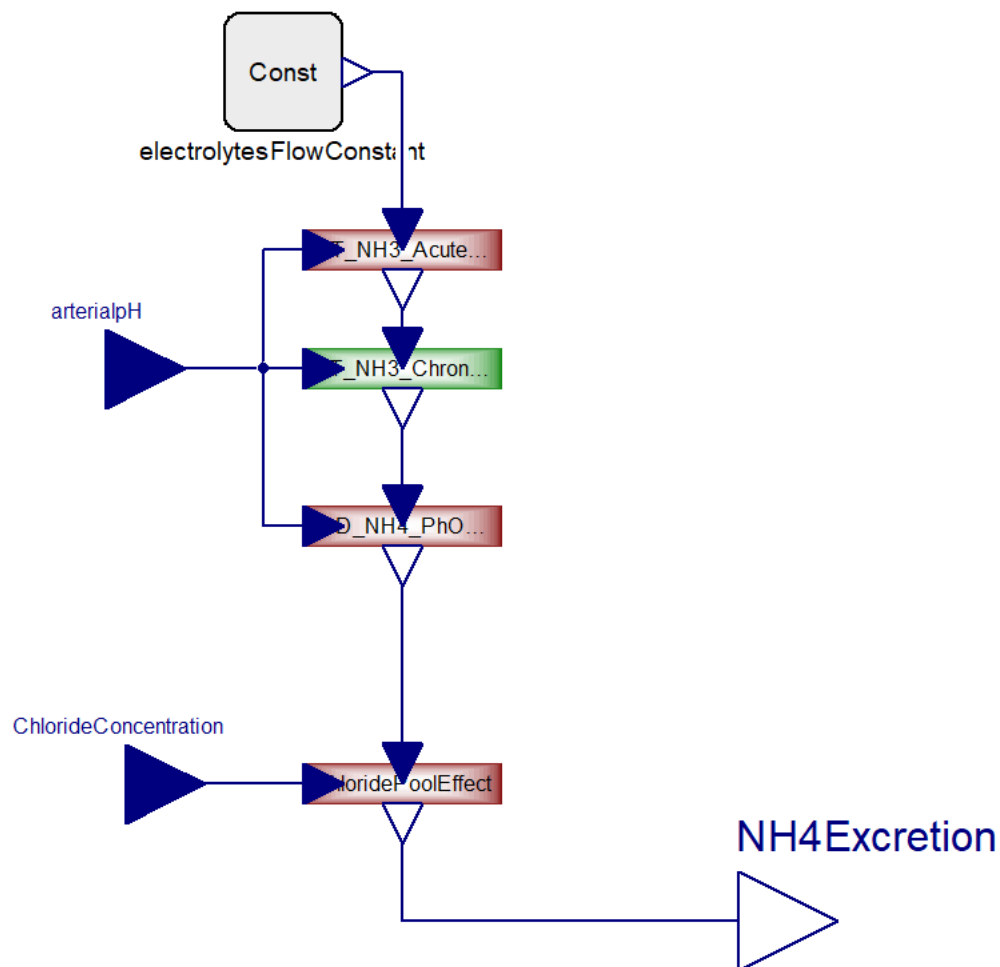```
In[*]:= colemanSpline[xx_] := (
    tx = xx;
    For[i = 1; tt = {}; n = 1, i ≤ Length[tx], i++; n++,
     tt = Append[tt, { {tx[[n, 1]]}, tx[[n, 2]], tx[[n, 3]]}];
    ];
    finterp = Interpolation[tt];
    ff[x_] := (
      n = Length[tx];
      y = If[x < tx[[1, 1]], tx[[1, 3]] (x - tx[[1, 1]]) + tx[[1, 2]],
        If[x >= tx[[n, 1]], tx[[n, 3]] (x - tx[[n, 1]]) + tx[[n, 2]],
         finterp[x]]]

    );
);
```
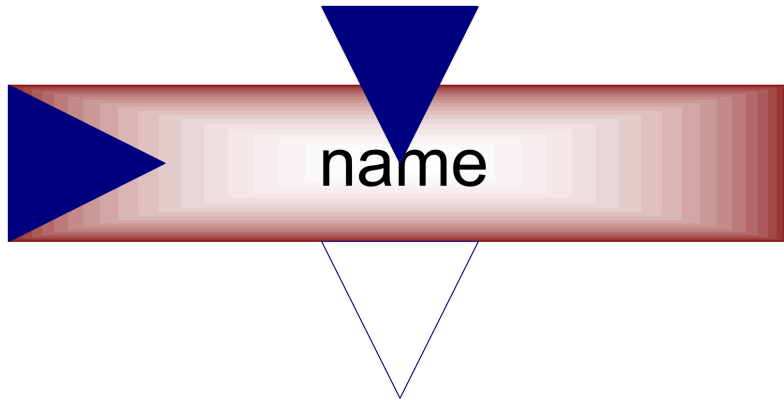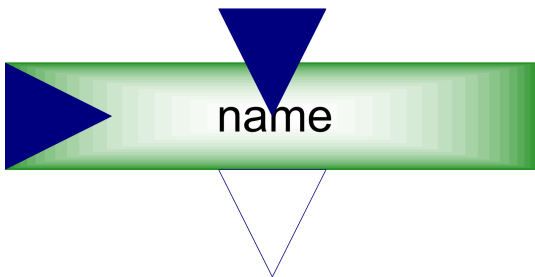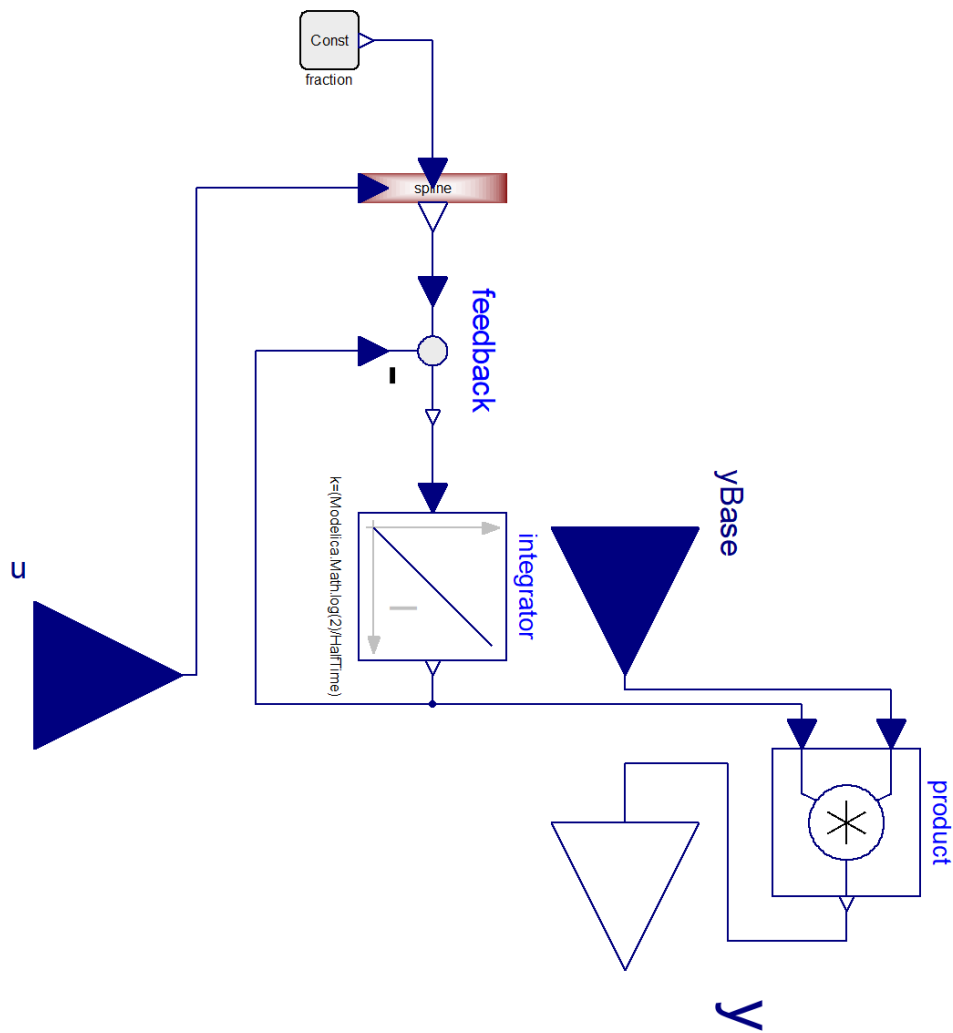
# NH4 Excretion

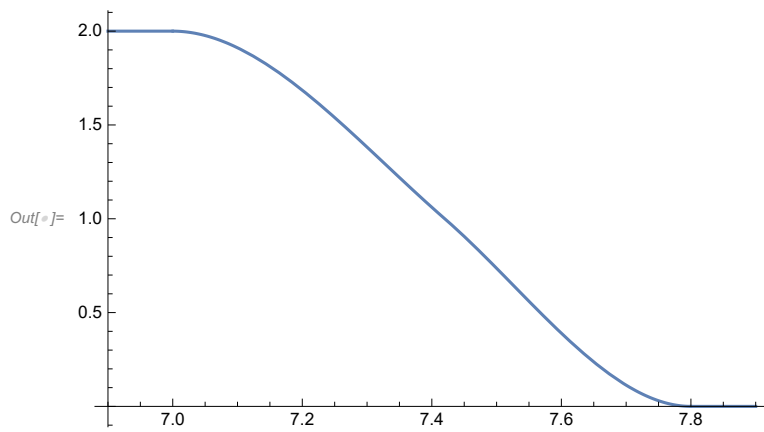EletrolyytesFLowConstant = 0.04 mmol/min = 57.6 mmol/d
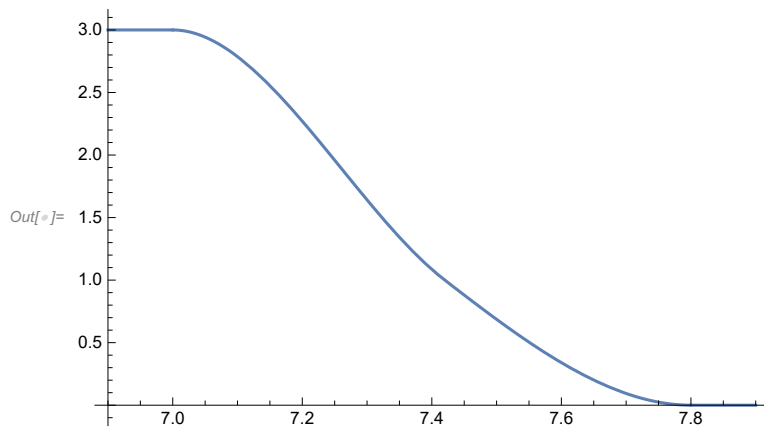
**Spline:**
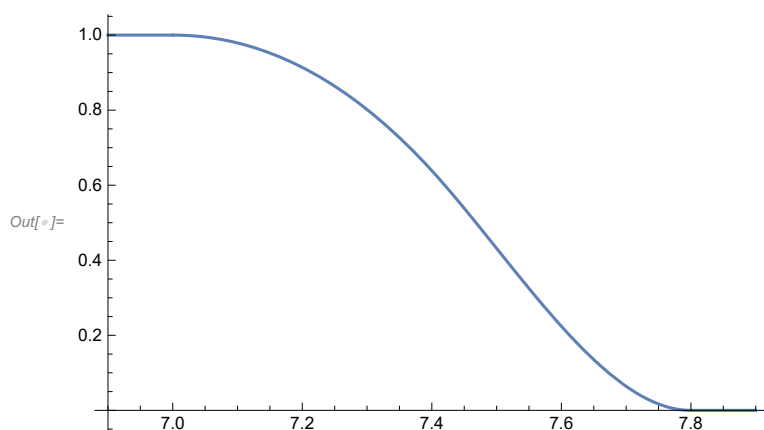


**SplineLag:**

*In[ ]:=*

```
NH4Acute = {{7.00, 2.0, 0}, {7.42, 1.0, -3.0}, {7.80, 0.0, 0}};
(*           {{7.00,2.0,0},{7.45,1.0,-3.0},{7.80,0.0,0}} *)
colemanSpline[NH4Acute]
Plot[ff[pH], {pH, 6.9, 7.9}]
```

In[ ]:= **NH4Chronic = {{7.00, 3.0, 0}, {7.42, 1.0, -4.0}, {7.80, 0.0, 0}};**
(*   {{7.00,3.0,0},{7.45,1.0,-4.0},{7.80,0.0,0}}   *)
colemanSpline[NH4Chronic]
Plot[ff[pH], {pH, 6.9, 7.9}]

In[ ]:= **pHonFlux = {{7.00, 1.0, 0}, {7.42, 0.6, -2.0}, {7.80, 0.0, 0}};**
(*   {{7.00,1.0,0},{7.45,0.6,-2.0},{7.80,0.0,0}} *)
colemanSpline[pHonFlux]
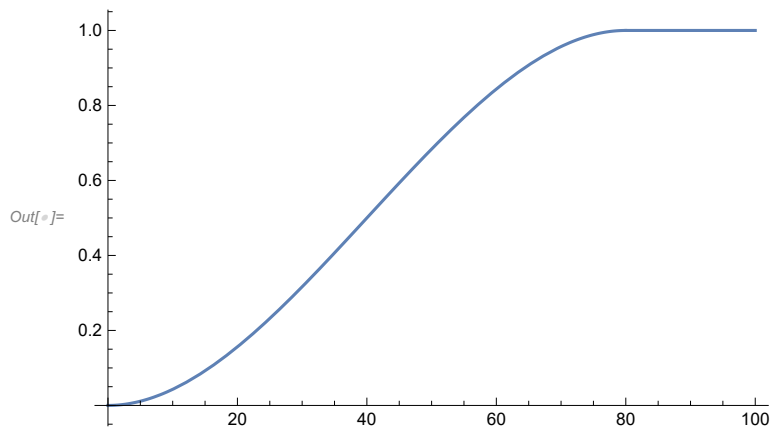**Plot[ff[pH], {pH, 6.9, 7.9}]**

In[ ]:= **ff[7.2]**
0.0674139 * ff[7.2]

Out[ ]= 0.914048

Out[ ]= 0.0616196

In[ ]:=

In[ ]:= **ChlorideEffect = {{0.00, 0.0, 0}, {80, 1.0, 0.0}};**
colemanSpline[ChlorideEffect]
Plot[ff[pH], {pH, 0, 100}]

Out[ ]=

https://paperpile.com/shared/z8jfSE

In[ ]:=

In[ ]:=

In[ ]:=