

Coronavirus Update 4-3-2020

"Interpreting the Data"

FB Live Notes

COVID-19 cases based on pre-existing conditions

PRE-EXISTING CONDITION	CASES PER CONDITION Counts are among the 7,162 cases with completed information on pre-existing conditions.	PERCENT OF THOSE CASES THAT ARE:		
		NON-HOSPITALIZED	NON-ICU	ICU
Chronic liver disease	41	59%	22%	17%
Current smoker	96	64%	23%	5%
Former smoker	165	48%	27%	20%
Chronic renal disease	213	24%	45%	26%
Immunocompromised	264	53%	24%	16%
Cardiovascular disease	647	37%	37%	20%
Chronic lung disease	656	55%	23%	14%
Diabetes mellitus	784	42%	32%	19%
Other chronic disease	1,182	49%	30%	14%
One or more	2,692	52%	27%	13%
None of the above	4,470	84%	7%	2%

■ Status unknown

Source: CDC Data as of March 28, 2020 at 12 p.m. EST.

INSIDER

[73% of Americans Hospitalised With COVID-19 Had an Underlying Condition, Says CDC. Tyler Sonnemaker, Business Insider 31 MARCH 2020](#)

Among US patients hospitalized with COVID-19, 73 percent had at least one underlying condition, according to a new report from the [Centres for Disease Control and Prevention](#) (CDC).

The CDC noted that many of the conditions reported by patients are fairly common among Americans in general.

The agency also cautioned that its findings are still preliminary and that the analysis was constrained by factors like missing health data for nearly 95 percent of patients, as well as the [limited availability of coronavirus testing](#), and a lack of information about longer-term outcomes of the disease.

Still, the early findings are comparable to those from countries like China and Italy, which have both seen higher rates of death and severe cases among patients with preexisting health conditions.

The Chinese Centre for Disease Control and Prevention found that death rates among patients with heart disease, diabetes, chronic respiratory disease, high blood pressure, and cancer were significantly higher than the nationwide average, while Italy's National Institute of Health found that 99 percent of people who died from COVID-19 had at least one preexisting condition.

"Strategies to protect all persons and especially those with underlying health conditions, including social distancing and handwashing, should be implemented by all communities and all persons to help slow the spread of COVID-19," the CDC report said.

Predisposing Conditions

Chronic Liver Disease >>> Alcohol/Cirrhosis; Hepatitis A, B, C, and Hemochromatosis (iron overload disease).

Non-Alcoholic Fatty Liver Disease >>> Gut Dysbiosis and Metabolic Syndrome.

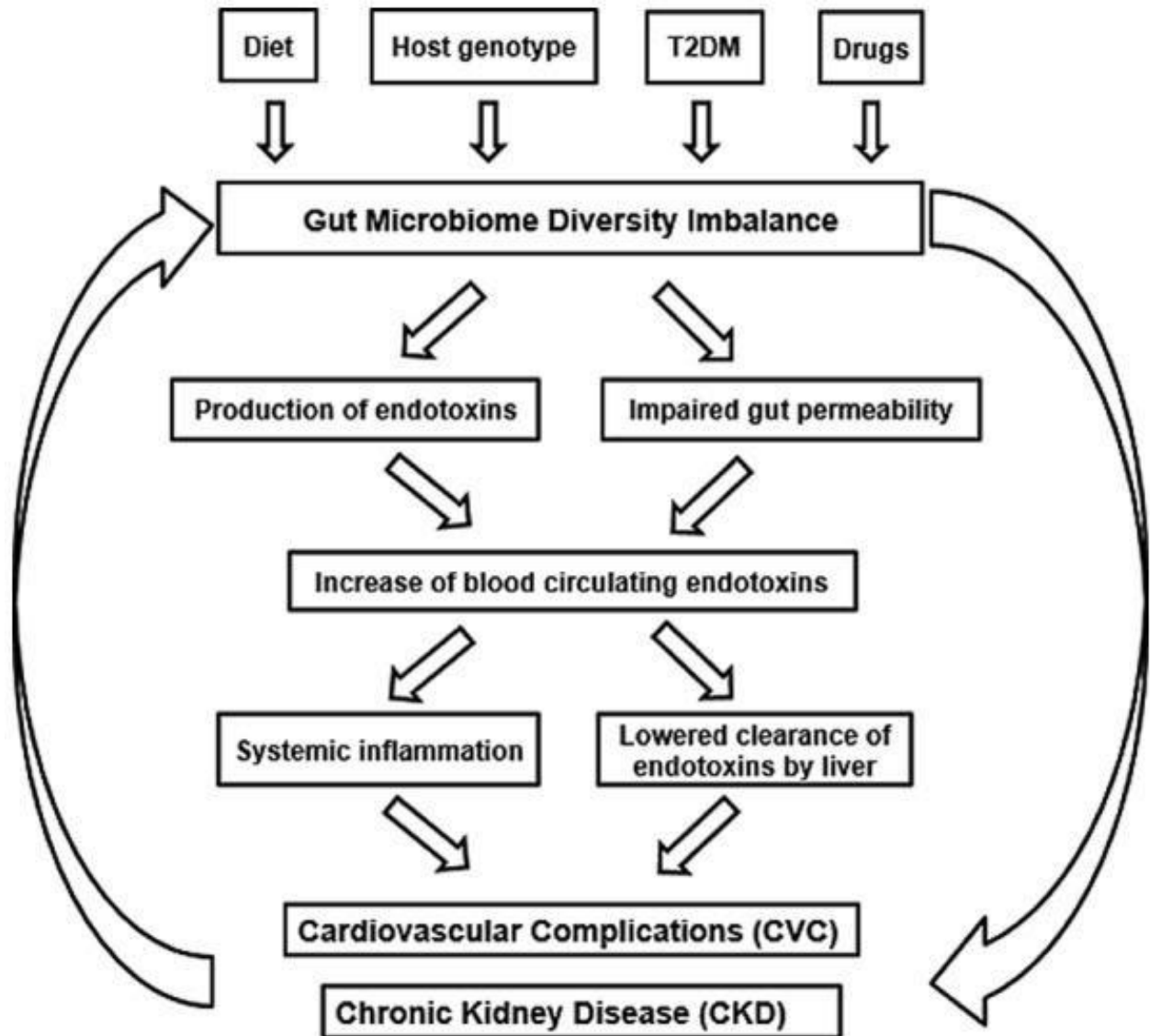
NAFL patients had higher serum LPS and Liver cell LPS localization than controls, which was correlated with serum zonulin (a marker for leaky gut) and

inflammatory cytokine expression. [Increased liver localization of lipopolysaccharides in human and experimental non-alcoholic fatty liver disease.](#)

Gut dysbiosis >>> Low Vitamin D, Diabetes, and Metabolic Syndrome.

Bacterial lipopolysaccharide (LPS), a proinflammatory endotoxin, is a component of the outer envelope of all gram-negative bacteria (1). When gram-negative bacteria multiply in the host, LPS is released into the circulation, where it is recognized by a variety of circulating cell types, triggering the induction of NF- κ B-dependent proinflammatory cytokines such as tumor necrosis factor- α (TNF- α), interleukins, prostaglandins, and nitric oxide (1-3). These cytokines and chemokines induce and amplify the host response to bacterial infection (4, 5). However, excessive cytokine release can have deleterious consequences. For example, septic shock triggered by LPS causes production of reactive oxygen species (ROS) and multiorgan dysfunction (2), with myocardial dysfunction being the major cause of morbidity and mortality (6). It has been shown that TNF- α is the earliest cytokine produced in large amounts in response to LPS and that it is the major cause of most of the effects of LPS

[Dysbiosis of Gram-negative gut microbiota and the associated serum lipopolysaccharide exacerbates inflammation in type 2 diabetic patients with chronic kidney disease](#) (diagram below)



Metabolic Syndrome >>> Is High Cholesterol, High Triglycerides, and HBP

Cardiovascular Disease - HBP >>> Elevated Triglycerides, Smoking, Overweight/Obesity, Lack of Exercise, Processed Food (increased sodium/decreased potassium), High Alcohol Consumption, Stress, Old Age, Chronic Kidney/Renal Disease, and Sleep Apnea.

Chronic Kidney/Renal Disease >>> Diabetes and HBP

Diabetes >>> Gut Dysbiosis, Stress, Elevated Glucose, Elevated Triglycerides, HBP, High Fat/High Carbohydrate Diet, Obesity, High Alcohol Consumption.