of published studies and unpublished individual-level data.

Long working hours is known to have insidious effects on the health and wellbeing of a person. Studies have documented that long working hours put employees at the risk of heart attacks and strokes. The Centers for disease control and [prevention](#) reveal the 2004 data from the Bureau of Labor Statistics stating almost [15 million Americans](#) work full time on evening shifts, night shifts, rotating shifts or other employer arranges irregular schedules.

The current study led by Mika Kivimaki, Professor of Epidemiology at the University College London, looked at data from 4 published studies and 19 studies with unpublished data that involved 222,120 men and women from the United States, Europe, Japan and Australia. The subjects were followed for an average of 7.6 years.

They observed that people working for more than 55 hours a week had a higher risk of developing type-2 diabetes as compared to those working for less than 35 to 40 hours a week.

The risk of developing type-2 diabetes increased by 30 percent among those doing low socioeconomic status jobs who have been working 55 hours or more per week. The association between the two remained strong even after excluding shift work, which is known to up the risk of obesity and developing type-2 diabetes.

According to Professor Kivimaki, "The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible. Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socioeconomic status jobs."

The finding was published in The Lancet Diabetes & Endocrinology.

<http://cooks.ndtv.com/article/show/long-working-hours-may-trigger-diabetes-597967>

## Long Working Hours May Trigger Diabetes

NDTV Cooks, Modified: September 25, 2014 20:23 IST



Long working hours have recently been on the radar of health experts and researchers. Previously, it has been linked to increased smoking and coronary heart disease. ([More: Long Working Hours Linked to Increased Smoking](#))

A new study conducted by a team at University College London has found that long working hours can also make a person susceptible to diabetes. The study was published in The Lancet Diabetes & Endocrinology and explains that those who work for

55 hours or more in a week are 30 per cent more likely to develop Type 2 diabetes than those who work for 35 to 40 hours weekly. Ideally, one should not be working in more than 40 hours a week. Mika Kivimaki, Professor of Epidemiology at University College London, UK, and colleagues conducted a systematic review and meta-analysis of published studies and unpublished individual-level data examining the effects of long working hours on type 2 diabetes. ([More: Why Working Long Hours is Bad for You](#))

"The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible," said Kivimaki.

"Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socioeconomic status jobs," Kivimaki said.

To arrive at the conclusion, the team closely examined accumulated data from four pre-published studies and 19 studies with unpublished data involving 22,2,120 men and women from the US, Europe, Japan, and Australia who were followed for an average of 7.6 years. It was noted that individuals doing low on the socioeconomic status, who also worked 55 hours or more per week had a roughly 30 per cent increased risk of developing diabetes compared to their counterparts who worked between 35 and 40 hours a week, even after taking into account health behaviours such as smoking and physical activity and other risk factors like age, sex, and obesity.

The experts concluded that long working hours when coupled with low socioeconomic status may put working professional at the risk of developing type 2 diabetes. The study also revealed that this association remained strong even after excluding shift work, which has been shown to increase the risk of obesity and type 2 diabetes. The team suggested a number of possible explanations especially disruptive schedules that leave little time to take part in health restoring activities like as sleeping, unwinding, and exercise.

*Inputs from PTI*

<http://www.news-medical.net/news/20140925/Working-long-hours-in-jobs-of-low-socioeconomic-status-can-increase-the-risk-of-diabetes.aspx>



## **Working long hours in jobs of low socioeconomic status can increase the risk of diabetes**

Published on September 25, 2014 at 2:43 PM · [No Comments](#)

By [Kate Bass](#) BSc

It is widely accepted that working long hours can be detrimental to one's health; not least because it leaves less time free to exercise and can cause stress and sleep disturbances.

It has recently been reported that people working more than 55 hours per week doing manual work or other jobs of low socioeconomic status are [more likely to develop type 2 diabetes](#) than those working fewer hours.

Type 2 diabetes is metabolic disorder that develops when the body cannot produce sufficient [insulin](#) to remove excess glucose from the blood and is characterized by excessive thirst and urination. It can have serious cardiovascular consequences.



Mika Kivimäki, Professor of Epidemiology at University College London, UK, and his colleagues systematically reviewed and analysed available data (up to 30 April 2014) on the association between long working hours and type 2 diabetes. Their study included data from 4 published studies and unpublished data for over 2 million people from USA, Europe, Japan, and Australia.

The in-depth analyses revealed that people who worked 55 hours or more per week in positions of low socioeconomic status had a 30% greater risk of developing type 2 diabetes than their counterparts who worked 35–40 hours a week. This association remained strong even after taking into account risk factors such as smoking, low physical activity, age, sex, and [obesity](#) and after excluding shift work (which has been shown to increase the risk of obesity and developing type 2 diabetes).

Professor Kivimäki explained,

The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible. Although working long hours is unlikely to increase

diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socioeconomic status jobs.

The team proposed that the increased risk of diabetes may arise as a consequence of working disruptive schedules that leave little time to take part in health-restoring behaviours such as sleeping, unwinding, and exercising.

Further research is needed to identify the underlying mechanisms responsible for the association between long working hours and diabetes among people in positions of low socioeconomic status. In the meantime, work factors affecting health behaviours and increasing stress levels may need to be addressed as part of diabetes prevention strategies.

Source:

Kivimäki M, et al. Long working hours, socioeconomic status, and the risk of incident type 2 diabetes: a meta-analysis of published and unpublished data from 222 120 individuals. *The Lancet Diabetes & Endocrinology*, Epub before print September 2014. Available at: [http://www.thelancet.com/journals/landia/article/PIIS2213-8587\(14\)70178-0/abstract](http://www.thelancet.com/journals/landia/article/PIIS2213-8587(14)70178-0/abstract)

<http://www.foxnews.com/health/2014/09/26/study-links-working-long-hours-to-increased-diabetes-risk/>



## Study links working long hours to increased diabetes risk

Published September 26, 2014

[FoxNews.com](http://www.foxnews.com)

[Facebook](#)8 [Twitter](#)18 [livefyre](#)1 [Email](#) [Print](#)



A study has linked working long hours at a manual labor job with a greater risk of developing Type 2 diabetes.

Researchers at the University of London reviewed results of four published studies and 19 unpublished data reports to analyze the effects of long working hours on Type 2 diabetes. The collective data analyzed about 222,120 men and women from multiple countries, The University Herald reported.

The data found a 30 percent greater risk of Type 2 diabetes in manual workers and employees at other low socioeconomic status jobs who put in more than 55 hours a week.

“The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible,” Mika Kivimaki, a professor of epidemiology said in a press release.

“Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socioeconomic status jobs,” Kivimaki said.

Study authors took other health factors such as smoking, physical activity, age, sex and obesity into consideration and still found a 30 percent increased risk.

Researchers say more studies are needed to determine possible causes, but suggest a possible reason for the increased risk may be disruptive schedules that may make it difficult for employees to fit healthy behaviors into their routine.

<http://www.universityherald.com/articles/11580/20140926/long-working-hours-increases-diabetes-risk-london.htm>

Sep 26, 2014 05:14 AM EDT By [Stephen Adkins](#), UniversityHerald Reporter

## Long Working Hours Increase Diabetes Risk, Study



(Photo : PR) Long Working Hours Increases

Diabetes Risk, Study.

More than 55 hours of manual work or other low socioeconomic status jobs per week is associated with 30 percent greater risk of developing type-2 diabetes in employees, according to a University College London study.

The researchers said that the risk was relatively less in those putting in a normal 35 to 40 hour week.

For the study, the researchers conducted a systematic review and meta-analysis of four published studies and 19 unpublished individual-level data to determine the effects of long working hours on type-2 diabetes. About 222,120 men and women from the United States, Europe, Japan, and Australia were followed for an average of 7.6 years.

The researchers found that the risk remained 30 percent even after health behaviours like smoking and physical activity, and other risk factors including age, sex, and obesity were taken into consideration. The association continued to persist even after omitting shift work, which has been previously shown to increase the risk of obesity and developing type 2 diabetes.

Possible reasons for the high risk can be attributed to working disruptive schedules that rarely allows employees engage in health restoring behaviours such as sleeping, unwinding, and exercise.

"The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible. Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socioeconomic status jobs," Mika Kivimäki, Professor of Epidemiology, said in a [press release](#).

"Kivimäki and colleagues' elegantly designed study provides a solid foundation for both epidemiological and intervention work on diabetes risks. The results remained robust even after controlling for obesity and physical activity, which are often the focus of diabetes risk prevention, suggesting that work factors affecting health behaviours and stress may need to be addressed as part of diabetes prevention," said Dr Orfeu Buxton from Pennsylvania State University and Dr Cassandra Okechukwu from Harvard School of Public Health.

The finding is published in The Lancet Diabetes & Endocrinology Journal.

<http://www.clinicaladvisor.com/type-2-diabetes-risk-increased-by-working-long-hours/article/373827/>

**THE Clinical Advisor**

September 26, 2014

## **Can working longer hours at certain jobs increase type 2 diabetes risk?**

Diabetes risk is almost 30% higher for people working long hours doing manual labor or other low socioeconomic status jobs.



Working long hours at certain jobs may increase risk of type 2 diabetes

Risk for [type 2 diabetes](#) appears to be approximately 30% higher among people working more than 55 hours per week doing manual labor or other low socioeconomic status jobs, new data published in *The Lancet Diabetes & Endocrinology* suggest.

Mika Kivimäki, PhD, and colleagues conducted a systematic review and meta-analysis of four published studies and 19 studies with unpublished individual-level data on 222,120 men and women from the United States, Europe, Japan and Australia that looked at the effects of working long hours on type 2 diabetes.

Long working hours were defined as working 55 hours or more per week while standard working hours were defined as 30 to 40 hours per week.

## Study Findings

A total of 4,963 people developed diabetes during 1.7 million person-years at risk, with an incidence of 29 per 10,000 person-years, according to the study results. The researchers reported a minimally adjusted summary risk ratio of 1.07 (95% CI, 0.89-1.27), equating to a difference in incidence of three cases per 10,000 person-years, for long vs. standard working hours. Heterogeneity in study-specific estimates was significant.

When evaluated according to socioeconomic status, results revealed a significant association between working long hours at a low socioeconomic status [job and diabetes](#) (risk ratio=1.29; 95% CI, 1.06-1.57), equating to a difference in incidence of 13 per 10,000 person-years. This association, however, was not found in the high socioeconomic status group (risk ratio=1.00; 95% CI, 0.80-1.25; equating to a difference in incidence of zero per 10,000 person-years).

The researchers noted that the association held strong even after accounting for health behaviors, such as smoking and physical activity, and other risk factors, including age, sex and obesity. Excluding shift work, which has been shown to increase [obesity](#) and type 2 diabetes risk, also did not attenuate the association.

[This article originally appeared on Endocrinology Advisor.](#)

<http://dailydigestnews.com/2014/09/working-long-hours-may-trigger-type-2-diabetes-study-finds/>

# Working long hours may trigger Type 2 diabetes, study finds

By [Kate Halse](#), *Daily Digest News*  
September 26, 2014

A new study has found a connection between working long hours and a heightened risk of developing type 2 diabetes. The new study, the largest in its field to date, indicates that those who worked for 55 hours or more each week working in manual labor or other low socioeconomic status jobs have a 30 percent higher risk of developing type 2 diabetes. Results from the study are published in *The Lancet Diabetes & Endocrinology*.

The study was conducted by Mika Kivimäki, Professor of Epidemiology at University College London, UK, and colleagues, who performed a systematic review and meta-analysis of published studies along with unpublished individual-level data looking at the effect that working long hours has on the formation of type 2 diabetes up to April 30, 2014.

Data analysis from four published studies and 19 studies with unpublished data involving 222 men and 120 women from the U.S., Europe, Japan and Australia, who were followed for an average of 7.6 years, shows a similar risk of developing type 2 diabetes among people who worked over 55 hours each week and those who worked the typical 35 to 40 hours per week. The researchers, however, discovered vast differences when examining the results more closely.

Additional research showed a 30 percent increased risk of developing type 2 diabetes among those who worked lower socioeconomic status jobs in comparison to participants who worked typical 35 to 40 hour weeks despite accounting for health behaviors such as smoking and physical activity along with risk factors such as age, sex and obesity.

Professor Kivimäki [said in a statement](#), “The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible. Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socioeconomic status jobs.”

[According to the World Health Organization](#), type 2 diabetes comprises 90 percent of individuals with diabetes globally.

<http://www.latimes.com/science/sciencenow/la-sci-sn-diabetes-risk-working-long-hours-20140925-story.html>

## Los Angeles Times

### Overworked and underpaid? You may be at greater risk of diabetes



People who work long hours -- especially in low-paying jobs -- are more likely to develop Type 2 diabetes, a new study suggests. (Francine Orr / Los Angeles Times)  
By [Karen Kaplan contact the reporter](#)

### [Study: People who work long hours in low-wage jobs experience higher risk of diabetes](#)



by [Kim Krisberg](#) on September 26, 2014

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A recent study has uncovered another possible risk factor for the development of type 2 diabetes: working long hours in low-paying jobs.

In a [study](#) published this week in the *Lancet Diabetes & Endocrinology*, researchers found that people who work more than 55 hours per week performing manual work or other low socioeconomic status jobs face a 30 percent greater risk of developing type 2 diabetes when compared to those working between 35 and 40 hours per week. The association remained even after researchers accounted for risk factors such as smoking, physical activity levels, age, sex and obesity as well as after they excluded

shift work, which has already been shown to increase type 2 diabetes risk. The study is the largest so far to examine the link between long working hours and type 2 diabetes.

To conduct the study, researchers examined data from 23 studies involving more than 222,000 men and women in the U.S., Europe, Japan and Australia who were followed for an average of more than seven years. While on the surface, researchers found a similar type 2 diabetes risk among those who worked more than 55 hours per week and those working a more standard 35-40 hour week, more in-depth analysis revealed that workers in low socioeconomic jobs did, indeed, face a significantly higher risk. In other words, the association between long work hours and higher type 2 diabetes risk was only apparent among low-income groups. In a [related commentary](#) published in the same journal issue, authors Orfeu Buxton, a lecturer at Harvard Medical School, and Cassandra Okechukwu, an assistant professor with the Harvard School of Public Health, write:

(Study lead author Mika) Kivimaki and colleagues' finding of an association only in the low socioeconomic status group suggests a possible role of sleep as a mediator; both inadequate sleep quality and quantity are strongly predictive of incident type 2 diabetes. A recent study showed that the association between short sleep duration and diabetes can be partly attenuated by inclusion of socioeconomic status. Working more consistent and less disruptive hours might explain the lack of associations for the individuals in the high socioeconomic status group. A related idea is the role of social jet lag — long working hours and short sleep during the weekdays combined with delayed sleep times on the weekend — that disrupts the circadian timing system and adversely affects metabolism. Laboratory studies have identified mechanisms by which disruption of the circadian system increases the risk of diabetes. Night work, a cause of circadian disruption, is also associated with higher risks of type 2 diabetes.

The study's authors discussed three possible ways in which working longer hours could manifest into such a significant health risk for low-income workers. The first is that long work hours among low-income workers may be a marker of personal hardships and reflect other confounding variables, while workers with a high socioeconomic status do not experience such hardships and so working longer hours is not hazardous. The second hypothesis is that working longer hours may leave low-income workers with little time to engage in health-protective behaviors, such as getting enough sleep, exercising and socializing. The third possibility is that working longer hours is simply dangerous to a person's health, but the authors write that "the fact that we do not see (the same health risks among workers with high socioeconomic status) suggests that the association is driven by confounding or indirect effects on other risk factors."

Still, the study raises the question of whether work conditions should be considered in efforts to prevent diabetes. Globally, more than 285 million people have type 2 diabetes and that burden is expected to grow to 439 million by 2030. In the U.S. alone, more than 25 million people have diabetes and if trends continue, [one in three](#) U.S. adults will be living with the costly chronic disease by 2050.

To read the full study, visit the [Lancet](#).

<http://www.cbsnews.com/news/working-too-much-may-lead-to-diabetes/>

# [CBSNews.com](http://CBSNews.com) - Breaking News

By Robert Preidt September 26, 2014, 10:40 AM

## Working too much may lead to diabetes



File photo of a person with diabetes testing his blood sugar level. AP Photo/Joerg Sarbach

Working long hours may increase your [risk for diabetes](#), a new study suggests. But the finding seems to depend on your job.

Researchers examined data from prior studies involving more than 222,000 men and women in the United States, Europe, Japan and Australia who were followed for an average of 7.6 years.

The initial analysis revealed no difference in the risk of [type 2 diabetes](#) among people who worked more than 55 hours a week and those who worked 35 to 40 hours a week.

However, further analyses showed that people who worked more than 55 hours a week at manual labor or other types of "low socioeconomic status jobs" were 30 percent more likely to develop diabetes than those who worked 35 to 40 hours a week.

This increased risk remained even after the researchers accounted for diabetes risk factors such as smoking, physical activity levels, age, sex and obesity, and after the researchers excluded [shift work, which increases the risk of obesity and diabetes](#).

Although the study, published Sept. 24 in *The Lancet Diabetes & Endocrinology*, found an association between long work weeks and diabetes, it didn't establish a cause-and-effect relationship.

Further research is needed to learn more about the seeming link between working long hours and increased diabetes risk, the study authors said.

Possible explanations include the fact that people who work long hours have little time for healthy behaviors such as exercise, relaxation and adequate sleep.

"Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in

people doing low socioeconomic status jobs," Mika Kivimaki, professor of epidemiology at University College London in England, said in a journal news release.

The authors of an accompanying journal commentary said the findings may have implications for diabetes-prevention programs.

The study findings remained strong "even after controlling for [obesity and physical activity](#), which are often the focus of diabetes risk prevention, suggesting that work factors affecting health behaviors and stress may need to be addressed as part of diabetes prevention," Dr. Orfeu Buxton, of Pennsylvania State University, and Dr. Cassandra Okechukwu, from Harvard School of Public Health, wrote.

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# The UK News

*No doubt about it*

## Diabetes risk increased for people working long hours in poorly paid jobs

- [Sep 25, 2014 00:00](#)
- By [Andrew Gregory](#)

**A study by University College London found those putting in 55 hours or more a week in low-skill jobs were 30% more likely to get it than those working 35 to 40**



Stress: Diabetes increases risk of a heart attack or a stroke

People working long hours in poorly paid jobs have an increased risk of going on to [develop Type 2 diabetes](#).

A study found those putting in 55 hours or more a week in low-skill jobs were 30% more likely to get it than those working 35 to 40 hours.

And the huge difference between the two groups remained even after taking into account such factors as smoking, physical activity, age, gender and obesity among the [220,000 people](#) who took part in the study.

Prof Mika Kivimaki, of University College London, said: “Although working long hours is unlikely to increase the diabetes risk in everyone, health professionals should be aware that it is associated with a significantly higher risk in people doing low socioeconomic status jobs.”

Maureen Talbot, senior cardiac nurse at the British Heart Foundation which co-funded the research, added: “The findings of this study suggest a link between working more than 55 hours a week and an increased risk of developing Type 2 diabetes, but only in those people deemed to be in low socio-economic groups.

“Having diabetes increases someone’s risk of [having a heart attack](#) or stroke, so reducing that risk is essential.”

<http://www.wbay.com/story/26637848/2014/09/26/2-your-health-a-longer-work-week-could-up-diabetes-risk-says-study>



## **2 Your Health: A Longer Work Week Could Up Diabetes Risk, says Study**

*Updated: Sep 27, 2014 12:00 AM FST*



A new study shows long hours at work could raise your risk of developing Type 2 Diabetes.

Researchers found people who worked 55 hours a week or more were seven percent more likely to develop Type 2 Diabetes.

Experts aren't sure exactly why, but they say working long hours might leave people with less time to exercise.

They also say those with long hours may be more likely to have poor sleep, which has been shown to be a contributor to Diabetes.

Long work hours have also been found to be a risk factor for cardiovascular disease and depression.

The study was published in *The Lancet Diabetes & Endocrinology*.

<http://abcnewsradioonline.com/health-news>



## **Working Long and Hard May Heighten Diabetes Risk**

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ONDON) -- Working 55 hours or more a week can heighten the risk of developing type 2 diabetes, according to a new study.

However, lead author Mika Kivimaki from the University College London says the risk is much greater for people who do manual labor or other so-called "low socioeconomic status jobs."

Without establishing a cause-and-effect relationship, Kivimaki's research team determined that individuals in these lower-income professions who work 55 hours or more are 30 percent more likely to contract type 2 diabetes than people who only put in 35 to 40 hours weekly.

These findings were made from evaluating 222,000 workers over an average of 7.6 years from the U.S., Europe, Japan and Australia.

Kivimaki's surmised that laborers who worked the longer hours may be more susceptible to diabetes because they tend not to exercise and have a hard time both relaxing and sleeping.

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Friday, September 26, 2014 at 6:47AM by [Carmen Cox](#)

Read On ABC News Radio: <http://abcnewsradioonline.com/health-news#ixzz3EWkfTBkg>

<http://www.medicalnewstoday.com/articles/282978.php>

## Working long hours in low-paid jobs 'increases diabetes risk'

Last updated: 25 September 2014 at 12am PST  
MNT ChoiceAcademic Journal

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A new study published in *The Lancet Diabetes & Endocrinology* claims people who work more than 55 hours a week doing jobs of low socioeconomic status are at significantly higher risk of developing type 2 diabetes, compared with those who work fewer hours.



*Researchers say people who work long hours doing jobs of low socioeconomic status - such as manual work - are much more likely to develop type 2 diabetes than those who work fewer hours.*

Long working hours have previously been associated with poor health outcomes. A study recently reported by *Medical News Today*, for example, found a [higher risk of coronary heart disease](#) among people who work more than 60 hours a week.

The researchers of this latest study, led by Mika Kivimäki, professor of epidemiology at University College London in the UK, notes that past studies have also linked long working hours to [stress](#), unhealthy lifestyles, depressive symptoms and disturbed sleep, which they say are factors that can contribute to development of [diabetes](#).

"However, the direct association between long working hours and incident type 2 diabetes has been assessed in only a few studies," the researchers add.

With this in mind, the team conducted the largest study so far to investigate how long working hours influence the risk of type 2 diabetes.

## **Long hours in low socioeconomic status jobs 'increases type 2 diabetes risk by 30%'**

To reach their findings, the team analyzed data from a selection of published and unpublished studies looking at the effect of long working hours on type 2 diabetes. The data involved 222,120 men and women from the US, Europe, Japan and Australia, and participants were followed up for an average of 7.6 years.

When the researchers compared people who worked 55 hours or more each week with those who worked the standard 35-40 hours a week, they found no significant difference in the risk of developing type 2 diabetes.

**However, when they compared results by socioeconomic status, the team found that participants with jobs of low socioeconomic status - such as jobs involving manual labor - who worked 55 hours or more each week were 30% more likely to develop type 2 diabetes, compared with those who worked 35-40 hours a week.**

"The strong socioeconomic patterning in the results was surprising," Prof. Kivimäki told *MNT*. "The higher the person's position in the socioeconomic hierarchy was, the less working long hours was linked to diabetes risk. So, high socioeconomic position appears to protect against the 'diabetogenic' effects of long working hours."

The researchers note that this finding remained even after accounting for age, sex, [obesity](#) status, smoking and physical activity. It also remained when the researchers excluded participants who do shift work, which has previously been linked to increased risk of obesity and type 2 diabetes.

### **'Working long hours in such groups could be marker of other risk factors'**

Although the team did not investigate the reasons for this association, they hypothesize that it could be down to a number of factors. Those who work long hours in low socioeconomic status jobs may be more likely to have less sleep and less time to engage in physical exercise, for example, which may increase the risk of type 2 diabetes.

"It is also possible that working long hours in low socioeconomic groups is a marker of other risk factors, such as low pay and financial constraints," said Prof. Kivimäki. "Those with a high socioeconomic status are less likely to have such hardships."

Commenting on their overall findings, Prof. Kivimäki says:

"The pooling of all available studies on this topic allowed us to investigate the association between working hours and diabetes risk with greater precision than has been previously possible.

Although working long hours is unlikely to increase diabetes risk in everyone, health professionals should be aware that it is associated with a significantly increased risk in people doing low socioeconomic status jobs."

When *MNT* asked Prof. Kivimäki if people in low socioeconomic status jobs should reduce their working hours to reduce diabetes risk, he replied that no studies have suggested that lowering working hours would have such an effect.

**"For this reason, my recommendation for people who wish to decrease their risk of type 2 diabetes is to eat and drink healthfully, be physically active, avoid overweight, do not smoke, and keep blood glucose and lipids levels within the normal range. This applies both to individuals who work long hours and those who work standard hours."**

He added that in future research, the team plans to investigate the link between long working hours and other health outcomes, such as [coronary heart disease](#), [stroke](#) and excessive alcohol consumption.

In an editorial linked to the study, Dr. Orfeu Buxton, of Pennsylvania State University, and Dr. Cassandra Okechukwu, of Harvard School of Public Health in Boston, MA, say that this study offers a "solid foundation" for further research into the risks and interventions for diabetes.

"The results remained robust even after controlling for obesity and physical activity," they add, "which are often the focus of diabetes risk prevention, suggesting that work factors affecting health behaviors and stress may need to be addressed as part of diabetes prevention."

*MNT* recently reported on a study from the Centers for Disease Control and Prevention (CDC), revealing that [rates of diabetes in the US leveled off](#) between 2008 and 2012.

Written by [Honor Whiteman](#)