

# RS=Disease Response and Clin Classification

RSCAT=APACHE II

## The APACHE II Severity of Disease Classification System

RSSTRESC/RSSTRESN

Physiologic Variable	High Abnormal Range					Low Abnormal Range					Points
	+4	+3	+2	+1	0	+1	+2	+3	+4		
Temperature - rectal (°C)		39°-40.9°		38.5°-38.9°	36°-38.4°	34°-35.9°	32°-33.9°	30°-31.9°	≤ 29.9°		
Mean Arterial Pressure - mm Hg		30-159	110-129		70-109		50-69		≤ 49		
Heart Rate (ventricular response)	≥ 180	140-179	110-139		70-109		55-69	40-54	≤ 39		
Respiratory Rate (non-ventilated or ventilated)	≥ 50	35-49		25-34	12-24	10-11	6-9		≤ 5		
Oxygenation: A-aDO <sub>2</sub> or PaO <sub>2</sub> (mm Hg)											
a. FIO <sub>2</sub> ≥ 0.5 record A-aDO <sub>2</sub>		350-499	200-349		< 200						
b. FIO <sub>2</sub> < 0.5 record only PaO <sub>2</sub>					PO <sub>2</sub> > 70	PO <sub>2</sub> 61-70		PO <sub>2</sub> 55-60	PO <sub>2</sub> < 55		
Arterial pH (preferred)		7.6-7.69		7.5-7.59	7.33-7.49		7.25-7.32	7.15-7.24	< 7.15		
Serum HCO <sub>3</sub> (venous mMol/L) (Not preferred, use if no ABGs)		41-51.9		32-40.9	22-31.9		18-21.9	15-17.9	< 15		
Serum Sodium (mMol/L)		160-179	155-159	150-154	130-149		120-129	111-119	≤ 110		
Serum Potassium (mMol/L)		6-6.9		5.5-5.9	3.5-5.4	3-3.4	2.5-2.9		< 2.5		
Serum Creatinine (mg/100 mL) (Double point score for acute renal failure)		2-3.4	1.5-1.9		0.6-1.4		< 0.6				
Hematocrit (%)	≥ 60		50-59.9	46-49.9	30-45.9		20-29.9		< 20		
White Blood Count (total/mm <sup>3</sup> ) (in 1,000s)	≥ 40		20-39.9	15-19.9	3-14.9		1-2.9		< 1		
Glasgow Coma Score (GCS): Score = 15 minus actual GCS	RSORRES/RSSTRESC/RSSTRESN when RSTESTCD=APCH112										
A. Total Acute Physiology Score (APS): Sum of the 12 individual variable points	RSORRES/RSSTRESC/RSSTRESN when RSTESTCD=APCH113										
B. Age Points (years):	≤44-0	45-54-2	55-64-3	65-74-5	≥75-6	RSSTRESC/RSSTRESN					
C. Chronic Health Points (see below)	RSORRES when RSTESTCD=APCH114										
Total APACHE II Score (Sum of A + B + C)	RSORRES/RSSTRESC/RSSTRESN when RSTESTCD=APCH116										

RSSTRESC/RSSTRESN

Chronic Health Points: If the patient has a history of severe organ system insufficiency or is immunocompromised as defined below, assign points as follows:

- 5 points - for nonoperative or emergency postoperative patients
  - 2 points - for elective postoperative patients
- RSORRES when RSTESTCD=APCH115

Definitions: Organ insufficiency or immunocompromised state must have been evident prior to this hospital admission and conform to the following criteria:

- Liver** - Biopsy proven cirrhosis and documented portal hypertension; episodes of past upper GI bleeding attributed to portal hypertension; or prior episodes of hepatic failure/encephalopathy/coma.
- Cardiovascular** - New York Heart Association Class IV.
- Respiratory** - Chronic restrictive, obstructive, or vascular disease resulting in severe exercise restriction (i.e., unable to climb stairs or perform household duties); or documented chronic hypoxia, hypercapnia, secondary polycythemia, severe pulmonary hypertension (>40 mmHg), or respirator dependency.
- Renal** - Receiving chronic dialysis.
- Immunocompromised** - The patient has received therapy that suppresses resistance to infection (e.g., immunosuppression, chemotherapy, radiation, long term or recent high dose steroids) or has a disease that is sufficiently advanced to suppress resistance to infection (e.g., leukemia, lymphoma, AIDS).